

DOCKETED

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Clean Transportation Program



Draft Solicitation Concept for BESTFIT Innovative Charging Solutions

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May 12, 2020



Workshop Agenda

- Welcome and Introductions

- BESTFIT Innovative Charging Solutions Overview
 - BESTFIT Solicitation Concept and Background
 - Proposed Funding
 - Proposed Eligibility
 - Proposed Project Requirements
 - Proposed Evaluation Criteria
 - Proposed Schedule

- Questions and Discussion



Housekeeping

- Chat and Q&A boxes are available for questions and comments throughout the presentation.
- Participants on the phone will have the chance to provide questions and comments at the end of the presentation.
- "Raise hand" feature to ask a question or provide comment at the end of the presentation.
- Diversity Survey:
 - More information will be provided in the "chat box" section and the next few slides.
 - Survey will be emailed to all participants after the workshop.



Commitment to Diversity

The CEC adopted a resolution on April 8, 2015 to firmly commit to:

- Increase participation of women, minority, disabled veteran and LGBT business enterprises in program funding opportunities.
- Increase outreach and participation by disadvantaged communities.
- Increase diversity in participation at CEC proceedings.
- Increase diversity in employment and promotional opportunities.



Commitment to Diversity (cont.)

- Fairness – Increase funding accessibility to all Californians.
- Inclusion – Small businesses make up a significant portion of the U.S. economy.
- Job Creation – Projects can create jobs for residents of the under-served communities.
- Diversity of Ideas – Great ideas occur in a variety of areas.
- Diversity in Communities' Needs – Needs vary widely from one area to the next (air quality, socioeconomic, etc.).



Diversity Survey

- The CEC is committed to ensuring that the Clean Transportation Program reflects the rich and diverse characteristics of California and its people.
- Please tell us the following:
 - Your name
 - Your company
 - How you heard about this workshop
 - Whether your company is in Northern, Central, or Southern CA
- Please email this information to Matt.Alexander@energy.ca.gov.



Diversity Survey (cont.)

- Additionally, please let us know in your email if you are representing a business that is:
 - A small business,
 - A disabled veteran business,
 - A woman-owned business,
 - A Lesbian-, Gay-, Bisexual-, Transgender-owned business, or
 - A minority-owned business.
- Please list this workshop title in the subject or body of your email:
BESTFIT Innovative Charging Solutions
- The information supplied will be used for public reporting purposes to display anonymous overall attendance of diverse groups.



Clean Transportation Program

- Formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program
- Established by Assembly Bill 118 (Nunez, 2007)
- Provides up to \$100 million per year in funds
- Extended to January 1, 2024 by Assembly Bill 8 (Perea 2013)



Clean Transportation Program

“...to develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.”

- California Health and Safety Code 44272(a)

Complementary goals:

- Improve air quality
- Investments in low-income and disadvantaged communities
- Promote economic development
- Increase alternative fuel use
- Reduce petroleum dependence



BESTFIT Innovative Charging Solutions



Overview

- Built-Environment Electrification Solutions & Form Factors for Fitting Infrastructure to Transportation (BESTFIT)
- Innovative charging solutions and form factors that are the “best fit” for the local built environment, use case, and vehicle compared to traditional solutions
- Funding for projects in both light-duty and medium-duty/heavy-duty sectors
- \$7.5 million total



Origination

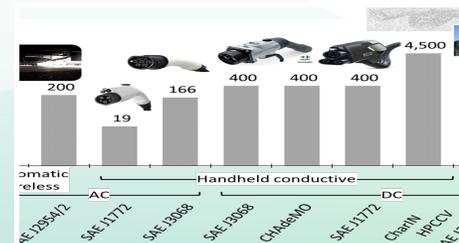
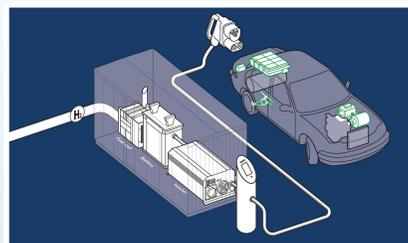
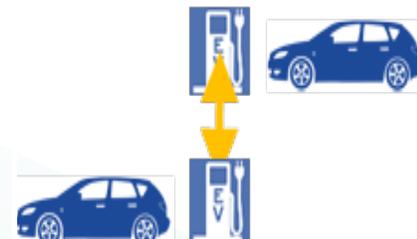
- EV Ready Communities Challenge highlighted the need for innovative charging solutions influenced by the local built environment
- There is no “one size fits all” solution



Source: California Energy Commission staff



Innovative Charging Solutions





Area of Focus 1: Increase Utilization

- This category addresses projects designed to increase or maximize efficient utilization of charging infrastructure
- The goal is to increase the throughput of electric miles serviced to EVs by each charger through the creation of new business models that leverage innovative placement and locations, user sharing, queuing, vehicle management technologies, and other strategies



Area of Focus 2: Minimize Cost for Purchase and Installation

- This category addresses efforts to maximize the benefits of charging installations by avoiding costly grid impacts
- The goal for innovative charging solutions like smart charging and discharging or distributed energy resources (DERs) is to defer or outright avoid grid capacity upgrades and associated costs otherwise incurred with traditional approaches



Area of Focus 3: Demonstrate Advancements in Charging or Customer Interface

- This category addresses technological advances to facilitate the adoption of EVs by making the charging experience seamless for drivers and users through standardized interfaces and streamlined customer services
- The goal for these advanced interfaces is to simplify charging today, but also lay the foundation for emerging electric transportation applications including autonomous, shared, and connected vehicles



Proposed Funding

Vehicle Sector	Area of Focus	Maximum Award Amount	Total Funding Available
Light-Duty	Increase Utilization	Up to \$1 million per applicant	\$3.5 million
	Minimize Cost for Purchase and Installation		
	Demonstrate Advancements in Customer or Charging Interface		
MD/HD	Minimize Cost for Purchase and Installation	Up to \$2 million per applicant	\$4 million
	Demonstrate Advancements in Customer or Charging Interface		



Proposed Eligibility

- Open to all automotive original equipment manufacturers (OEMs), electric vehicle charging equipment manufacturers, and electric vehicle service providers (EVSPs) operating in California
- Applicants may submit multiple applications under BESTFIT
 - Maximum award amount applies to each applicant, not each proposed project
 - Applicants that submit applications in both the light-duty and MD/HD sectors are eligible for the maximum award amount in each category (a total of \$3 million)
 - Each proposed project must be separate and distinct and adhere to all requirements contained in the solicitation



Proposed Project Requirements

- All demonstrations must be installed for public or private, real-world use and must demonstrate how the novel technology and/or business model could be deployed at scale in the future and become commercially viable
- Applicants must identify only one Area of Focus (see Slide 18) that their proposed project primarily addresses
- This Area of Focus designation will be used to categorize and rank applications for funding



Example Projects

Intra-site storage – Storage-based charging systems that can move about an individual site challenged by conditions that prevent the construction of stationary EVSE to provide on-demand services

Novel sharing business models – Examples include private workplace chargers that become publicly available after work hours and software solutions to match charging demand to available chargers in real time

Robotic connection – Automated charging using devices that articulate a conductive connection between the vehicle and electricity supply

Interoperability for MD/HD vehicles – Standardized and interoperable charging interfaces for MD/HD vehicles



Eligible Stages of Development for Projects and Technologies

- **Bench Testing and Validation:** Validation of concept in test setup under real operational conditions
- **Demonstration:** Demonstration and testing of complete system prototype under real operating conditions
- **Prototype:** Functionality proof and operation of complete system prototype under real operating conditions
- **Complete Operational System:** Functionality proof of complete system under real operating conditions
- **Commercial availability:** Qualification of system based on successful operation



Ineligible Projects

- The following project types are not eligible:
 - Market, literature, or technology surveys, or meta-analysis studies
 - Basic research and development
 - Projects which include DER for purposes other than supplying power to EV chargers
 - Tests for regulatory compliance
 - Marketing and promotional activities
 - Software development with no research or validation component
 - Lab-scale research and validation
 - Research and development that is not EV-related and has no clear market connection
 - Proof of functions



Data Collection

- Each project must collect a minimum of 12 months of data on deployed infrastructure and provide this electronically to the CEC on a regularly scheduled basis
- Applicants shall describe in detail plans to ensure EVs will utilize their infrastructure and enable them to collect 12 months of data on charging events for deployed infrastructure, including but not limited to:
 - Charge and session duration
 - Energy delivered (kWh)
 - Power delivered (kW)
 - Cost of electricity for the session
 - Payment method
 - Type of vehicle that charged
 - Number of unique vehicles and frequency of “repeat vehicles”
 - Energy delivered back to grid or facility if a bidirectional charging use case (kWh)



Data Collection (cont.)

- In addition, applicants should identify and develop a plan for providing other relevant data and information to the CEC **throughout the duration of the funding agreement**, including but not limited to:
 - Lessons learned
 - Best practices (e.g. permitting and installation processes)
 - Potential job creation
 - Economic development
 - Increased state revenue



Match Funds

- Applications must include at least 25 percent of total project costs as match share
- Of this match share, at least 50 percent should be cash match



Eligible Project Costs

- Examples of eligible costs include but are not limited to:

- EVSE
- Transformer
- Electric panels, conduit, wiring
- Meters
- Energy storage equipment
- Photovoltaic solar panels separately metered for electric charging
- Installation costs
- Planning and engineering design costs
- Stub-outs
- Demand management equipment



- The following are not eligible for CEC's reimbursement or as the applicant's match share:
 - Vehicle Purchases
 - Processes to comply with otherwise applicable legal requirements (e.g. permits from the local authority having jurisdiction (AHJ) and compliance with the Americans with Disabilities Act (ADA))
 - Utility service upgrade costs covered by the utility



Proposed Evaluation Process

- Applicants must designate one Area of Focus that their proposed project primarily addresses
- Applications will be categorized and ranked based on this designation
- The evaluation process will consist of two stages:
 - 1) Pre-Application Abstract Screening and Technical Scoring
 - 2) Full Application Screening and Technical Scoring



Proposed Evaluation Process: Pre-Application Abstracts

- Limited to 5 pages
- Scored according to Pre-Application Abstract Evaluation Criteria
- Pre-Application abstracts must receive a score of 70% in each Evaluation Criteria category in order to pass this stage and be eligible to submit a Full application



Proposed Evaluation Criteria

BESTFIT Pre-Application Abstract Evaluation Criteria

Evaluation Criteria	Points
Project Summary <i>NOTE: Pre-application abstracts must obtain a minimum passing score of 17.5 points within this evaluation criterion to be eligible to submit a full application.</i>	25
Project Readiness and Implementation <i>NOTE: Pre-application abstracts must obtain a minimum passing score of 10.5 points within this evaluation criterion to be eligible to submit a full application.</i>	15
Funding Request and Cost Effectiveness <i>NOTE: Pre-application abstracts must obtain a minimum passing score of 7 points within this evaluation criterion to be eligible to submit a full application.</i>	10
TOTAL POSSIBLE POINTS:	50



Proposed Evaluation Process: Full Applications

- Pre-application abstracts receiving a passing score will be eligible to submit a full application
- Full applications will be scored according to the Full Application Evaluation Criteria
- Minimum score of 70% required to be eligible for funding



Proposed Evaluation Criteria

BESTFIT Full Application Evaluation Criteria

Scoring Criteria	Points
Innovation	45
Project Readiness and Implementation	25
Total Possible Points for Criteria (1) and (2) (Minimum Passing Score is 45.50)	65
Economic, Social, and Environmental Benefits	15
Team Experience, Qualifications, and Resources	10
Budget	10
TOTAL POSSIBLE POINTS:	100



Project Selection and Award

- Only final application scores will determine project selection and award, not pre-application abstract scores
- Ties will be broken by the highest Innovation score
- If still tied, the proposal with the highest Project Readiness and Implementation score will be ranked higher



Project Selection and Award (cont.)

Vehicle Sector	Area of Focus	Maximum Award Amount	Total Funding Available
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	Demonstrate Advancements in Customer or Charging Interface		



Proposed Schedule

Activity	Action Date (Tentative)
Scoping Workshop	May 12, 2020
Pre-Application Workshop	August 11, 2020
Solicitation Release	End of July 2020
Deadline to Submit Pre-Application Abstracts	Mid-September 2020
Anticipated Notice of Passing Pre-Application Abstracts	End of September 2020
Deadline to Submit Full Applications	Mid-November 2020
Anticipated Notice of Proposed Awards Posting	December 2020
Anticipated CEC Business Meeting Approval	February 2021
Agreement Execution	March 2021



Directed Questions



Funding

- Are the maximum award amounts sufficient?
 - Is \$1 million for light-duty projects enough? Too much or too little?
 - Is \$2 million for MD/HD projects enough? Too much or too little?
- Should the maximum award remain based on applicant, or based on project?



Project Selection

- Is the current evaluation and project selection process adequate?
 - If not, how would you change or restructure this?



Applicant Eligibility

- Are the definitions for eligible applicants sufficient, too broad, or too prescriptive?



Project Requirements

- Are the Areas of Focus representative of the needs in the market?
 - Do you propose changes to the Areas of Focus?
 - Are we overlooking any critical areas that should be addressed in this solicitation?



Evaluation Criteria

- Are there key market indicators that are used to demonstrate a market opportunity for charging solutions to be commercially successful?



Open Discussion





Q&A / Public Comments

- Phone lines first
- Raise hand feature second (for those online)
- Q&A / chat box questions

Email or call the Public Advisor's Office @:

PublicAdvisor@energy.ca.gov

Or call (916) 654-4489

Toll free at (800) 822-6228.



Public Comments

Docket #:19-TRAN-02

- Submit comments via the CEC E-Commenting System:

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-TRAN-02>

- Email Docket Unit: DOCKET@energy.ca.gov

Reference “*BESTFIT Innovative Charging Solutions*” in the subject line. If answering or providing comments to the specific questions included in this presentation, please reference the slide number or question.

All comments due by 5:00 p.m. on Tuesday, May 26, 2020.



List Serv Notifications

Subscribe to Transportation Energy List Servers to receive updates on the Clean Transportation Program and upcoming solicitations:

https://ww2.energy.ca.gov/listservers/index_cms.html

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- [lowcarbonfuels](#) - Low Carbon Fuels Production Program
- [schoolbusprogram](#) - School Bus Replacement Program
-
- [vgi_communications](#) - California Vehicle-Grid Integration Roadmap Update
- [fuelswatch](#) - Weekly Fuels Watch Report
-
- [petroleum_watch](#) - Monthly California Petroleum Watch (Analysis) Newsletter



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Thank you for participating remotely!
