Memorandum

To: Chair Robert B. Weisenmiller Date: January 2, 2019

Commission Karen Douglas Commissioner David Hochschild Commissioner Andrew McAllister Commissioner Janea A. Scott

From: Joshua Croft Telephone: (916) 445-5309

Energy Research and Development Division

California Energy Commission

1516 Ninth Street Sacramento, CA 95814

Subject: CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE ANALYSIS FOR PROPOSED SUBAWARDS UNDER THE CALIFORNIA SUSTAINABLE ENERGY ENTREPRENEUR DEVELOPMENT (CALSEED) INITIATIVE, AGREEMENT NO. 300-15-007

The California Clean Energy Fund (CalCEF) is the administrator of the Energy Commission's CalSEED Initiative under Agreement No. 300-15-007. The CalSEED Initiative awards small grants and provides access to business and technical services to entrepreneurs seeking to develop a technical feasibility case for their technologies. The Center for Sustainable Energy is a subcontractor and provides policy support and partner recommendations to awardees.

In October 2018, CalSEED held the first Prototype Award Business Plan Competition to determine which eligible CalSEED Concept Award winners have the greatest technical and commercial potential to merit Prototype Award funding. The Prototype Award Business Plan Competition resulted in four projects being proposed for awards. The proposed awardees are: (1) CodeCycle, LLC; (2) Nativus; (3) PowerFlex Systems, Inc.; and (4) Sepion Technologies. Each proposed award is \$450,000. These awards will provide follow-on funding to the most successful of the entrepreneurs and researchers whose energy innovations show significant potential impact and commercial potential.

I am an Energy Commission Specialist 1 in the Energy Research and Development Division of the California Energy Commission. I have reviewed the CEQA compliance forms submitted by each proposed awardee, which are attached to this memo. It is my opinion that each of the prototype awards proposed for funding are exempt under CEQA. The reasons for my conclusion are as follows.

1. PROJECT TITLE: EXPANDING COVERAGE OF ADVANCED COMPLIANCE TECHNOLOGY, WITH ONGOING CENTRAL VALLEY DEMONSTRATION

Proposed Awardee: CodeCycle, LLC

Principal Investigator: Kim Goodrich, Dan Suyeyasu

Proposed Award Amount: \$450,000

Project Summary: The goal of this project is to expand the functionality of software that improves building energy code compliance by using data-driven web and mobile software to streamline the compliance process for design teams, contractors, and building inspectors. Current approaches to energy code enforcement are largely paper-based but CodeCycle converts complex energy standards into easy-to-understand interfaces for design teams and building departments. During the Prototype Award project, the team will expand the software's coverage to include additional sections of the code such as commercial envelope, and HVAC as well as the residential energy standards.

CEQA Exemption Status: 14 CCR 15061(b)(3) "Common Sense Exemption"; 14 CCR 15306 "Basic Data Collection"

Reason Why Project is Exempt: This project is exempt from CEQA because it involves software development and testing that does not have the potential for causing a significant effect on the environment. This project will not fund deployment of the software and is limited to online or cloud-based transfer of information to streamline code compliance.

2. Project Title: Hyper-Efficient Rotary Air Conditioner

Proposed Awardee: Nativus Principal Investigator: Matt Miller Proposed Award Amount: \$450,000

Project Summary: The goal of this project is to create and test a prototype, highly efficient portable room air conditioner with a substantially lower weight and operating cost and a 50 percent power reduction compared to the industry standard while providing similar cooling capacity. This efficiency gain is made possible via a proprietary rotary heat exchanger that combines the heat exchanger surface, motor, and compressor with a centrifugal fan that greatly increases energy efficiency by removing the 'boundary layer' from a traditional heat exchanger. Nativus will use the Prototype Award to further validate the highly-efficient air conditioner design, gather performance and efficiency data, and ultimately certify the design for commercial use.

CEQA Exemption Status: 14 CCR 15061(b)(3) "Common Sense Exemption; 14 CCR 15301 "Existing Facilities"; 14 CCR 15306 "Basic Data Collection"

Reason Why Project is Exempt: This project is exempt under CEQA because all research and development tasks will be completed within an enclosed space inside an already existing facility, involves no expansion of an existing use of the facility, and will not generate noise or odors more than permitted levels. Further, all work is considered 'cold' manufacturing and assembly, meaning that no excessive energy will be consumed or released into the environment. Thus, the data collection and research will not result in a serious disturbance to the environment and it can be seen with certainty, due to the scale of the project and that the activities will be conducted in a contained space, that the project will not have a significant effect on the environment.

3. PROJECT TITLE: OPTIMAL LOAD SHARING OF DCFC AND LEVEL-2 CHARGING AT WORK

Proposed Awardee: PowerFlex Systems, Inc.

Principal Investigator: Cheng Jin Proposed Award Amount: \$450,000 **Project Summary:** The goal of this project is to prototype an expanded software system that jointly optimizes multiple levels of electric vehicle (EV) charging, solar photovoltaic generation, energy storage, customer preferences, and building load. As the need increases for large-scale workplace EV charging, site owners will seek to lower their whole-site peak daily load. With the Prototype award, Powerflex Systems will finish development on the expanded algorithm and test its performance in the field.

CEQA Exemption Status: 14 CCR 15061(b)(3) "Common Sense Exemption; 14 CCR 15306 "Basic Data Collection"

Reason Why Project is Exempt: This project is exempt under CEQA because the project consists of basic data collection and research that does not have the potential for causing a significant effect on the environment. Project activities include the design, implemention, testing and deployment of software systems in existing facilities. This project will only fund software development and deployment and involves no construction or modification to any of the facilities.

4. PROJECT TITLE: EV BOOST (ELECTRIC VEHICLE – BATTERY OPTIMIZATION OPPORTUNITIES FOR SUSTAINABLE TRANSPORTATION)

Proposed Awardee: Sepion Technologies Principal Investigator: Peter Frischmann Proposed Award Amount: \$450,000

Project Summary: The goal of this project is to scale a prototype battery membrane that enables drop-in, roll-to-roll manufacturing of lithium-metal anode batteries with significantly greater energy density compared to traditional graphite anode lithium-ion batteries. This technology maintains the necessary safety characteristics and competitive costs of traditional lithium-ion batteries by avoiding the need for large scale reconfiguration of existing manufacturing lines. During the Prototype Award, the team will scale up to 100kg batches with roll to roll manufacturing while demonstrating that the enhanced performance demonstrated at a small scale is maintained.

CEQA Exemption Status: 14 CCR 15061(b)(3) "Common Sense Exemption; 14 CCR 15301 "Existing Facilities"; 14 CCR 15306 "Basic Data Collection"

Reason Why Project is Exempt:

This project is exempt under CEQA because the work will be carried out in existing facilities within the guidelines found in the Integrated Safety Management procedures from US Department of Energy's Lawrence Berkeley National Lab. All physical activities will be conducted in a controlled environment with consultant expertise and regular briefings on safe handling and disposal of all hazardous materials potentially utilized. This project involves negligible or no expansion of existing use of the facilities and does not have the potential for causing a significant effect on the environment.

CodeCycle, LLC

EXPANDING COVERAGE OF ADVANCED COMPLIANCE TECHNOLOGY, WITH ONGOING CENTRAL VALLEY DEMONSTRATION

CEQA Compliance Form

All applicants must <u>complete</u> this form, regardless of whether the proposed activity is considered a "project" as defined below. Answer all questions as completely as possible. The Energy Commission may request additional information in order to clarify the responses provided on this form.

The California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000 et seq.) requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible.¹ Under CEQA, an activity that may cause either a direct or reasonably foreseeable indirect physical change in the environment is called a "project."² An activity funded by a contract, grant, or loan is considered a "project" under CEQA if it will cause a direct or reasonably foreseeable indirect physical change in the environment. Agencies must comply with CEQA before they approve a "project." This may require the preparation of one or more of the following CEQA documents:

- A <u>Notice of Exemption</u> (if the project is exempt from CEQA under an exemption identified in the CEQA statutes or regulations);³
- An Initial Study (if the project may have a significant effect on the environment);4
- A <u>Negative Declaration</u> (if the Initial Study shows that the project will not have a significant effect on the environment) or a Mitigated Negative Declaration (if any significant effects identified by the Initial Study can be avoided or mitigated to a level of insignificance);⁵ or
- An Environmental Impact Report (if there is substantial evidence that the project will have significant effects).⁶

The **Lead Agency** is the public agency that has the greatest responsibility for carrying out, supervising, or approving a project, and for preparing environmental review documents under CEQA (e.g., initial study, environmental impact report). Where the award recipient is a *public agency*, the Lead Agency is typically the recipient. Where the award recipient is a *private entity*, the Lead Agency is the public agency that has the greatest responsibility for supervising or approving the project as a whole.⁷

When issuing contracts, grants, or loans, the Energy Commission is typically a "Responsible Agency" under CEQA, which means that it must make CEQA findings based on review of the funded activities and any environmental documents created by the Lead Agency. If the Energy Commission is the only public agency with responsibility for approving the funded activities and the project is not exempt under CEQA, the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project. This form will help the Energy Commission determine what type of CEQA review is necessary before it can approve the award, and which agency will perform any required environmental review as Lead Agency. It may also help the applicant determine the CEQA process necessary for the proposed activities.

¹ For a brief description of CEQA, visit http://www.resources.ca.gov/cega/more/fag.html.

² California Public Resources Code § 21065.

³ 14 California Code of Regulations (CCR) §§ 15061 and 15062.

⁴ 14 CCR § 15063.

⁵ 14 CCR §§ 15070 et seq.

^{6 14} CCR §§ 15080 et seg.

⁷ 14 CCR §§ 15050 and 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

1. What are the physical aspects of the proposed activities? (Check all that apply and provide a brief description of work, including the size or dimensions of the project).

Type of Project	Yes	No	Project Description
Construction (including		\square	
grading, paving, etc.)			
Trenching		\boxtimes	
New or replaced pipelines		\boxtimes	
Modification or conversion of a facility		\boxtimes	
New or modified operation			
of a facility or equipment			
On-road demonstration		\boxtimes	
Paper study (including			
analyses on economics,			
feedstock availability,			
workforce availability, etc.)			
Laboratory research		\square	
Temporary or mobile		\square	
structures (skid-mounted)			
Design/Planning		\boxtimes	
Other (describe and attach sheets as necessary)			The project focuses on software development and testing. The software will be deployed – beyond the scope of this project to automate the inspection process for Title 24, Part 6 enforcement (California's Building Energy Efficiency Standards). Building inspectors, design teams, builders, and acceptance testers are all potential users of the software.

2. Where are the proposed activities located or where will they be located? (Attach additional sheets as necessary.)

Street Address	City/ County	Type of Work to Be Completed at Site
5290 College Ave	Oakland / Alameda	Computer coding and strategic planning.

3. Will the proposed activities potentially have environmental impacts that trigger CEQA review? (Check a box and explain for each question).

Question	Yes	No	Unsure	Explanation
Is the proposed activity site				Primary activity is computer
environmentally sensitive?				coding, happening in offices.
Is the site located on				See above.
agricultural land?				
Are the activities part of a larger	\boxtimes			The computer code developed
project?			🗀	through this funding will

Question	Yes	No	Unsure	Explanation
				eventually be used to assist building departments with the tracking and enforcement of Title 24, Part 6 compliance (California Building Energy Efficiency Standards).
Is there public controversy about the proposed activities or larger project?				We are not aware of any public controversy.
Will historic resources or historic buildings be impacted by the activities?		\boxtimes		Primary activity is computer coding, happening in offices.
Has the proposed site been identified by the Dept. of Toxic Substances Control and the Secretary of the Environmental Protection as being affected by hazardous wastes or cleanup problems?				See above.
Will the activities generate noise or odors in excess of permitted levels?		\boxtimes		See above.
Will the activities increase traffic at the site, and by what amount?		\boxtimes		See above.

4. Will the proposed activities require discretionary permits or determinations, as listed below?

Permit Type	No.	Modified (M) or New (N)	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Issuance Date
Air Quality	none	мПиП	7.901.09	7 milospatou socialiso Bato
Water Quality	none	M N N		
Conditional				
Use or	none	$M \square N \square$		
Variance				
Building	none	$M \square N \square$		
Expansion	Tione	IVI IV		
Hazardous	none	$M \square N \square$		
Waste	110110	101 🗀 10		
Rezoning	none	M 🗌 N 🗌		
Authority to	none	$M \square N \square$		
Construct	Tione	IVI IV		
Other (List	nono			
types):	none	M		

5.	Has any agency lis project?	sted in #4 indicated tha	at it will be the	lead CEQA a	gency for the					
	No.☐ Yes. Provide the phone number, and expenses	name of <u>and</u> contact infemail address):	formation for the	lead agency (d	contact person					
6.	Has any agency listed in #4 prepared or indicated that it will prepare environmental documents (e.g., Notice of Exemption, Initial Study/ Negative Declaration/ Mitigated Negative Declaration, Environmental Impact Report) under CEQA for the proposed project?									
		ne chart below for each a pared environmental doc								
	Name of Agency:									
	Contact person, phon		1		· ·					
	CEQA Determination/Type	Title of Document (Attach the document	State Clearinghouse	Completion Date	Planned Completion					
	of Document	to this form)	Number		Date (must be prior to Energy Commission encumbranc e deadline)					
	Not a project Email Letter Resolution Other:		N/A		N/A					
	Exempt Notice of Exemption Resolution Agenda item approving exemption		N/A							
	Initial Study									
	Negative Declaration									
	Mitigated Negative Declaration									
	Notice of Preparation									
	Environmental Impact Report									
	Master Environmental Impact Report									
	Notice of Determination									

Name of Agency:						
Contact person, phon	e number, email:					
CEQA Determination/Type of Document	Title of Document (Attach the document to this form)	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to Energy Commission encumbranc e deadline)		
NEPA Document ⁸ (Environmental Assessment, Finding of No Significant Impact, and/or Environmental Impact Statement)						

7. If any agency identified in #4 has indicated that it will prepare CEQA documents and has not done so, explain why no document has been prepared and provide an estimated date for approval (must complete the CEQA process within sufficient time for the Energy Commission to meet its encumbrance deadline, as the Energy Commission in its sole and absolute discretion may determine):

N/A

⁸ For additional information about NEPA (the National Environmental Policy Act, 42 U.S.C. 4321 et seq.), see: http://www.epa.gov/compliance/basics/nepa.html.

Nativus

HYPER-EFFICIENT ROTARY AIR CONDITIONER

CEQA Compliance Form

All applicants must <u>complete</u> this form, regardless of whether the proposed activity is considered a "project" as defined below. Answer all questions as completely as possible. The Energy Commission may request additional information in order to clarify the responses provided on this form.

The California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000 et seq.) requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible.¹ Under CEQA, an activity that may cause either a direct or reasonably foreseeable indirect physical change in the environment is called a "project."² An activity funded by a contract, grant, or loan is considered a "project" under CEQA if it will cause a direct or reasonably foreseeable indirect physical change in the environment. Agencies must comply with CEQA before they approve a "project." This may require the preparation of one or more of the following CEQA documents:

- A <u>Notice of Exemption</u> (if the project is exempt from CEQA under an exemption identified in the CEQA statutes or regulations);³
- An <u>Initial Study</u> (if the project may have a significant effect on the environment);⁴
- A <u>Negative Declaration</u> (if the Initial Study shows that the project will not have a significant effect on the environment) or a Mitigated Negative Declaration (if any significant effects identified by the Initial Study can be avoided or mitigated to a level of insignificance);⁵ or
- An Environmental Impact Report (if there is substantial evidence that the project will have significant effects).

The **Lead Agency** is the public agency that has the greatest responsibility for carrying out, supervising, or approving a project, and for preparing environmental review documents under CEQA (e.g., initial study, environmental impact report). Where the award recipient is a *public agency*, the Lead Agency is typically the recipient. Where the award recipient is a *private entity*, the Lead Agency is the public agency that has the greatest responsibility for supervising or approving the project as a whole.⁷

When issuing contracts, grants, or loans, the Energy Commission is typically a "Responsible Agency" under CEQA, which means that it must make CEQA findings based on review of the funded activities and any environmental documents created by the Lead Agency. If the Energy Commission is the only public agency with responsibility for approving the funded activities and the project is not exempt under CEQA, the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project. This form will help the Energy Commission determine what type of CEQA review is necessary before it can approve the award, and which agency will perform any required environmental review as Lead Agency. It may also help the applicant determine the CEQA process necessary for the proposed activities.

¹ For a brief description of CEQA, visit http://www.resources.ca.gov/cega/more/fag.html.

² California Public Resources Code § 21065.

³ 14 California Code of Regulations (CCR) §§ 15061 and 15062.

⁴ 14 CCR § 15063.

⁵ 14 CCR §§ 15070 et seq.

^{6 14} CCR §§ 15080 et seq.

⁷ 14 CCR §§ 15050 and 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

1.	What are the physical aspects of the proposed activities? (Check all that apply and
	provide a brief description of work, including the size or dimensions of the project).

Type of Project	Yes	No	Project Description
Construction (including grading, paving, etc.)			1 Toject Bedeription
Trenching			
New or replaced pipelines			
Modification or conversion of a facility		\boxtimes	
New or modified operation of a facility or equipment		\boxtimes	
On-road demonstration			
Paper study (including analyses on economics, feedstock availability, workforce availability, etc.)		\boxtimes	
Laboratory research		\boxtimes	
Temporary or mobile structures (skid-mounted)		\boxtimes	
Design/Planning			
Other (describe and attach sheets as necessary)			We will be assembling a small air conditioner device approximately 12"x12"x6" in size. We will be testing energy efficiency gains and power consumption reduction using various equipment such as thermal sensors, voltmeters, and airspeed gauges.

2. Where are the proposed activities located or where will they be located? (Attach additional sheets as necessary.)

Street Address	City/ County	Type of Work to Be Completed at Site				
611 Solana Hills Ct	Solana Beach /	Research, development, and construction of				
San Diego		an air conditioner apparatus.				

3. Will the proposed activities potentially have environmental impacts that trigger CEQA review? (Check a box and explain for each question).

Question	Yes	No	Unsure	Explanation
Is the proposed activity site environmentally sensitive?		\boxtimes		
Is the site located on agricultural land?				
Are the activities part of a larger project?		\boxtimes		
Is there public controversy about the proposed activities or		\boxtimes		

Question	Yes	No	Unsure	Explanation
larger project?				
Will historic resources or historic buildings be impacted by the activities?		\boxtimes		
Has the proposed site been identified by the Dept. of Toxic Substances Control and the Secretary of the Environmental Protection as being affected by hazardous wastes or cleanup problems?				
Will the activities generate noise or odors in excess of permitted levels?		\boxtimes		
Will the activities increase traffic at the site, and by what amount?		\boxtimes		
		•	•	•

4. Will the proposed activities require discretionary permits or determinations, as listed below?

Permit Type	No.	Modified (M) or New (N)	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Issuance Date
Air Quality		$M \square N \square$		None
Water Quality		M 🗌 N 🗌		None
Conditional Use or Variance		M \square N \square		None
Building Expansion		M 🗌 N 🗌		None
Hazardous Waste		M 🗌 N 🗌		None
Rezoning		$M \square N \square$		None
Authority to Construct		M 🗌 N 🗌		None
Other (List types):		M 🗆 N 🗆		None

5.	project?	agency	iistea i	n #4	indicated	tnat	it Will	be	tne	iead	CEQA	agency	tor	tne
	⊠ No. □ Yes. I	Provide t	he name	e of a	ınd contact	infor	matior	ı for	the	lead :	agencv	(contact	pers	son.

phone number, and email address):

6.	Has any agency listed in #4 prepared or indicated that it will prepare environmenta documents (e.g., Notice of Exemption, Initial Study/ Negative Declaration/ Mitigated Negative Declaration, Environmental Impact Report) under CEQA for the proposed project? No. Yes. Complete the chart below for each agency. Cut and paste the chart if more than									
	one agency has prep to this form.	pared environmental doc	uments. Attach a	any document i	dentified below					
	Name of Agency: Contact person, phon	ne number email:								
	CEQA Determination/Type of Document	Title of Document (Attach the document to this form)	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to Energy Commission encumbranc e deadline)					
	Not a project Email Letter Resolution Other:		N/A		N/A					
	Exempt Notice of Exemption Resolution Agenda item approving exemption		N/A							
	Initial Study Negative Declaration									
	Mitigated Negative Declaration									
	Notice of Preparation									
	Environmental Impact Report									
	Master									
	Environmental Impact Report									
	Notice of Determination									
	NEPA Document ⁸ (Environmental Assessment, Finding of No Significant									

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Name of Agency:										
Contact person, phon	Contact person, phone number, email:									
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Impact, and/or Environmental Impact Statement)										

7. If any agency identified in #4 has indicated that it will prepare CEQA documents and has not done so, explain why no document has been prepared and provide an estimated date for approval (<u>must complete the CEQA process within sufficient time for the Energy Commission to meet its encumbrance deadline, as the Energy Commission in its sole and absolute discretion may determine):</u>

PowerFlex Systems, Inc.

OPTIMAL LOAD SHARING OF DCFC AND LEVEL-2 CHARGING AT WORK

CEQA Compliance Form

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- A <u>Notice of Exemption</u> (if the project is exempt from CEQA under an exemption identified in the CEQA statutes or regulations);³
- An <u>Initial Study</u> (if the project may have a significant effect on the environment);⁴
- A <u>Negative Declaration</u> (if the Initial Study shows that the project will not have a significant effect on the environment) or a Mitigated Negative Declaration (if any significant effects identified by the Initial Study can be avoided or mitigated to a level of insignificance);⁵ or
- An Environmental Impact Report (if there is substantial evidence that the project will have significant effects).⁶

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When issuing contracts, grants, or loans, the Energy Commission is typically a "Responsible Agency" under CEQA, which means that it must make CEQA findings based on review of the funded activities and any environmental documents created by the Lead Agency. If the Energy Commission is the only public agency with responsibility for approving the funded activities and the project is not exempt under CEQA, the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project. This form will help the Energy Commission determine what type of CEQA review is necessary before it can approve the award, and which agency will perform any required environmental review as Lead Agency. It may also help the applicant determine the CEQA process necessary for the proposed activities.

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² California Public Resources Code § 21065.

³ 14 California Code of Regulations (CCR) §§ 15061 and 15062.

⁴ 14 CCR § 15063.

⁵ 14 CCR §§ 15070 et seq.

^{6 14} CCR §§ 15080 et seq.

⁷ 14 CCR §§ 15050 and 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

1. What are the physical aspects of the proposed activities? (Check all that apply and provide a brief description of work, including the size or dimensions of the project).

Type of Project	Yes	No	Project Description
Construction (including grading, paving, etc.)			PowerFlex is in the business of managing EV charging to optimize the charging process in real time through cloud-based software. For some customers (e.g., a workplace), we sell them chargers and a controller, they install the chargers, controller, and associated electric equipment themselves (e.g., electric panels, cables, and sometimes transformers), and we manage the charging facility in the cloud after the installation is done. In this case, PowerFlex is not involved in construction. For some customers, we provide turnkey solution where we will contract electricians to do the installation. In all cases, the construction is standard for installing electric equipment. NOTE: Our CalSEED project will focus on developing new product features, all in software, and test and deploy them in some of our existing facilities (such as Caltech, JPL, some high schools in the Bay Area), through software upgrade over air from the cloud. We
Trenching			therefore do not expect the CalSEED project activity itself to involve Construction. Refer to the Project Description above (on "Construction"). We always avoid trenching to minimize costs. Occasionally, trenching is involved to lay cable from a panel to the EV chargers, typically minimal. As noted above, we do not expect the CalSEED project activity itself to involve Trenching.
New or replaced pipelines	П		
Modification or conversion of a facility			Except described in Project Description for "Construction" above.
New or modified operation of a facility or equipment			Except the addition of EV chargers, as described in Project Description for "Construction" above.
On-road demonstration		\boxtimes	
Paper study (including analyses on economics, feedstock availability, workforce availability, etc.)			
Laboratory research		\boxtimes	

Type of Project	Yes	No	Project Description
Temporary or mobile structures (skid-mounted)		\boxtimes	
Design/Planning			Refer to the Project Description above on "Construction". When we provide a turnkey solution, we decide the layout of EV chargers, controllers, cables, panels, etc to supply electric power from their electric room to the parking spaces. The planning is typically very simple as there are not many ways to lay cables from an electric room to the parking spaces. As noted above, we do not expect the CalSEED project activity itself to involve Design/Planning.
Other (describe and attach sheets as necessary)		\boxtimes	

2. Where are the proposed activities located or where will they be located? (Attach additional sheets as necessary.)

Street Address	City/ County	Type of Work to Be Completed at Site
450 First St, Suite P	Los Altos, CA 94022	The software development will be at PowerFlex office, hosted in PowerFlex servers as well as Amazon cloud. Testing of the software will be at PowerFlex office as well as some of our existing deployment sites, such as Caltech, JPL, some high schools near PowerFlex office in the Bay Area. It will be carried out through software upgrade over air from the cloud.

3. Will the proposed activities potentially have environmental impacts that trigger CEQA review? (Check a box and explain for each question).

Question	Yes	No	Unsure	Explanation
Is the proposed activity site environmentally sensitive?				They are workplaces, e.g., Caltech, JPL, some high schools in the Bay Area
Is the site located on agricultural land?		\boxtimes		
Are the activities part of a larger project?				Our CalSEED project will focus on developing new product features, all in software, and test and deploy them in some of our existing facilities . Once these features are fully tested,

Question	Yes	No	Unsure	Explanation
				they will be deploy at almost all our deployment sites through software upgrade over air from the cloud.
Is there public controversy about the proposed activities or larger project?				
Will historic resources or historic buildings be impacted by the activities?				
Has the proposed site been identified by the Dept. of Toxic Substances Control and the Secretary of the Environmental Protection as being affected by hazardous wastes or cleanup problems?				Not to our knowledge.
Will the activities generate noise or odors in excess of permitted levels?				
Will the activities increase traffic at the site, and by what amount?		\boxtimes		

4. Will the proposed activities require discretionary permits or determinations, as listed below?

No, because our CalSEED project will focus on developing new product features, all in software, and test and deploy them in some of our **existing facilities**, through software upgrade over air from the cloud.

Permit Type	No.	Modified (M) or New (N)	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Issuance Date
Air Quality	N/A	M		
Water Quality	N/A	M 🗌 N 🗌		
Conditional Use or Variance	N/A	M 🗆 N 🗆		
Building Expansion	N/A	M 🗆 N 🗆		
Hazardous Waste	N/A	M 🗌 N 🗌		
Rezoning	N/A	M \square N \square		
Authority to Construct	N/A	M 🗆 N 🗆		

Permit Type	No.	Modified (M) or New (N)	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Issuance Date	
Other (List types):	N/A	M 🗌 N 🗌			

				J J						
	Other (List types):	N/A	M 🗆 N 🗆							
5.	Has any ager project?	ncy listed in	#4 indicated th	hat it will be the	e lead CEQA a	gency for the				
	 No. Yes. Provide the name of <u>and</u> contact information for the lead agency (contact person phone number, and email address): 									
6.	documents (e	e.g., Notice o	of Exemption, I	indicated that in nitial Study/ Neg pact Report) und	jative Declarat	ion/ Mitigated				
	 No. Yes. Complete the chart below for each agency. Cut and paste the chart if more than one agency has prepared environmental documents. Attach any document identified below to this form. 									
	Name of Agend	•								
	Contact person			1	1					
	Determination/Type (Attac		f Document h the document form)	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to Energy Commission encumbranc e deadline)				
	Not a project Email Letter Resolution Other:			N/A		N/A				
	Exempt Notice of Exemption Resolution Agenda item approving exem			N/A						
	Initial Study	- ti								
	Negative Declar Mitigated Negati									
	Declaration	IVG								

Name of Agency:	Name of Agency:							
Contact person, phone number, email:								
CEQA Determination/Type of Document	Title of Document (Attach the document to this form)	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to Energy Commission encumbranc e deadline)				
Notice of Preparation								
Environmental Impact Report								
Master Environmental Impact Report								
Notice of Determination								
NEPA Document ⁸ (Environmental Assessment, Finding of No Significant Impact, and/or Environmental Impact Statement)								

7. If any agency identified in #4 has indicated that it will prepare CEQA documents and has not done so, explain why no document has been prepared and provide an estimated date for approval (must complete the CEQA process within sufficient time for the Energy Commission to meet its encumbrance deadline, as the Energy Commission in its sole and absolute discretion may determine):

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⁸ For additional information about NEPA (the National Environmental Policy Act, 42 U.S.C. 4321 et seq.), see: http://www.epa.gov/compliance/basics/nepa.html.

Sepion Technologies

EV BOOST (ELECTRIC VEHICLE – BATTERY OPTIMIZATION OPPORTUNITIES FOR SUSTAINABLE TRANSPORTATION)

CEQA Compliance Form

All applicants must <u>complete</u> this form, regardless of whether the proposed activity is considered a "project" as defined below. Answer all questions as completely as possible. The Energy Commission may request additional information in order to clarify the responses provided on this form.

The California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000 et seq.) requires public agencies to identify the significant environmental impacts of their actions and to avoid or mitigate them, if feasible.¹ Under CEQA, an activity that may cause either a direct or reasonably foreseeable indirect physical change in the environment is called a "project."² An activity funded by a contract, grant, or loan is considered a "project" under CEQA if it will cause a direct or reasonably foreseeable indirect physical change in the environment. Agencies must comply with CEQA before they approve a "project." This may require the preparation of one or more of the following CEQA documents:

- A <u>Notice of Exemption</u> (if the project is exempt from CEQA under an exemption identified in the CEQA statutes or regulations);³
- An <u>Initial Study</u> (if the project may have a significant effect on the environment);⁴
- A <u>Negative Declaration</u> (if the Initial Study shows that the project will not have a significant effect on the environment) or a Mitigated Negative Declaration (if any significant effects identified by the Initial Study can be avoided or mitigated to a level of insignificance);⁵ or
- An Environmental Impact Report (if there is substantial evidence that the project will have significant effects).⁶

The **Lead Agency** is the public agency that has the greatest responsibility for carrying out, supervising, or approving a project, and for preparing environmental review documents under CEQA (e.g., initial study, environmental impact report). Where the award recipient is a *public agency*, the Lead Agency is typically the recipient. Where the award recipient is a *private entity*, the Lead Agency is the public agency that has the greatest responsibility for supervising or approving the project as a whole.⁷

When issuing contracts, grants, or loans, the Energy Commission is typically a "Responsible Agency" under CEQA, which means that it must make CEQA findings based on review of the funded activities and any environmental documents created by the Lead Agency. If the Energy Commission is the only public agency with responsibility for approving the funded activities and the project is not exempt under CEQA, the Energy Commission must act as the Lead Agency and prepare its own environmental documents before approving the project. This form will help the Energy Commission determine what type of CEQA review is necessary before it can approve the award, and which agency will perform any required environmental review as Lead Agency. It may also help the applicant determine the CEQA process necessary for the proposed activities.

¹ For a brief description of CEQA, visit http://www.resources.ca.gov/cega/more/fag.html.

² California Public Resources Code § 21065.

³ 14 California Code of Regulations (CCR) §§ 15061 and 15062.

⁴ 14 CCR § 15063.

⁵ 14 CCR §§ 15070 et seq.

^{6 14} CCR §§ 15080 et seq.

⁷ 14 CCR §§ 15050 and 15051. The Lead Agency typically has general governmental powers (such as a city or county), rather than a single or limited purpose (such as an air pollution control district).

What are the physical asprovide a brief description		•			SIZE (or dimens			
Construction (including grading, paving, etc.)									
Trenching	П								
New or replaced pipelines	Ħ								
Modification or conversion of a facility									
New or modified operation of a facility or equipment									
On-road demonstration	П								
Paper study (including									
analyses on economics, feedstock availability,									
workforce availability, etc.)		4_							
Laboratory research	\boxtimes	$\perp \downarrow \sqcup$	\perp						
Temporary or mobile	П								
structures (skid-mounted)									
Design/Planning	Ш								
Other (describe and attach	П								
sheets as necessary)									
additional sheets as necessary and the sheets are not sheet as necessary and the sheets are not sheet as necessary and the sheet as necessary and the sheet as necessary and the sheet and the sheet and the sheet as necessary and the sheet as ne	mery			Research Technolog		nd engin	eering	at	Sepion
Will the proposed activities review? (Check a box and					nme	ntal impa	ts that	trigg	er CEQ
Is the proposed activity site	•		r eacl						
environmentally sensitive?									
environmentally sensitive? Is the site located on					on).				
environmentally sensitive? Is the site located on agricultural land? Are the activities part of a lar project?	ger			n questic	on).	We are de energy de variety of f	nse bat	g saf	s with a
environmentally sensitive? Is the site located on agricultural land? Are the activities part of a larger				n questic	on).	energy de	nse bat	g saf	s with a

Californi		riitai Qu	anı	y ACI (CEQ	A) Compliance I offi		
Question		Yes	No	Unsure	Explanation		
by the activities							
Has the propidentified by the Substances Conservation as hazardous was problems?	ic ne al						
Will the action noise or odo permitted level		\boxtimes					
Will the actraffic at the samount?	se at						
Will the proposed activities require discretionary permits or determinations, as listed below?							
Permit Type		Modified (or New (N	. ,	Approving Public	Reason for Permit, Summary of Process, and		

Permit Type	No.	Modified (M) or New (N)	Approving Public Agency	Reason for Permit, Summary of Process, and Anticipated Issuance Date
Air Quality	None	$M \square N \square$		
Water Quality	None	M 🗌 N 🗌		
Conditional Use or Variance	None	МПИП		
Building Expansion	None	M 🗌 N 🗌		
Hazardous Waste		M 🗌 N 🗌		
Rezoning	None	$M \square N \square$		
Authority to Construct	None	M 🗆 N 🗆		
Other (List types):	None	M \square N \square		

5.	Has any agency listed in #4 indicated that it will be the lead CEQA agency for the project?
	⊠ No.
	Yes. Provide the name of and contact information for the lead agency (contact person,
	phone number, and email address):

4.

6.	Has any agency listed in #4 prepared or indicated that it will prepare environmental documents (e.g., Notice of Exemption, Initial Study/ Negative Declaration/ Mitigated Negative Declaration, Environmental Impact Report) under CEQA for the proposed project? No. Yes. Complete the chart below for each agency. Cut and paste the chart if more than one agency has prepared environmental documents. Attach any document identified below to this form. Name of Agency: Contact person, phone number, email:								
	Not a project Email Letter Resolution Other:								
	Exempt Notice of Exemption Resolution Agenda item approving exemption								
	Initial Study								
	Negative Declaration Mitigated Negative Declaration								
	Notice of Preparation Environmental Impact Report								
	Master Environmental Impact Report								
	Notice of Determination								
	NEPA Document ⁸ (Environmental Assessment, Finding of No Significant Impact, and/or Environmental Impact								

⁸ For additional information about NEPA (the National Environmental Policy Act, 42 U.S.C. 4321 et seq.), see: http://www.epa.gov/compliance/basics/nepa.html.

Name of Agency:								
Contact person, phone number, email:								
CEQA Determination/Type of Document	Title of Document (Attach the document to this form)	State Clearinghouse Number	Completion Date	Planned Completion Date (must be prior to Energy Commission encumbranc e deadline)				
Statement)								

7. If any agency identified in #4 has indicated that it will prepare CEQA documents and has not done so, explain why no document has been prepared and provide an estimated date for approval (must complete the CEQA process within sufficient time for the Energy Commission to meet its encumbrance deadline, as the Energy Commission in its sole and absolute discretion may determine):

RESOLUTION NO: 2019-0119-8

STATE OF CALIFORNIA

STATE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CALIFORNIA CLEAN ENERGY FUND DBA CALCEF VENTURES

WHEREAS, pursuant to Public Resources Code section 25710 et seq. the State Energy Resources Conservation and Development Commission ("Energy Commission") is authorized to establish and administer the Electric Program Investment Charge (EPIC) Program; and

WHEREAS, the Energy Commission has recognized that California's electricity ratepayers benefit from energy research, development and demonstration ("RD&D") activities conducted by individuals, small businesses, academics and small non-profit institutions; and

WHEREAS, the Energy Commission has created the California Sustainable Energy Entrepreneur Development (CalSEED) Initiative within the EPIC Program to provide funding for the aforementioned public interest RD&D activities; and

WHEREAS, the California Clean Energy Fund ("CalCEF") is the administrator of the CalSEED Initiative under Agreement Number 300-15-007 and is responsible for soliciting grant applications, recommending grant awards to the Energy Commission, and managing authorized grant projects; and

WHEREAS, CalCEF has completed a Prototype Award Business Plan Competition, a competitive solicitation open to eligible CalSEED Concept Award winners, and has requested a total of \$1,800,000 for the following four small grant projects:

1. \$450,000 is being requested for the "Expanding Coverage of Advanced Compliance Technology, with Ongoing Central Valley Demonstration" project with CodeCycle, LLC, a project to expand the functionality of software that improves building energy code compliance by using data-driven web and mobile software to streamline the compliance process for design teams, contractors, and building inspectors.

- 2. \$450,000 is being requested for the "Hyper-Efficient Rotary Air Conditioner" project with Nativus, a project to create and test a prototype, highly efficient portable room air conditioner with a substantially lower weight and a 50% power reduction compared to the industry standard while providing similar cooling capacity.
- 3. \$450,000 is being requested for the "Optimal Load Sharing of DCFC and Level-2 Charging at Work" project with PowerFlex Systems, Inc., a project to prototype an expanded software system that jointly optimizes multiple levels of electric vehicle (EV) charging, solar photovoltaic generation, energy storage, customer preferences, and building load.
- 4. \$450,000 is being requested for the "EV BOOST (Electric Vehicle Battery Optimization Opportunities for Sustainable Transportation)" project with Sepion Technologies, a project to scale a prototype battery membrane that enables drop-in, roll-to-roll manufacturing of lithium-metal anode batteries with significantly greater energy density compared to traditional graphite anode lithium-ion batteries.

WHEREAS, Energy Commission staff have reviewed the proposed projects and determined that categorical exemptions apply to each project, as described in the Staff CEQA Compliance Analysis Memorandum dated January 2, 2019, a document that is included in the backup materials to this Business Meeting item.

THEREFORE BE IT RESOLVED, that the Energy Commission adopts Staff's CEQA findings for the four proposed projects contained in the Staff CEQA Compliance Analysis Memorandum dated January 2, 2019; and

FURTHER BE IT RESOLVED, that the Energy Commission approves the four projects proposed for funding from CalCEF's Prototype Award Business Plan Competition for a total of \$1,800,000; and

FURTHER BE IT RESOLVED, that the Energy Commission directs CalCEF to execute grant agreements with the approved projects pursuant to Agreement Number 300-15-007; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on January 9, 2019.

AYE: [List of Commissioners]
NAY: [List of Commissioners]
ABSENT: [List of Commissioners]
ABSTAIN: [List of Commissioners]

Cody Goldthrite, Secretariat