



**CALIFORNIA
ENERGY COMMISSION**



California Energy Commission

STAFF REPORT

Electric Program Investment Charge 2023 Annual Report

Appendices A-D

April 2024 | CEC-500-2024-028-APA-D



California Energy Commission

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APPENDIX A: 2023 CEC EPIC Reporting Requirements and Budget Summaries

The California Energy Commission (CEC) is committed to transparency and full compliance with all applicable Electric Program Investment Charge (EPIC) reporting and informational requirements.

This annual report has been prepared in accordance with both statutory and regulatory reporting requirements and will be submitted to the California Legislature and the California Public Utilities Commission (CPUC) after CEC adoption at a Business Meeting.

Reporting requirements in Public Resources Code Sections 25711.5(f) and as specified in CPUC Decisions relating to the EPIC program are referenced in Tables A-1 and A-2, including the location where the information can be found. Budget information for the CEC's administration of EPIC is also provided in summary tables A-3 through A-10.

The CEC must prepare and submit its EPIC Annual Report to the California Legislature and the CPUC no later than April 30 of each year.

2023 CEC EPIC Reporting Requirements

**Table A-1: CEC EPIC Reporting Requirements to the Legislature
Calendar Year 2023**

Legislative Requirement	Information/Location
<p>A. <u>Annual Report to Legislature</u>: Public Resources Code Section 25711.5(f) requires an annual report to the Legislature. The annual report must contain all information as described in Section 25711.5(f)(1)-(8) as follows:</p>	<p>See below.</p>
<p>(1) A brief description of each project for which funding was awarded in the immediately prior calendar year, including the name of the recipient and the amount of the award, a description of how the project is thought to lead to technological advancement or breakthroughs to overcome barriers to achieving the state’s statutory energy goals, and a description of why the project was selected.</p>	<p><u>Energize Innovation Showcase</u> at https://www.energizeinnovation.fund and the CPUC’s <u>EPIC Database</u> at https://www.epicpartnership.org</p>
<p>(2) A brief description of each project funded by the EPIC program that was completed in the immediately prior calendar year, including the name of the recipient, the amount of the award, and the outcomes of the funded project.</p>	<p><u>Energize Innovation Showcase</u> at https://www.energizeinnovation.fund and CPUC’s <u>EPIC Database</u> at https://www.epicpartnership.org</p>
<p>(3) A brief description of each project funded by the EPIC program for which an award was made in the previous years but that is not completed, including the name of the recipient and the amount of the award, and a description of how the project will lead to technological advancement or breakthroughs to overcome barriers to achieving the state’s statutory energy goals.</p>	<p><u>Energize Innovation Showcase</u> at https://www.energizeinnovation.fund and CPUC’s <u>EPIC Database</u> at https://www.epicpartnership.org</p>
<p>(4) Identification of the award recipients that are California-based entities, small businesses, or businesses owned by women, minorities, or disabled veterans.</p>	<p>Appendix C to this annual report.</p>

Legislative Requirement	Information/Location
<p>(5) Identification of which awards were made through a competitive bid, interagency agreement, or sole source method, and the action of the Joint Legislative Budget Committee (JLBC) pursuant to paragraph (2) of subdivision (h) for each award made through an interagency agreement or sole source method.</p>	<p>Appendix C to this annual report identifies award methods for all agreements.</p> <p>Information for interagency and sole source agreements and JLBC action, as of December 31, 2023, is provided in Appendix A of this annual report.</p>
<p>(6) Identification of the total amount of administrative and overhead costs incurred for each project.</p>	<p>Appendix C to this annual report.</p>
<p>(7) A brief description of the impact on program administration from the allocations required to be made pursuant to Section 25711.6, including any information that would help the Legislature determine whether to reauthorize those allocations beyond June 30, 2023.</p>	<p>Section 25711.6 became inoperative on July 1, 2023, and is repealed, as of January 1, 2024.</p> <p>Accordingly, this impact requirement is expired.</p>
<p>(8) Identify the projects that received follow-on funding, the amount of follow-on funding each project received, and the method and criteria that was used for their selection.</p>	<p>Appendix A identifies the twelve projects awarded EPIC follow-on funding as of December 31, 2023, including the criteria used to select the projects.</p> <p>These projects were awarded through an Invitation for Bid method. As part of this method, CEC staff identify project recipients, based on prior project performance, policy impact and statutory requirements for follow-on funding, and invite them to submit a proposal for follow-on funding. A CEC technical evaluation committee reviews and evaluates the proposals and recommends whether the project merits follow-on funding. The proposed follow-on agreement is then considered for approval at a CEC Business Meeting.</p>

Source: California Energy Commission Staff

**Table A-2: CEC EPIC Reporting Requirements for the CPUC
Calendar Year 2023**

CPUC Requirement	Information/Location
<p><u>A. Annual Report to Legislature:</u> CPUC D.13-11-025, OP 29, requires that the annual report prepared and submitted to the Legislature pursuant to Public Resources Code Section 25711.5, also be submitted to the CPUC.</p>	<p>The annual report prepared and submitted to the Legislature pursuant to Public Resources Code Section 25711.5(f) will be submitted to the CPUC upon submittal to the Legislature.</p>
<p><u>B. Annual Report to CPUC:</u> CPUC D. 23-04-042, OP 8, requires EPIC administrators to file annual reports with the CPUC on April 30 of each year, via a Tier 2 Advice Letter that follows the outline within Appendix C.</p>	<p>The annual report has been prepared in accordance with applicable CPUC reporting requirements reflected in D. 23-04-042 and will be filed with the CPUC after CEC adoption at a Business Meeting.</p>
<p><u>C. Service:</u> CPUC D. 12-05-037, OP 16, requires service of the annual report on all parties in the most recent EPIC proceeding; all parties to the most recent general rate case of each investor-owned utility (IOU); and each successful and unsuccessful applicant for an EPIC funding award during the previous calendar year.</p>	<p>This requirement has expired, but this annual report will be served on all parties in the most recent EPIC proceeding; all parties to the most recent general rate case of each IOU; and each successful and unsuccessful applicant for a CEC EPIC funding award during the previous calendar year.</p>
<p><u>D. Information Availability:</u> CPUC D.13-11-025, OP 13, requires EPIC administrators, except when valid reasons exist for confidentiality, to make all data, findings, results, computer models and other products developed through EPIC available upon request consistent with the treatment of intellectual property requirements.</p>	<p>This requirement has expired, but the CEC has and will continue to respond to all requests for information in accordance with any confidentiality requirements and consistent with the treatment of intellectual property requirements. Requests can be sent to the CEC's <u>Energy Research and Development Division</u> at erdd@energy.ca.gov.</p>
<p><u>E. Project Reporting:</u> CPUC D.13-11-025, OP 14, requires annual reports to include a final report for every project completed during the previous year, including a comprehensive description of the project, detailed findings and results, a summary of all data collected, and how the data may be accessed.</p>	<p>Final project report links for projects completed in 2023 are provided in Appendix B, Table B-10, and captured in the <u>Energize Innovation Showcase</u> at https://www.energizeinnovation.fund and in CPUC's <u>EPIC Database</u> at</p>

CPUC Requirement	Information/Location
<p>CPUC D. 23-04-042, OP 8, clarifies that annual reports should provide information about each project from the past year via a Tier 2 Advice Letter that follows the outline within Appendix C. Additionally, Administrators are no longer required to include a spreadsheet with the annual report (D.13-11-025 Attachment 6), because this data should be captured in the EPIC database. <i>See</i> CPUC D. 23-04-042, 38. However, if the EPIC database contains insufficient or missing information, Administrators shall be required to resubmit within 30 days. <i>See</i> CPUC D. 23-04-042, OP 8.</p>	<p>https://www.epicpartnership.org The annual report prepared and submitted to the Legislature will be submitted to the CPUC accompanied by a Tier 2 Advice Letter setting forth project-level information in section 4 of the Tier 2 Advice Letter.</p>
<p><u>F. Awards:</u> CPUC D. 13-11-025, OP 15, requires annual reports to identify the use of noncompetitive awards.</p>	<p>This requirement has expired, but this information is provided in Appendix A of this annual report.</p>
<p><u>G. Project Reporting:</u> CPUC D.13-11-025, OP 17, requires annual reports to include project-level information on the number of bidders passing the initial pass/fail screening; the rank of the selected bidder; and if the selected bidder was not the highest scoring bidder, the project status report must also explain why a lower scoring bidder was selected.</p>	<p>The requirement to include detailed bidder information has expired, and Section 25711.5(f)(5) requires only identification of bidding information, but requests can be sent to the CEC’s <u>Energy Research and Development Division</u> at erdd@energy.ca.gov.</p>
<p><u>H. Project Reporting:</u> CPUC D.13-11-025, OP 18, requires a justification for contracts or grants exempted from competitive bidding. Additionally, CPUC D. 18-10-052, pages 22-23, states that administrators should include a detailed explanation for the use of non-competitive processes.</p> <p>Furthermore, D.20-02-003 directed IOU administrators to provide greater transparency, primarily in the form of Direct Award Request Forms in their respective Annual reports. The method used to grant awards for each project is now reported in the EPIC database. <i>See</i> D.20-02-003, at 13.</p>	<p>The requirement to include a justification and detailed explanation has expired, and Section 25711.5(f)(5) requires only identification of bidding information, but requests can be sent to the CEC’s <u>Energy Research and Development Division</u> at erdd@energy.ca.gov.</p> <p>This information for interagency and sole source agreements and JLBC action is provided in this annual report. Through 2023, the CEC has made 4 EPIC awards through either an interagency or sole source method.</p>
<p><u>I. Annual Report:</u> Administrators are no longer required to include a spreadsheet with the annual report (D.13-11-025</p>	<p>The annual report prepared and submitted to the Legislature will be submitted to the CPUC</p>

CPUC Requirement	Information/Location
<p>Attachment 6), because this data should be captured in the EPIC database. See CPUC D. 23-04-042, 38. However, if the EPIC database contains insufficient or missing information, Administrators shall be required to resubmit within 30 days. See CPUC D. 23-04-042, OP 8.</p>	<p>accompanied by a Tier 2 Advice Letter setting forth the Initiative information.</p> <p>The CPUC’s EPIC Database provides substantive reporting for EPIC projects at https://www.epicpartnership.org.</p>
<p><u>J.</u> <u>Annual Report</u>: CPUC D. 23-04-042, OP 2, requires that annual reports indicate how the administrator’s investment plans meet the standards set forth in the Environmental and Social Justice Action Plan, Distributed Energy Resources Action Plan, and the federal Justice40 Initiative.</p> <p>Additionally, OP 2 requires that annual reports shall indicate how the administrator investment plans meet the following requirement:</p> <p>The EPIC 4 Investment Plans shall dedicate at least 25 percent of technology demonstration and deployment (TD&D) funds toward projects located in and benefitting disadvantaged communities and at least an additional 10 percent allocation of TD&D funds toward projects located in and benefitting low-income communities.</p>	<p>This annual report provides the required descriptions of how the CEC meets the standards ordered in D. 23-04-042, OP 2, and will be submitted to the CPUC accompanied by a Tier 2 Advice Letter setting forth the Initiative information.</p>
<p><u>K.</u> CPUC D. 23-04-042, pages 38-39, requires EPIC administrators to report how EPIC funds were leveraged with any non-EPIC public clean energy innovation funds to advance the State’s climate goals in alignment with the requirement of D.12-05-037 to use and leverage matching funds whenever possible.</p>	<p>The annual report submitted to the Legislature will be submitted to the CPUC accompanied by a Tier 2 Advice Letter setting forth the Initiative information.</p>
<p><u>L.</u> <u>Annual Report</u>: CPUC D. 23-04-042, OP 9, requires all EPIC administrators to post clearly and prominently in their annual reports and on all program, project, and outreach materials, websites, and any other public materials (including those of third-party EPIC contractors) the following language consistent with other utility ratepayer funding programs: This program is funded by California utility customers under the auspices of the California Public Utilities Commission.</p>	<p>The required language from CPUC D. 23-04-042, OP 9 is posted on all program, project, and outreach materials, websites, and any other public materials.</p>

CPUC Requirement	Information/Location
<p><u>M. Information Availability:</u> CPUC D. 13-11-025, OP 29(b), requires that, at the CPUC’s request, the CEC give the CPUC full access rights to all EPIC research, development, and demonstration, reports, intellectual property (IP), and data to which the CEC has access, with appropriate protections for proprietary data and IP against public disclosure.</p>	<p>This requirement has expired, but the CEC remains able and willing to comply with any CPUC requests pursuant to this requirement. Requests can be sent to the <u>Energy Research and Development Division</u> at erdd@energy.ca.gov.</p>
<p><u>N. Information Availability:</u> CPUC D. 13-11-025, page 64, encourages the CEC to make its annual reports accessible to the public on its EPIC webpage and through its public advisor.</p>	<p>This requirement has expired, but the CEC posts its EPIC annual reports on its <u>Energy Research and Development Investment Plans and Annual Reports</u> webpage at https://www.energy.ca.gov/data-reports/reports/energy-research-and-development-investment-plans-and-annual-reports, and makes its reports available through its public advisor’s office.</p>
<p><u>O. Project Reporting:</u> CPUC D. 15-04-020, OP 6, requires the identification of any specific CPUC proceedings addressing issues related to each EPIC project.</p>	<p>This requirement has expired, but the CEC provides this information to the CPUC for their EPIC Database at https://www.epicpartnership.org, which identifies specific CPUC proceedings related to each CEC EPIC-funded project. In addition, CEC and CPUC staff have implemented regular coordination meetings to identify and discuss potential intersections between CEC EPIC projects and CPUC proceedings.</p>
<p><u>P. Project Reporting:</u> CPUC D. 15-04-020, page 53, requires that if an IOU administrator chooses to be a necessary partner on a CEC EPIC project, the IOU may use its EPIC funds for in-house costs and the IOU’s reports shall identify the CEC project title and amount of IOU funding used, but the CEC shall be responsible for all other substantive reporting as with all its other projects.</p>	<p>This requirement has expired, but <u>Energize Innovation Showcase</u> at https://www.energizeinnovation.fund provides all substantive reporting for CEC EPIC projects, including any joint IOU and CEC projects.</p>

CPUC Requirement	Information/Location
<p><u>Q. Fund Shifts Between Program Areas:</u> EPIC administrators were required to obtain CPUC approval to shift more than 5 percent of budgeted funds for each funding category or program area or to new categories of funding within an approved EPIC triennial investment plan.¹ D. 21-11-028, OP 9, however, eliminated the CPUC approval requirement for shifting more than 5 percent of funds. Going forward, the CEC is "authorized to reallocate up to 15 percent of funds among each of their approved initiatives without additional Commission approval."²</p>	<p>Information on the funds that were shifted as of December 31, 2023, is provided in Appendix A.</p> <p>The CEC has no pending requests to CPUC to shift funds above 5% (triennial plan and interim fourth plan) or 15% (EPIC full fourth Plan).</p>

Source: California Energy Commission Staff

¹ CPUC Decision 13-11-025, Ordering Paragraph 36.

² D. 21-11-028, OP 10.

CEC EPIC Budget Information for Calendar Year 2023

The following tables provide approved budget information for the CEC’s administration of EPIC through 2023. Additional project related information is provided where applicable.

Table A-3: California Public Utilities Commission Approved, Escalated Energy Commission Electric Program Investment Charge Funding for 2018–2020

Funding Element/Program Area	Total
Applied Research and Development	\$158,912,222
Technology Demonstration and Deployment	\$172,237,778
Market Facilitation	\$66,230,000
Subtotal	\$397,380,000
Program Administration	\$44,400,000
Total	\$441,780,000

Source: California Energy Commission Staff

Table A-4: California Public Utilities Commission Approved, Energy Commission Electric Program Investment Charge Funding for 2021-2025 Interim (Year 1)

Funding Element/Program Area	Total
Applied Research and Development	\$41,200,000
Technology Demonstration and Deployment	\$75,000,000
Market Facilitation	\$16,334,000
Subtotal	\$132,534,000
Program Administration	\$14,726,000
Total	\$147,260,000

Source: California Energy Commission Staff

Table A-5: California Public Utilities Commission Approved, Energy Commission Electric Program Investment Charge Funding for 2021-2025 (Years 2-5)

Funding Element/Program Area	Total
Non-Variable Renewable Energy	\$23,000,000
Variable Renewable Energy	\$29,000,000
Clean, Dispatchable Resources	\$55,000,000
Grid Modernization	\$27,240,000
Distributed Energy Resource Integration and Load Flexibility	\$86,000,000
Transportation Electrification	\$59,000,000
Industrial Decarbonization	\$46,000,000
Building Decarbonization	\$60,000,000
Entrepreneurial Support	\$63,800,000
Scaling Clean Energy Technology	\$18,200,000
Climate Resiliency	\$18,000,000
Environmental Sustainability	\$15,000,000
Subtotal	\$500,240,000
Program Administration	\$88,800,000
Total	\$589,040,000

Source: California Energy Commission Staff

Table A-6 summarizes the committed project funds and encumbered project funds for each EPIC investment plan. The data in this table are current as of December 31, 2023.

Table A-6: Committed and Encumbered Project Funding by Electric Program Investment Charge Investment Plan (as of December 31, 2023)

Investment Plan	Approved Plan Project Funds	Committed Project Funds	Encumbered Project Funds
2012-2014	\$331,800,000	\$331,800,000	\$328,246,114
2015-2017	\$365,004,500	\$365,004,500	\$348,857,997
2018-2020	\$397,380,000	\$397,380,000	\$396,716,248
2021-2025 Interim	\$132,534,000	\$132,534,000	\$78,283,007
2021-2025	\$500,240,000	\$500,240,000	\$55,884,393
Total	\$1,726,958,500	\$1,726,958,500	\$1,207,987,759

Source: California Energy Commission Staff

Table A-7 summarizes the new projects awarded by solicitation or direct agreement (non-competitive sole source, interagency, or follow-on funding agreements).

Table A-7: New CEC Approved Electric Program Investment Charge Awards in 2023

Solicitation Number	Solicitation Title	Number of Awards	Award Amount for Solicitation
Direct Agreements	Not Applicable	2	\$7,999,695
GFO-21-304	RAMP 2022: Realizing Accelerated Manufacturing and Production for Clean Energy Technologies	7	\$19,334,000
GFO-21-901r3	R3 Cost Share for Federal Clean Energy-Funding Opportunities	1	\$1,499,995
GFO-22-301	Commercializing Industrial Decarbonization (2022 CID Program)	5	\$26,134,825
GFO-22-302	Valuation of Investments in Electricity Sector Resilience	1	\$1,200,000
GFO-22-304	Assessing the Role of Hydrogen in California's Decarbonizing Electric System	2	\$1,597,153
GFO-22-305	Advanced Pre-Fabricated Zero-Carbon Homes	3	\$10,743,178
GFO-22-401	Advancing Environmental Monitoring Technologies for Floating Offshore Wind	3	\$8,900,868
GFO-22-402	Advancing Designs for Floating Offshore Wind Mooring Lines and Anchors	4	\$11,869,231
Total		28	\$89,278,945

Source: California Energy Commission Staff

Table A-8 summarizes the cumulative amount of direct projects awarded through 2023 (interagency agreement or sole source, not including EPIC follow-on funding), and the action of the Joint Legislative Budget Committee (JLBC).

**Table A-8: EPIC Direct Project Awards (Interagency Agreement or Sole Source)
(as of December 31, 2023)**

Agreement Number	Agreement Title	Recipient/ Contractor	Project Funds Amount	Joint Legislative Budget Committee Action
300-15-004	Optimizing Hydropower Operations While Sustaining Stream Temperatures and Ecosystem Functions	The Regents of the University of California, Merced	\$650,000	Approved
300-15-005	Improving Hydrologic and Energy Demand Forecasts for Hydropower Operations with Climate Change	The Regents of the University of California, on behalf of the Irvine Campus	\$720,000	Approved
300-15-006	Optimizing Use of Non-traditional Waters, Drought Proofing the Electricity System, and Improving Snowpack Prediction	The Regents of the University of California, Los Angeles	\$1,130,000	Approved
EPC-22-009	National Offshore Wind Research and Development Consortium - CEC-NOWRDC Offshore Wind Block Grant Program	National Offshore Wind Research and Development Consortium	\$5,000,000	Approved
Total			\$7,500,000	

Source: California Energy Commission Staff

EPIC Follow-on Funding Awards

The Budget Act of 2020 (Senate Bill 115, Committee on Budget and Fiscal Review, Chapter 40, Statutes of 2020) initially allowed the CEC to provide follow-on funding during fiscal year 2020–2021 to a limited number of EPIC agreements that meet the criteria identified in the legislation.³ SB 115 directed the CEC to identify in the EPIC annual reports for 2020 and 2021, the projects that received this follow-on funding, the amount of follow-on funding each project received, and the method and criteria that was used for their selection.

In 2020, consistent with SB 115, CEC developed two sets of criteria to invite and select proposed projects (Table A-10): 1) administrative screening; and 2) assessment of commercialization potential and policy impact; and began the process for selecting awards for SB 115 follow-on funding. The Budget Act of 2021 (Assembly Bill 148, Committee on Budget Chapter 115, Statutes of 2021) extended the CEC’s authority to award follow-on funding until July 1, 2025.⁴

³ Item 3360-101-3211 of Section 2.00 of the Budget Act of 2020.

⁴ Section 72 of the Budget Act of 2021, codified at Public Resources Code section 25711.5(h)(4).

Table A-9 summarizes the cumulative amount of direct projects awarded follow-on funding through 2023.

Table A-9: EPIC Follow-on Project Awards (as of December 31, 2023)

Agreement Number	Agreement Title	Recipient/ Contractor	Follow-on Project Funds Amount
300-15-007	California Sustainable Energy Entrepreneurial Development	(CalSEED) Initiative California Clean Energy Fund dba CalCEF Ventures	\$30,000,000
EPC-15-030	San Diego Regional Energy Innovation Cluster	Cleantech San Diego Association	\$5,000,000
EPC-15-032	Bay Area Regional Energy Innovation Cluster	Cleantech Activate Global, Inc	\$4,980,000
EPC-15-038	BlueTechValley Innovation Cluster	California State University, Fresno Foundation	\$5,000,000
EPC-16-015	Los Angeles Regional Energy Innovation Cluster	Los Angeles Cleantech Incubator	\$4,999,247
EPC-16-059	Advanced VGI Control to Maximize Battery Life and Use of Second-Life Batteries to Increase Grid Service and Renewable Power Penetration	Lawrence Berkeley National Laboratory	\$1,000,000
EPC-18-002	California Test Bed Initiative	California Clean Energy Fund dba CalCEF Ventures	\$10,998,701
EPC-20-019	Accelerated Deployment of Irrigation Pumping Demand Flexibility	Polaris Energy Services Inc.	\$2,884,912
EPC-20-034	Building Resiliency from Within	OhmConnect, Inc.	\$3,000,000

EPC-20-036	Load Shifting During Critical Summer Hours via Programmable Irrigation	AgMonitor Inc.	\$349,972
EPC-22-003	Accelerate Development of Smartville Second-Life Battery Repurposing Platform	Smartville, Inc.	\$2,000,000
EPC-23-010	Manufacturability of Low-Cost InGaAs Thermophotovoltaic Devices	Antora Energy, Inc.	\$2,999,695
Total			\$73,212,527

Source: California Energy Commission Staff

Table A-10 provides the statutory criteria that authorizes CEC to award EPIC project funds to follow-on projects and includes the project technical evaluation criteria developed by CEC.

Table A-10: EPIC Follow-on Funding Criteria for Administrative Screening and Technical Evaluation

Criteria Section	Criteria Description
Section 1: Administrative Screening Criteria	<p>Follow-on project proposals must meet all the following to be eligible for funding:</p> <ul style="list-style-type: none"> • The project has a prime recipient that is located in California. • The project will spend a minimum of 80 percent of its funding from the program in California. • The project has received funding for the original project or technology through a competitive bid process from a state or federal agency. • The project has demonstrated significant results under its previous award. • The project has technology breakthrough potential that can enable the state to achieve its statutory energy policy goals ahead of schedule. • The project can address near-term priorities impacting the electricity sector and its customers such as wildfires and associated power disruptions. • Absent follow-on funding, the project would experience a gap in funding that would likely prevent the technology from achieving significant technological advancement, negatively impact the ability of the project to attract sufficient private investment or prevent the project's commercialization and associated sales revenue. • The project has not previously received follow-on funding through a non-competitive process.

	<ul style="list-style-type: none"> • For Technology Demonstration and Deployment projects, the project has a minimum of 20 percent match share.
Section 2: Technical Evaluation Criteria	<p>The following criteria were used to assess whether the project merits follow-on funding:</p> <ul style="list-style-type: none"> • The technology’s competitive advantages over existing commercial offerings. • Market adoption potential for the technology in California. • Quantified and qualitative benefits to electric ratepayers based on a reasonable estimate of market adoption, if applicable. • The project’s ability to address near-term priorities impacting the electricity sector and its customers including the following: <ul style="list-style-type: none"> ○ Wildfires and public safety power shutoff-related outages ○ Grid and customer service reliability • Wildfires and public safety power shutoff-related outages • Grid and customer service reliability • Performance metrics and technical milestones that were achieved under the prior project. • Performance metrics and technical milestones that were achieved under the prior project. <p>Performance metrics and technical milestones being proposed for the follow-on project.</p>

Source: California Energy Commission Staff

**APPENDIX B:
2023 CEC EPIC Project Summary Tables by Strategic
Objective and Initiative**

Tables B1-B6 summarize the number of 2023 reportable projects and total funding for each strategic objective and initiative, as well as their status. These projects span EPIC investment cycles from 2012 through to the current 2021-2025 EPIC Investment Plan, with each table representing projects from separate investment plans. There are several instances where a single cross-cutting project is funded from multiple investment plans or multiple strategic objectives and strategic initiatives. Appendix D provides a comprehensive list of the 2023 reportable projects, including which investment plan, strategic objective, and initiative each project is funded by.

Table B-1. Summary of 2012-2014 EPIC Investment Plan Reportable Projects by Strategic Objective and Initiative in 2023

SO #	Strategic Initiative	Total Number of Projects by Initiative	Total EPIC Project Funding	Total Number of Projects by Status			
				Open (Active)	Completed	Terminated	Pending Final Approval
S10	S10.1 Provide Small Grants to Early-Stage Energy Companies and Entrepreneurs Through Regional Innovation Clusters.	1	\$9,788,043	1	0	0	0
S10	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre- Commercial Clean Energy Technologies	3	\$8,000,000	3	0	0	0
S13	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies,	1	\$3,225,773	1	0	0	0

	Generation Systems, and Development Strategies						
S14	S14.1 Demonstrate Zero-Net Energy Buildings and Communities	1	\$3,207,432	0	1	0	0
Total		6	\$24,221,248				

Source: California Energy Commission Staff

Table B-2. Summary of 2015-2017 EPIC Investment Plan Reportable Projects by Strategic Objective and Initiative in 2023

SO #	Strategic Initiative	Total Number of Projects by Initiative	Total EPIC Project Funding	Total Number of Projects by Status			
				Open (Active)	Completed	Terminated	Pending Final Approval
S1	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2	\$3,462,632	1	1	0	0
S1	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	3	\$6,271,532	1	2	0	0
S1	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.; S1.3 Apply Advanced Social Science Research Methods to Improve Adoption of Next Generation Energy Efficiency Solutions.	1	\$2,401,436	1	0	0	0
S1	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response	2	\$3,327,359	1	1	0	0

	Technologies and Strategies to Reduce Energy Use and Costs.						
S3	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2	\$2,722,284	0	2	0	0
S3	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2	\$3,602,421	1	1	0	0
S3	S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable Resources.	1	\$2,000,000	0	1	0	0
S7	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	6	\$14,189,656	3	3	0	0
S9	S9.2 Advance Vehicle-Grid Integration Technologies and Methods for Broader Use and Benefit for Residential, Private, and Public Users.	1	\$1,500,000	1	0	0	0
S10	S10.1 Provide Seed-Stage Funding for Disruptive Energy Technologies.	1	\$20,211,957	1	0	0	0
S12	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	4	\$17,813,727	3	1	0	0
S12	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	4	\$10,779,258	3	1	0	0
S13	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	3	\$11,739,647	3	0	0	0
S13	S13.2 Accelerate the Demonstration and Early	1	\$2,411,007	1	0	0	0

	Deployment of Emerging BioDigester and Integrated Clean Generation to Efficiently Use Agricultural, Municipal, and Other Organic Waste.						
S14	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy Needs.	9	\$44,978,120	9	0	0	0
S15	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	4	\$7,087,640	3	1	0	0
S18	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	4	\$10,768,265	3	1	0	0
S18	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.; S18.2 Integrate Market Insight into the Selection and Management of EPIC Funded Technologies and Strategies.; S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	1	\$4,999,247	1	0	0	0
S18	S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2	\$11,231,152	2	0	0	0
S19	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.	1	\$10,993,646	1	0	0	0
S19	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy	1	\$3,998,715	0	1	0	0

	Technologies.; S19.2 Facilitate Innovative Procurement Strategies to Reduce Costs for Clean Energy Technologies.						
Total		55	\$196,489,701				

Source: California Energy Commission Staff

Table B-3. Summary of 2018-2020 EPIC Investment Plan Reportable Projects by Strategic Objective and Initiative in 2023

SO #	Strategic Initiative	Total Number of Projects by Initiative	Total EPIC Project Funding	Total Number of Projects by Status			
				Open (Active)	Completed	Terminated	Pending Final Approval
S1.1	1.1.2 Test Novel Luminaire Systems Architecture and Form Factors That Leverage the Unique Properties Of LEDS	3	\$1,500,000	3	0	0	0
S1.2	1.2.1 Deploy Next Generation Window and Building Envelope Systems in Existing Residential and Commercial Buildings	1	\$1,850,000	1	0	0	0
S1.2	1.2.2 Builder Competition for Best Residential Envelopes	1	\$1,917,967	1	0	0	0
S1.2	1.2.3 Multifamily Factory Built Homes Competition for Highly Efficient Building Envelopes	2	\$3,999,982	2	0	0	0

S1.3	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	5	\$10,214,907	5	0	0	0
S1.5	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	3	\$8,000,000	3	0	0	0
S1.7	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	5	\$7,974,146	5	0	0	0
S1.7	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency	1	\$1,529,705	1	0	0	0
S1.7	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency; 1.7.4 Large Scale Deployment of Pre-Commercial Technologies with Demonstrated Potential	2	\$5,866,516	2	0	0	0

S1.7	1.7.3 Develop Strategies and Tools For Maximizing Cost Effective Energy Efficiency Strategies For Decarbonization of the Industrial Sector	1	\$425,000	1	0	0	0
S2.1	2.1.1 Develop Community Renovation for High Efficiency and Grid Resources	2	\$9,687,500	2	0	0	0
S2.3	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	33	\$92,234,232	31	1	0	1
S2.4	2.4.1 EPIC Challenge	16	\$27,628,642	15	0	1	0
S3.1	3.1.1 Pilot Test for the Next-Generation Demand Response Landscape; 3.1.3 Assess iDERs and Load Management Systems	1	\$7,000,000	1	0	0	0
S3.1	3.1.2 Assess Performance of Load Control Systems	5	\$10,931,163	4	1	0	0
S3.2	3.2.1 Grid-Friendly PEV Mobility	3	\$9,511,562	3	0	0	0
S3.2	3.2.2 Battery Second Use	2	\$2,686,115	2	0	0	0
S3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables	5	\$7,235,535	5	0	0	0

	and into the Effects of DER on Gross Load						
S3.4	3.4.1 Assessment and Simulation Study of California Grid with Optimized Grid-Level Energy Storage	2	\$2,754,955	2	0	0	0
S4.1	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	3	\$2,593,260	1	2	0	0
S4.2	4.2.1 Advanced Manufacturing and Installation Approach for Utility-Scale Land-Based Wind Turbine Components	1	\$2,999,979	1	0	0	0
S4.2	4.2.2 Real-Time Remote Monitoring System for Offshore and Land-Based Wind Technologies	2	\$3,586,914	1	1	0	0
S4.3	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	5	\$12,603,665	3	1	1	0
S4.4	4.4.2 Demonstrating Modular Bioenergy Systems and Feedstock Densifying and Handling Strategies to Improve Conversion of Accessibility-	1	\$4,999,830	1	0	0	0

	Challenged Forest Biomass Resources						
S5.1	5.1.1 Continue CalSEED Initiative to Provide Early Stage Support for Clean Energy Technology Entrepreneurs	1	\$12,000,000	1	0	0	0
S5.1	5.1.2 Expand Entrepreneurial Services from Innovation Clusters	5	\$22,906,402	5	0	0	0
S5.2	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	27	\$57,008,915	27	0	0	0
S5.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	16	\$36,002,081	15	1	0	0
S6.1	6.1.1 Develop and Test Novel Energy Efficient Treatment Methods for Conventional and Non-Conventional Sources of Water Supply; 6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations; 6.1.3 Develop and Demonstrate Advanced Energy Efficiency Improvements to Allow	1	\$3,000,000	1	0	0	0

	for On-Site Wastewater Treatment and Reuse for Industrial Facilities and Water Intensive Industries						
S6.1	6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations	2	\$5,603,779	2	0	0	0
S6.2	6.2.1 Demonstrate Advanced Water and/or Energy Efficiency Technologies to Reduce Carbon Intensity of Agriculture	1	\$2,884,912	1	0	0	0
S7.1	7.1.1 Integrated Pathways for Energy Futures: Tools and Science-Based Research for Holistic Energy Decision Making	2	\$2,700,000	2	0	0	0
S7.2	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options	1	\$3,000,000	1	0	0	0
S7.2	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.2 Clarify	2	\$1,878,584	2	0	0	0

	Interactions between Renewable Electricity Systems and Climate Change to Ensure an Effective, Resilient Transition to Low-Carbon Energy in California; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models						
S7.2	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2	\$5,000,000	2	0	0	0
S7.3	7.3.1 Find Environmental and Land Use Solutions to Facilitate the Transition to a Decarbonized Electricity System	2	\$1,000,000	1	1	0	0
S7.3	7.3.2 Enhance Human Health and Safety Associated with the Electricity Sector	1	\$4,000,000	1	0	0	0
Total		168	\$396,716,248				

Source: California Energy Commission Staff

Table B-4. Summary of 2021-2025 Interim EPIC Investment Plan Reportable Projects by Strategic Objective and Initiative in 2023

SO #	Strategic Initiative	Total Number of Projects by Initiative	Total EPIC Project Funding	Total Number of Projects by Status			
				Open (Active)	Completed	Terminated	Pending Final Approval
S1	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	3	\$10,743,178	1	0	0	2
S1	1.5 Decarb: The Role of Green Hydrogen in a Decarbonized California—A Roadmap and Strategic Plan	2	\$1,597,153	2	0	0	0
S1	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	4	\$13,199,898	4	0	0	0
S1	1.8 Decarb: Offshore Wind Energy Technologies	7	\$16,374,363	5	0	0	2
S2	2.6 R&R: Valuation of Investments in Electricity Sector Resilience	2	\$3,150,000	1	0	0	1
S2	2.7 R&R: Vehicle-to-Building for Resilient Back-up Power	1	\$3,675,637	1	0	0	0
S3	3.1 Entrepreneurial Ecosystem	8	\$29,542,778	8	0	0	0
Total		27	\$78,283,007				

Source: California Energy Commission Staff

Table B-5. Summary of 2021-2025 EPIC Investment Plan Reportable Projects by Strategic Objective and Initiative in 2023

SO #	Strategic Initiative	Total Number of Projects by Initiative	Total EPIC Project Funding	Total Number of Projects by Status			
				Open (Active)	Completed	Terminated	Pending Final Approval
S1	1.2 Variable Renewable Energy	4	\$9,395,736	3	0	0	1
S3	3.2 Transportation Electrification	3	\$3,730,436	3	0	0	0
S4	4.1 Industrial Decarbonization	5	\$26,134,825	5	0	0	0
S4	4.2 Building Decarbonization	1	\$625,000	1	0	0	0
S5	5.1 Entrepreneurial Support	3	\$15,998,396	3	0	0	0
Total		16	\$55,884,393				

Source: California Energy Commission Staff

Completed Projects

In 2023, awardees completed 24 EPIC projects. Final project reports by awardee (available upon request) have been or will be submitted to the CEC.

CEC staff continues to ensure EPIC final reports meet the formatting requirements specified in California Government Code Sections 7405 and 11135 and the Web Content Accessibility Guidelines. Once approved, finalized, and formatted to be digitally accessible, each final project report is posted on the CEC website and available at the Research and Development Reports and Publications page at <https://www.energy.ca.gov/energy-rd-reports-n-publications>. Table B-6 provides information on the final project reports for projects completed in 2023 that are currently available online.

Table B-6: Published Final Reports for CEC EPIC-Funded Projects Completed in 2023

Agreement #	Company	Project Title	Investment Program Period	Total EPIC Project Funds	Final Report Link
300-18-001	Gladstein, Neandross & Associates, LLC	Technology Transfer for EPIC Research Projects	2015-2017 EPIC Program 2nd Investment Plan	\$3,788,265	https://www.energy.ca.gov/publications/displayOnereport cms.php?pubNum=
EPC-15-094	Electric Power Research Institute, Inc.	Demonstration of Affordable, Comfortable, Grid Integrated Zero Net Energy Communities	2012-2014 EPIC Program 1st Investment Plan; 2015-2017 EPIC Program 2nd Investment Plan	\$4,942,809	https://www.energy.ca.gov/publications/2024/demonstration-affordable-comfortable-and-grid-integrated-zero-net-energy
EPC-16-001	Institute of Gas Technology dba GTI Energy	Measure Results from Affordable Zero Net Energy Homes	2015-2017 EPIC Program 2nd Investment Plan	\$1,000,000	https://www.energy.ca.gov/publications/2023/measure-results-affordable-zero-net-energy-homes
EPC-16-004	Lawrence Berkeley National Laboratory	Integrated Whole-Building Zero Net Energy Retrofits for Small Commercial Offices	2015-2017 EPIC Program 2nd Investment Plan	\$2,000,000	https://www.energy.ca.gov/publications/2023/integrated-whole-building-zero-net-energy-retrofits-small-commercial-offices
EPC-16-042	Lawrence Berkeley National Laboratory	Low-Cost High-Reliability Thermoelectrics for Waste Heat Conversion	2015-2017 EPIC Program 2nd Investment Plan	\$2,000,000	Final project report will be posted upon final approval.
EPC-16-073	Natural Capitalism Solutions, dba Clean Coalition	Valencia Gardens Energy Storage	2015-2017 EPIC Program 2nd Investment Plan	\$1,994,687	Final project report will be posted upon final approval.
EPC-17-005	Electric Power Research Institute, Inc.	Integrating Building-Scale Solar + Storage	2015-2017 EPIC Program 2nd	\$1,491,764	https://www.energy.ca.gov/publications/2024/integrating-building-

		Advanced Technologies Maximizing Value to Customer and the Distribution Grid	Investment Plan		scale-solar-storage-advanced-technologies-maximize-value
EPC-17-016	The Regents of the University of California on behalf of the Davis Campus	An Online Siting Tool Application for Woody Biomass-to-Electricity Facilities in California	2015-2017 EPIC Program 2nd Investment Plan	\$1,222,284	Final project report will be posted upon final approval.
EPC-17-017	All Power Labs, Inc.	The Nexus of Clean Energy, Healthy Forests, and a Stable Climate: Innovative Biomass Gasification for Sustainable Forest Management	2015-2017 EPIC Program 2nd Investment Plan	\$1,500,000	Final project report will be posted upon final approval.
EPC-17-030	Prospect Silicon Valley	California Opportunities for Procurement to Accelerate Clean Energy (Cal-OP ACE)	2015-2017 EPIC Program 2nd Investment Plan	\$3,998,715	https://www.energy.ca.gov/publications/2023/holistic-assessment-building-energy-system-transition-pathways-under-resourced
EPC-17-043	Hitachi America LTD	GLOW: A User-friendly Interface for GridLAB-D	2015-2017 EPIC Program 2nd Investment Plan	\$2,999,699	Final project report will be posted upon final approval.
EPC-17-046	SLAC National Accelerator Laboratory	HiPAS GridLAB-D: A High-Performance Agent-based Simulation using GridLAB-D	2015-2017 EPIC Program 2nd Investment Plan	\$3,068,781	Final project report will be posted upon final approval.
EPC-17-047	SLAC National Accelerator Laboratory	OpenFIDO: An Open-source Framework for Integrated Data Operations	2015-2017 EPIC Program 2nd Investment Plan	\$1,000,000	Final project report will be posted upon final approval.

EPC-18-003	Lucent Optics, Inc.	Ultra-thin Flexible LED Lighting Panels	2015-2017 EPIC Program 2nd Investment Plan	\$1,692,069	https://www.energy.ca.gov/publications/2023/ultra-thin-flexible-led-lighting-panels-new-technology-platform-making-wide-area
EPC-18-009	Porifera, Inc.	Energy Savings Through Osmotic Concentration for the Food and Beverage Processing Industry	2015-2017 EPIC Program 2nd Investment Plan	\$2,800,687	https://www.energy.ca.gov/publications/2023/energy-savings-through-osmotic-concentration-food-industry
EPC-18-010	Porifera, Inc.	Energy and Water Savings in Food and Beverage Wastewater Reuse	2015-2017 EPIC Program 2nd Investment Plan	\$1,777,132	https://www.energy.ca.gov/publications/2024/energy-and-water-food-and-beverage-wastewater-reuse
EPC-18-015	Cuberg, Inc.	Improved Batteries for California's Zero-Emissions Vehicle Future	2018-2020 EPIC Program 3rd Investment Plan	\$1,566,639	https://www.energy.ca.gov/publications/2024/improved-batteries-californias-zero-emissions-vehicle-future
EPC-18-023	Eos Energy Storage, LLC	Utility Demonstration of Non-Flammable, Aqueous-Zinc Battery Storage: Innovation Scale-Up to Alleviate T&D Congestion and Mitigate Wildfire Risks	2018-2020 EPIC Program 3rd Investment Plan	\$2,986,110	https://www.energy.ca.gov/publications/2023/eos-energy-storage-utility-demonstration-non-flammable-aqueous-zinc-battery
EPC-19-002	The Regents of the University of California on behalf of the Los Angeles Campus	"Smart Greenhouse": Integrated Photovoltaics/Photosynthesis for Energy and Food	2018-2020 EPIC Program 3rd Investment Plan	\$600,000	https://www.energy.ca.gov/publications/2024/smart-greenhouse-integrated-photovoltaics-photosynthesis-energy-and-food
EPC-19-003	Tandem PV, Inc.	Processing and Architecture Design to Develop	2018-2020 EPIC Program 3rd	\$999,802	https://www.energy.ca.gov/publications/2023/proc

		and Demonstrate Stable and Efficient Perovskite + Silicon Tandem Modules	Investment Plan		essing-and-architecture-design-develop-and-demonstrate-stable-and-efficient
EPC-19-008	Aker Offshore Wind USA LLC	NextWind Real-time Monitoring System	2018-2020 EPIC Program 3rd Investment Plan	\$1,586,914	https://www.energy.ca.gov/publications/2024/next-wind-advancing-wind-energy-technology-using-real-time-monitoring-systems
EPC-19-009	Integral Consulting Inc.	A Risk Assessment Framework to Evaluate Effects of Offshore Wind Farms on the California Upwelling Ecosystem	2018-2020 EPIC Program 3rd Investment Plan	\$500,000	https://www.energy.ca.gov/publications/2024/numerical-modeling-framework-evaluate-effects-offshore-wind-farms-californias
EPC-19-017	Materials Research LLC	Pilot Scale Recovery of Lithium from Geothermal Brines	2018-2020 EPIC Program 3rd Investment Plan	\$1,878,634	https://www.energy.ca.gov/publications/2024/pilot-scale-recovery-lithium-geothermal-brines
EPC-20-036	AgMonitor Inc.	Load Shifting During Critical Summer Hours via Programmable Irrigation	2018-2020 EPIC Program 3rd Investment Plan	\$349,972	Final project report will be posted upon final approval.
Total				\$47,744,963	

Source: California Energy Commission Staff

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
Direct Agreement	300-15-004	The Regents of the University of California, Merced	Optimizing Hydropower Operations While Sustaining Stream Temperatures and Ecosystem Functions	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.3 Develop Analytical Tools and Technologies to Reduce Energy Stresses on Aquatic Resources and Improve Water-Energy Management	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$650,000	\$650,000	\$114,054	\$0	Non-competitive ³	12/21/2015 ³	CBE	3/9/2016	4/1/2016	3/31/2021	Ended
Direct Agreement	300-15-005	University of California, Irvine	Improving Hydrologic and Energy Demand Forecasts for Hydropower Operations with Climate Change	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$720,000	\$720,000	\$144,000	\$0	Non-competitive ³	12/21/2015 ³	None	3/9/2016	4/1/2016	3/31/2021	Ended
Direct Agreement	300-15-006	The Regents of the University of California on behalf of the Los Angeles Campus	Optimizing Use of Non-traditional Waters, Drought Proofing the Electricity System and Improving Snowpack Prediction	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.6 Advance Strategies to Reduce California Buildings' Impact on the Water-Energy Nexus.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,130,000	\$1,130,000	\$198,000	\$0	Non-competitive ³	12/21/2015 ³	CBE	3/9/2016	4/1/2016	3/31/2021	Completed
RFP-15-305	300-15-007	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.1 Provide Small Grants to Early-Stage Energy Companies and Entrepreneurs Through Regional Innovation Clusters.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$9,788,043	\$60,000,000	\$1,563,250	\$3,396,223	Competitive ²	N/A	None	3/9/2016	4/20/2016	3/31/2027	Active
RFP-15-305	300-15-007	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S10: Advance the Early Development of Breakthrough Energy Concepts.	S10.1 Provide Seed-Stage Funding for Disruptive Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$20,211,957	\$0	\$0	\$0	Competitive ²	N/A	None	3/9/2016	4/20/2016	3/31/2027	Active
Follow-on Funding Project	300-15-007	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	5.1 Close the Innovation Gap from Idea to Investment	5.1.1 Continue CalSEED Initiative to Provide Early Stage Support for Clean Energy Technology Entrepreneurs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$12,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	None	6/9/2021	4/20/2016	3/31/2027	Active
Follow-on Funding Project	300-15-007	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$16,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	None	6/9/2021	4/20/2016	3/31/2027	Active
Follow-on Funding Project	300-15-007	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	5 Enable Successful Clean Energy Entrepreneurship Across California	5.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	None	6/9/2021	4/20/2016	3/31/2027	Active

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
RFP-15-315	300-15-008	Itron, Inc., dba IBS	Research Roadmap for Getting to Zero Net Energy Buildings	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.3 Conduct Scenario Assessments and Gaps Analyses That Will Be Used to Develop or Update Research Roadmaps	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$999,884	\$999,884	\$171,332	\$0	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	5/30/2018	Completed
RFP-15-304	300-15-009	Guidehouse Inc.	Connecting Emerging Energy Technologies and Strategies to Market Needs and Opportunities	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.3 Conduct Technology and Environmental Assessments to Track Progress in the Clean Energy Industry and Identify Future Needs	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$6,825,763	\$6,937,889	\$2,714,986	\$0	Competitive 2	N/A	None	4/13/2016	6/13/2016	5/31/2022	Ended
RFP-15-304	300-15-009	Guidehouse Inc.	Connecting Emerging Energy Technologies and Strategies to Market Needs and Opportunities	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.2 Integrate Market Insight into the Selection and Management of EPIC Funded Technologies and Companies	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$112,126	\$0	\$0	\$0	Competitive 2	N/A	None	4/13/2016	6/13/2016	5/31/2022	Ended
RFP-15-316	300-15-010	Energetics Incorporated	Research Roadmap for Advancing Technologies in California's Industrial, Agricultural, and Water Sectors	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.3 Conduct Scenario Assessments and Gaps Analyses That Will Be Used to Develop or Update Research Roadmaps	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$647,728	\$647,728	\$122,646	\$29,610	Competitive 2	N/A	CBE	5/17/2016	6/20/2016	5/31/2018	Completed
RFP-15-319	300-15-011	ADM Associates, Inc.	California Commercial End-Use Survey	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.4 Conduct the IOU Portion of the California End-use Energy Consumption and Saturation Characterization Survey	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$7,990,063	\$7,990,063	\$3,426,324	\$100,893	Competitive 2	N/A	CBE, Small Business, Micro Business	5/17/2016	6/15/2016	3/31/2022	Ended
RFP-15-322	300-15-013	ADM Associates, Inc.	California Investor-Owned Utility Electricity Load Shapes	S21: Inform Investments and Decision-Making Through Market and Technical Analysis.	S21.1 Conduct Analyses on Different Technology Options and Strategies for the Electricity System	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$1,147,406	\$1,147,406	\$430,673	\$58,330	Competitive 2	N/A	CBE, Small Business, Micro Business	6/14/2016	7/29/2016	12/31/2018	Completed
RFP-17-306	300-17-003	Guidehouse Inc.	Distributed Energy Resources (DER) Roadmap	S21: Inform Investments and Decision-Making Through Market and Technical Analysis.	S21.1 Conduct Analyses on Different Technology Options and Strategies for the Electricity System	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$499,065	\$499,065	\$242,382	\$0	Competitive 2	N/A	None	5/9/2018	6/29/2018	9/30/2020	Completed
RFP-17-307	300-17-004	Industrial Economics, Incorporated	Measuring Innovation Progress to Guide Future Investment: Evaluation of EPIC Benefits Methodology	S21: Inform Investments and Decision-Making Through Market and Technical Analysis.	S21.3 Measure and Verify the Ratepayer Benefits of EPIC Funded Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	\$1,716,826	\$0	Competitive 2	N/A	None	5/9/2018	6/29/2018	2/16/2021	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
RFP-17-303	300-17-005	Energetics Incorporated	Research Roadmap for Cost and Technology Breakthroughs for Renewable Energy Generation	S21: Inform Investments and Decision-Making Through Market and Technical Analysis.	S21.1 Conduct Analyses on Different Technology Options and Strategies for the Electricity System.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$338,059	\$338,059	\$86,365	\$0	Competitive 2	N/A	CBE	5/9/2018	6/4/2018	5/29/2020	Completed
RFP-18-802	300-18-001	Gladstein, Neandross & Associates, LLC	Technology Transfer for EPIC Research Projects	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses.	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$3,788,265	\$3,788,265	\$881,903	\$1,310,568	Competitive 2	N/A	CBE, Small Business	4/10/2019	5/10/2019	3/31/2023	Ended
PON-13-303	EPC-14-001	Itron, Inc., dba IBS	Improving Solar & Load Forecasts: Reducing the Operational Uncertainty Behind the Duck Chart	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.2 Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$998,926	\$998,926	\$268,243	\$453,462	Competitive 2	N/A	CBE	12/10/2014	1/15/2015	6/29/2018	Completed
PON-13-303	EPC-14-002	Geysers Power Company, LLC	Investigating Flexible Generation Capabilities at the Geysers	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.3 Develop Advanced Technologies and Strategies to Improve the Cost-Effectiveness of Geothermal Energy Production.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	None	\$4,362,373	Competitive 2	N/A	CBE	12/10/2014	1/5/2015	3/31/2019	Completed
PON-13-303	EPC-14-003	The Regents of the University of California on behalf of the Los Angeles Campus	Low-Cost Thermal Energy Storage for Dispatchable CSP	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.1 Develop Advanced Utility-Scale Thermal Energy Storage Technologies to Improve Performance of Concentrating Solar Power.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,497,024	\$1,497,024	\$198,528	\$300,000	Competitive 2	N/A	CBE	12/10/2014	1/15/2015	3/30/2019	Completed
PON-13-303	EPC-14-004	Halotechnics	Systems Integration of Containerized Molten Salt Thermal Energy Storage in Novel Cascade Layout	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.1 Develop Advanced Utility-Scale Thermal Energy Storage Technologies to Improve Performance of Concentrating Solar Power.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$283,080	\$19,038	Competitive 2	N/A	None	12/10/2014	1/15/2015	1/14/2019	Terminated

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PON-13-303	EPC-14-005	The Regents of the University of California, on behalf of the San Diego campus	Solar Forecast Based Optimization of Distributed Energy Resources in the LA Basin and UC San Diego Microgrid	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.2 Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$999,984	\$999,984	\$157,282	\$999,984	Competitive 2	N/A	CBE	12/10/2014	1/15/2015	3/15/2018	Completed
PON-13-303	EPC-14-007	The Regents of the University of California on behalf of the Davis Campus	Improving Short-Term Wind Power Forecasting through Measurements and Modeling of the Tehachapi Wind Resource Area	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.2 Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$247,542	\$90,325	Competitive 2	N/A	CBE	12/10/2014	1/15/2015	12/31/2017	Completed
PON-13-303	EPC-14-008	The Regents of the University of California, on behalf of the San Diego campus	High-Fidelity Solar Power Forecasting Systems for the 392 MW Ivanpah Solar Plant (CSP) and the 250 MW California Valley Solar Ranch (PV)	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.2 Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$999,898	\$999,898	\$168,624	\$764,019	Competitive 2	N/A	CBE	12/10/2014	1/15/2015	1/15/2019	Completed
PON-13-301	EPC-14-009	The Regents of the University of California on behalf of the Berkeley campus	Optimizing Radiant Systems for Energy Efficiency and Comfort	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,939,964	\$2,939,964	\$450,466	\$299,194	Competitive 2	N/A	CBE	2/25/2015	6/30/2015	3/31/2019	Ended
PON-13-301	EPC-14-010	Lawrence Berkeley National Laboratory	Solar-Reflective "Cool" Walls: Benefits, Technologies, and Implementation	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.3 Develop, test, and demonstrate Advanced Building Envelope Systems, Materials, and Components	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,500,000	\$2,500,000	\$908,941	\$610,800	Competitive 2	N/A	CBE	2/25/2015	3/30/2015	6/30/2018	Ended
PON-13-301	EPC-14-011	Regents of the University of California, Davis - California Lighting Technology Center	From the Laboratory to the California Marketplace: A New Generation of LED Lighting Solutions	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.1 Develop, Test, and Demonstrate Next-Generation Lighting Systems and Components	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,995,187	\$2,995,187	\$557,072	\$5,000	Competitive 2	N/A	CBE	2/25/2015	4/1/2015	3/19/2019	Ended

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PON-13-301	EPC-14-012	Lawrence Berkeley National Laboratory	Comparing Attic Approaches for Zero Net Energy Homes	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$563,439	\$0	Competitive 2	N/A	CBE	2/25/2015	3/30/2015	12/31/2018	Ended
PON-13-301	EPC-14-013	The Regents of the University of California on behalf of the Berkeley campus	Very Low-cost MEMS-based Ultrasonic Anemometer for Use Indoors and in HVAC Ducts	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,488,964	\$2,488,964	\$214,202	\$249,000	Competitive 2	N/A	CBE	2/25/2015	4/15/2015	3/30/2019	Completed
PON-13-301	EPC-14-015	Lawrence Berkeley National Laboratory	Direct Current as an Integrating and Enabling Platform	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.4 Investigate and Improve Understanding of Building occupant Behavior and Related Consumer Choice Motivation to Increase and Sustain Energy Efficiency Improvements in Buildings; S1.8 Develop Cost-Effective Technologies and Approaches to Achieve California's Zero Net Energy Buildings Goals	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$495,365	\$100,000	Competitive 2	N/A	CBE	2/25/2015	4/15/2015	6/30/2018	Ended
PON-13-301	EPC-14-016	BIRA Energy	Cost- and Energy-Efficient Attic Designs for California Homes	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.3 Develop, test, and demonstrate Advanced Building Envelope Systems, Materials, and Components	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$228,148	\$265,000	Competitive 2	N/A	CBE	2/25/2015	6/29/2015	6/30/2018	Ended
PON-13-301	EPC-14-017	Lawrence Berkeley National Laboratory	Developing Flexible, Networked Lighting Control Systems That Reliably Save Energy	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.1 Develop, Test, and Demonstrate Next-Generation Lighting Systems and Components	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,875,000	\$1,875,000	\$216,162	\$0	Competitive 2	N/A	CBE	2/25/2015	4/1/2015	3/31/2019	Ended
PON-13-302	EPC-14-019	Electric Power Research Institute, Inc.	Validated and Transparent Energy Storage Valuation and Optimization Tool	S8: Integrate Grid Level Energy Storage Technologies and Determine Best Applications That Provide Locational Benefits	S8.1 Optimize Grid-Level Energy Storage Deployment With Respect to Location, Size, and Type	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$482,416	\$901,944	Competitive 2	N/A	CBE	3/11/2015	4/11/2015	12/30/2016	Completed

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PON-13-301	EPC-14-021	Electric Power Research Institute, Inc.	Development and Testing of the Next Generation Residential Space Conditioning System for California	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,993,005	\$2,993,005	\$1,072,105	\$322,281	Competitive ²	N/A	CBE	4/8/2015	6/30/2015	4/30/2019	Completed
PON-14-305	EPC-14-022	ABEC #3 LLC, dba Lakeview Farms Dairy Biogas	The Lakeview Farms Dairy Biogas - To - Electricity Project	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$29,498	\$4,500,000	Competitive ²	N/A	CBE	3/11/2015	5/15/2015	3/29/2019	Completed
PON-13-302	EPC-14-023	Eos Energy Storage, LLC	Utility Demonstration of Znyth Battery Technology to Characterize Performance and Grid Benefits	S8: Integrate Grid Level Energy Storage Technologies and Determine Best Applications That Provide Locational Benefits	S8.2 Develop Innovative Utility-Scale and Generation Energy Storage Technologies and Applications to Mitigate Intermittent Renewables and Meet Peak Demand.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,156,704	\$2,156,704	\$691,504	\$1,167,607	Competitive ²	N/A	None	4/8/2015	5/1/2015	8/31/2020	Ended
PON-14-303	EPC-14-024	West Biofuels, LLC	Modular Biomass Power Systems to Facilitate Forest Fuel Reduction Treatment	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$330,466	\$730,148	Competitive ²	N/A	CBE	3/11/2015	4/13/2015	3/31/2018	Completed
PON-14-303	EPC-14-025	Sunfolding Inc.	Mass-manufactured, Air Driven Trackers for Low Cost, High Performance Photovoltaic Systems	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$157,497	\$1,171,565	Competitive ²	N/A	CBE	3/11/2015	5/15/2015	3/31/2019	Completed
PON-14-306	EPC-14-026	The Regents of the University of California on behalf of the Berkeley campus	Examining the Heterogeneity of Energy Efficiency Adoption and Savings Across Socio-Economic and Ethnic Groups Using a Large Scale Quasi-Experiment	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.5 Conduct Market Analysis of Innovative Strategies to Facilitate Clean Energy Storage, Demand Response, Electric Vehicles, and Renewable	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$360,632	\$360,632	\$65,406	\$150,784	Competitive ²	N/A	CBE	4/8/2015	5/8/2015	6/30/2017	Completed

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PON-13-302	EPC-14-027	The Regents of the University of California on behalf of the Los Angeles Campus	High Temperature Hybrid Compressed Air Energy Storage (HTH-CAES)	S8: Integrate Grid Level Energy Storage Technologies and Determine Best Applications That Provide Locational Benefits	S8.2 Develop Innovative Utility-Scale and Generation Energy Storage Technologies and Applications to Mitigate Intermittent Renewables and Meet Peak Demand.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,621,628	\$1,621,628	\$206,222	\$0	Competitive 2	N/A	CBE	4/8/2015	5/8/2015	11/30/2017	Ended
PON-14-303	EPC-14-028	InnoSeptra, LLC	Low Cost Biogas Power Generation with Increased Efficiency and Lower Emissions	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,318,940	\$1,318,940	\$105,570	\$959,150	Competitive 2	N/A	CBE	3/11/2015	5/1/2015	3/29/2019	Completed
PON-14-305	EPC-14-029	ABEC #2 LLC, dba West Star North Dairy Biogas	The West Star North Dairy Biogas-to-Electricity Project	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$32,107	\$5,000,000	Competitive 2	N/A	CBE	3/11/2015	5/15/2015	3/29/2019	Completed
PON-14-303	EPC-14-030	Lawrence Berkeley National Laboratory	Paths to Sustainable Distributed Generation Through 2050: Matching Local Waste Biomass Resources with Grid, Industrial, and Community Levels	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable Bioenergy Systems	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$670,276	\$282,000	Competitive 2	N/A	CBE	3/11/2015	4/15/2015	3/31/2019	Completed
PON-14-305	EPC-14-031	University of California, Irvine	Pollution Control and Power Generation for Low Quality Renewable Fuel Streams	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,499,386	\$1,499,386	\$145,560	\$438,345	Competitive 2	N/A	None	4/8/2015	6/1/2015	3/31/2019	Completed
PON-14-306	EPC-14-032	Inova Energy Group, LLC	Capturing Cultural Diversity in California Residential Energy Efficiency Potential: An Energy Ethnography of Hispanic Households	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.5 Conduct Market Analysis of Innovative Strategies to Facilitate Clean Energy Storage, Demand Response, Electric Vehicles, and Renewable	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$224,593	\$224,593	\$10,681	\$0	Competitive 2	N/A	CBE	4/8/2015	5/8/2015	5/8/2018	Completed

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PON-14-305	EPC-14-033	The Watershed Research and Training Center	North Fork Community Power Forest Bioenergy Facility Demonstration	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,225,773	\$4,965,420	\$87,680	\$1,361,360	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/31/2024	Active
PON-14-305	EPC-14-033	The Watershed Research and Training Center	North Fork Community Power Forest Bioenergy Facility Demonstration	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,739,647	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/31/2024	Active
PON-14-303	EPC-14-034	Interra Energy, Inc.	Interra Reciprocating Reactor for Low-Cost & Carbon Negative Bioenergy	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$264,400	\$4,627,400	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/31/2019	Terminated
PON-14-303	EPC-14-035	Lawrence Berkeley National Laboratory	Demonstration of integrated photovoltaic systems and smart inverter functionality utilizing advanced distribution sensors	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$375,000	\$25,000	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/29/2019	Completed
PON-14-303	EPC-14-036	SunSpec Alliance	Smart Inverter Interoperability Standards and Open Testing Framework to Support High-Penetration Distributed Photovoltaics and Storage	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$162,005	\$2,066,875	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/29/2019	Completed
PON-14-306	EPC-14-037	Center for Sustainable Energy	Home Energy Efficiency Retrofits in California: An Analysis of Sociocultural Factors Influencing Customer Adoption	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.5 Conduct Market Analysis of Innovative Strategies to Facilitate Clean Energy Storage, Demand Response, Electric Vehicles, and Renewable	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$599,924	\$599,924	\$166,993	\$214,000	Competitive 2	N/A	CBE	4/8/2015	5/8/2015	3/31/2018	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-306	EPC-14-038	Indicia Consulting	Fieldwork to Document Technology Adoption and Behavior Change Across Diverse Geographies and Populations to Inform Energy Efficiency Program	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.5 Conduct Market Analysis of Innovative Strategies to Facilitate Clean Energy Storage, Demand Response, Electric Vehicles, and Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$574,545	\$574,545	\$40,208	\$52,500	Competitive ²	N/A	CBE	4/8/2015	5/8/2015	1/31/2019	Completed
PON-14-306	EPC-14-039	TRC Engineers, Inc.	Cultural Factors in the Energy Use Patterns of Multifamily Tenants	S18: Guide EPIC Investments through Effective Market Assessment, Program Evaluation, and Stakeholder Outreach	S18.5 Conduct Market Analysis of Innovative Strategies to Facilitate Clean Energy Storage, Demand Response, Electric Vehicles, and Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$379,019	\$379,019	\$107,714	\$100,000	Competitive ²	N/A	CBE	4/8/2015	5/8/2015	12/22/2017	Completed
PON-14-303	EPC-14-040	Gilnt Photonics, Inc.	Self-Tracking Concentrator Photovoltaics for Distributed Generation	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$999,940	\$999,940	\$282,545	\$2,500,000	Competitive ²	N/A	CBE	5/13/2015	5/15/2015	3/31/2019	Completed
PON-14-305	EPC-14-041	Biogas & Electric, LLC	Installation of a Lean Burn Biogas Engine with Emissions Control to Comply with Rule 1110.2 at a Wastewater Treatment Plant in South Coast Air Quality Management District	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,249,322	\$2,249,322	None	\$450,000	Competitive ²	N/A	CBE	4/8/2015	6/1/2015	5/31/2018	Terminated
PON-14-305	EPC-14-044	Lawrence Berkeley National Laboratory	Enabling Anaerobic Digestion Deployment for Municipal Solid Waste-to-Energy	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,300,000	\$4,300,000	\$1,497,504	\$1,500,000	Competitive ²	N/A	CBE	4/8/2015	5/15/2015	3/30/2019	Completed
PON-14-303	EPC-14-045	Taylor Energy	Advanced Recycling to 1-MW Municipal Solid Waste of Electricity Generation	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,499,481	\$1,499,481	\$168,742	\$46,616	Competitive ²	N/A	CBE, Woman-Owned Business	4/8/2015	5/15/2015	3/29/2019	Completed

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-305	EPC-14-046	Kennedy/Jenks Consultants	Lowering Food-Waste Co-digestion Costs through an Innovative Combination of a Pre-Sorting Technique and a Strategy for Cake Solids Reduction	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,496,902	\$1,496,902	\$323,906	\$2,630,000	Competitive 2	N/A	CBE	4/8/2015	5/15/2015	3/29/2019	Completed
PON-14-303	EPC-14-047	Southern California Gas Company (SoCalGas)	Dairy Waste-to-Bioenergy via the Integration of Concentrating Solar Power and a High Temperature Conversion Process	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable Bioenergy Systems; S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,494,736	\$1,494,736	\$96,773	\$600,000	Competitive 2	N/A	CBE	4/8/2015	4/15/2015	3/31/2019	Completed
PON-14-301	EPC-14-050	Gridscape Solutions, Inc.	City of Fremont Fire Stations Microgrid Project	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,817,925	\$1,817,925	\$73,475	\$657,260	Competitive 2	N/A	CBE, Minority-Owned Business	4/8/2015	5/8/2015	3/29/2019	Ended
PON-14-303	EPC-14-051	All Power Labs, Inc.	Cleaner Air, Cleaner Energy: Converting Forest Fire Management Waste to On Demand Renewable Energy	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,990,071	\$1,890,125	\$311,727	\$686,038	Competitive 2	N/A	CBE, Small Business, Micro Business	4/8/2015	5/15/2015	3/31/2019	Completed
PON-14-303	EPC-14-051	All Power Labs, Inc.	Cleaner Air, Cleaner Energy: Converting Forest Fire Management Waste to On Demand Renewable Energy	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.2 Develop Innovative Technologies, Techniques, and Deployment Strategies to Accelerate the Commercialization of Sustainable	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	-\$99,946	\$0	\$0	\$0	Competitive 2	N/A	CBE, Small Business, Micro Business	4/8/2015	5/15/2015	3/31/2019	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-305	EPC-14-052	Organic Energy Solutions, LLC	Community Scale Digester with Advanced Interconnection to the Electrical Grid	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$252,977	\$7,775,939	Competitive ²	N/A	CBE	4/8/2015	6/1/2015	3/31/2020	Ended
PON-14-301	EPC-14-053	Robert Bosch LLC	A Renewable Based Direct Current Building Scale Microgrid	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,817,566	\$2,817,566	\$276,825	\$1,797,544	Competitive ²	N/A	CBE	4/8/2015	6/30/2015	3/29/2019	Ended
PON-14-301	EPC-14-054	Cal Poly Humboldt Sponsored Programs Foundation	Demonstrating a renewable based microgrid for a critical facility at the Blue Lake Rancheria	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$832,908	\$1,318,422	Competitive ²	N/A	CBE	6/10/2015	7/6/2015	3/30/2018	Completed
PON-14-301	EPC-14-055	Chabot-Las Positas Community College District	Las Positas College Microgrid	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,522,591	\$1,522,591	\$260,719	\$450,000	Competitive ²	N/A	CBE	4/8/2015	5/8/2015	3/29/2019	Completed
PON-14-301	EPC-14-056	The Regents of the University of California on behalf of the Los Angeles Campus	Demonstrating Plug-in Electric Vehicles Smart Charging and Storage Supporting the Grid	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.3 Demonstrate Advanced Vehicle-to-Grid Energy Storage Technologies and Second-Use Vehicle Battery Applications	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,989,432	\$1,989,432	\$358,770	\$500,000	Competitive ²	N/A	CBE	4/8/2015	6/30/2015	3/30/2018	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-301	EPC-14-057	Lawrence Berkeley National Laboratory	Smart Charging of Plug-in Vehicles with Driver Engagement for Demand Management and Participation in Electricity Markets	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.3 Demonstrate Advanced Vehicle-to-Grid Energy Storage Technologies and Second-Use Vehicle Battery Applications	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,993,355	\$1,993,355	\$812,829	\$536,761	Competitive ²	N/A	CBE	4/8/2015	6/4/2015	3/30/2018	Completed
PON-14-301	EPC-14-059	Trane U.S., Inc.	Laguna Wastewater Treatment Plant Microgrid	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,999,804	\$4,999,804	\$187,080	\$2,290,000	Competitive ²	N/A	CBE	4/8/2015	5/8/2015	3/30/2019	Completed
PON-14-301	EPC-14-060	San Diego Gas & Electric Company	Demonstrate a utility-owned renewable based community microgrid at Borrego Springs California	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,724,802	\$4,724,802	\$923,165	\$1,739,560	Competitive ²	N/A	CBE	4/8/2015	5/1/2015	7/31/2018	Completed
PON-14-309	EPC-14-061	U.S. Geological Survey	Learning from Real-World Experience to Understand Renewable Energy Impacts to Wildlife	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$262,924	\$1,617,177	Competitive ²	N/A	CBE	6/10/2015	6/30/2015	3/29/2019	Completed
PON-14-304	EPC-14-062	The Regents of the University of California on behalf of the Riverside campus	Energy Efficiency in California's Water Sector Using Customized Energy Management and Supervisory Control and Data Acquisition Systems	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,017,034	\$3,017,034	\$452,544	\$1,722,732	Competitive ²	N/A	CBE	5/13/2015	7/1/2015	3/29/2019	Completed

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-304	EPC-14-063	Porifera, Inc.	Advance Wastewater Treatment Using Forward Osmosis to Produce High Quality Water	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,230,420	\$3,230,420	\$964,131	\$646,493	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	5/13/2015	6/30/2015	3/29/2019	Ended
PON-14-309	EPC-14-064	The Regents of the University of California on behalf of the Riverside campus	Aerosol Impacts on the Hydrology and Hydropower Generation in California	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$399,818	\$399,818	\$92,951	\$306,237	Competitive 2	N/A	CBE	5/13/2015	5/13/2015	6/30/2018	Completed
PON-14-304	EPC-14-065	Porifera, Inc.	Demonstration of Forward Osmosis to Produce Juice Concentrate, Purify and Reuse Wastewater and Reduce Energy Use	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,499,289	\$2,499,289	\$621,536	\$628,568	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	5/13/2015	6/30/2015	3/29/2019	Ended
PON-13-301	EPC-14-066	Lawrence Berkeley National Laboratory	High-Performance Integrated Window and Facade Solutions for California Buildings	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.3 Develop, test, and demonstrate Advanced Building Envelope Systems, Materials, and Components	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$1,308,929	\$450,000	Competitive 2	N/A	CBE	5/13/2015	6/30/2015	3/29/2019	Completed
PON-14-309	EPC-14-067	The Regents of the University of California on behalf of the Berkeley campus	Improving Hydrological Snowpack Forecasting for Hydropower Generation Using Intelligent Information Systems	S4: Develop Emerging Utility Scale Renewable Energy Generation Technologies and Strategies to Improve Power Plant Performance, Reduce Costs, and Expand the Resource Base	S4.2 Develop Innovative Tools and Strategies to Increase Utility-Scale Renewable Energy Power Plant Performance and Reliability.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,100,000	\$1,100,000	\$205,897	\$236,263	Competitive 2	N/A	CBE	5/13/2015	5/13/2015	8/30/2019	Completed
PON-14-309	EPC-14-068	Maulbetts Consulting	Evaluation of Cost, Performance and Water Conserving Capability of Hybrid Cooling	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.3 Develop Analytical Tools and Technologies to Reduce Energy Stresses on Aquatic Resources and Improve Water-Energy Management	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$581,580	\$581,580	None	\$0	Competitive 2	N/A	CBE	5/13/2015	5/13/2015	1/31/2018	Completed
PON-14-309	EPC-14-069	Energy & Environmental Economics, Inc.	Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$700,000	\$700,000	\$286,936	\$0	Competitive 2	N/A	CBE	5/13/2015	5/13/2015	1/31/2018	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-304	EPC-14-070	Wexus Technologies, Incorporated	Wexus Energy and Water Management Mobile Software for the Agricultural Industry	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs. S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$571,397	\$1,000,000	Competitive 2	N/A	CBE	5/13/2015	6/30/2015	3/29/2019	Ended
PON-14-309	EPC-14-071	Frontier Wind	Rotor-Mounted Bat Impact Deterrence System Design and Testing	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$862,875	\$862,875	\$31,238	\$36,313	Competitive 2	N/A	CBE	5/13/2015	6/30/2015	3/29/2019	Completed
PON-14-309	EPC-14-072	Lawrence Berkeley National Laboratory	Building a Healthier and More Robust Future: 2050 Low Carbon Energy Scenarios for California	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$700,000	\$700,000	\$236,701	\$65,000	Competitive 2	N/A	CBE	5/13/2015	6/30/2015	12/30/2017	Completed
PON-14-309	EPC-14-073	Lawrence Berkeley National Laboratory	Monitoring the Urban Heat Island Effect and the Efficiency of Future Countermeasures	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$116,818	\$4,000	Competitive 2	N/A	CBE	5/13/2015	6/29/2015	12/31/2018	Completed
PON-14-309	EPC-14-074	University of California, Irvine	Building a Climate Change Resilient Electricity System for Meeting California's Energy and Environmental Goals	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$698,792	\$698,792	\$181,613	\$300,000	Competitive 2	N/A	None	5/13/2015	6/30/2015	7/2/2018	Completed

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PON-14-304	EPC-14-075	The Regents of the University of California on behalf of the Berkeley campus	Unlocking Industrial Energy Efficiency Through Optimized Energy Management Systems	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,981,729	\$4,981,729	\$451,253	\$1,530,590	Competitive ²	N/A	CBE	5/13/2015	6/15/2015	3/29/2019	Ended
PON-14-304	EPC-14-076	Kennedy/Jenks Consultants	Raw Wastewater Filtration to Increase Organic Removal Efficiency and Achieve Significant Electrical Savings	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs; S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,476,085	\$3,476,085	\$1,184,735	\$1,288,340	Competitive ²	N/A	CBE	5/13/2015	6/30/2015	3/29/2019	Ended
PON-14-310	EPC-14-077	Center for Sustainable Energy	Enable Standardized Vehicle-Grid Integration through Development of Universal Standard	S9: Advance Technologies and Strategies That Optimize the Benefits of Plug in Electric Vehicles to the Electricity System	S9.1 Investigate Smart and Efficient Charging Technologies and Approaches to Integrate Plug- In Electric Vehicles Into the Power Grid	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,499,999	\$1,499,999	\$193,033	\$162,474	Competitive ²	N/A	CBE	6/10/2015	6/30/2015	6/30/2018	Terminated
PON-14-310	EPC-14-078	ChargePoint, Inc.	Next-Generation Grid Communication for Residential PEVs	S9: Advance Technologies and Strategies That Optimize the Benefits of Plug in Electric Vehicles to the Electricity System	S9.1 Investigate Smart and Efficient Charging Technologies and Approaches to Integrate Plug- In Electric Vehicles Into the Power Grid	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$139,418	\$142,500	Competitive ²	N/A	CBE	6/10/2015	6/30/2015	6/30/2018	Completed

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PON-14-303	EPC-14-079	Electric Power Research Institute, Inc.	Assessing the Ability of Smart Inverters and Smart Consumer Devices to Enable more Residential Solar Energy	S3: Develop Innovative Technologies, Tools, and Strategies to Make Distributed Generation More Affordable	S3.3 Develop Advanced Distributed Photovoltaic Systems to Reduce the Cost of Energy, Increase Interoperability, and Advance Plug-and-Play	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,705,478	\$1,705,478	\$400,537	\$891,414	Competitive 2	N/A	CBE	6/10/2015	6/30/2015	3/31/2021	Completed
PON-14-301	EPC-14-080	Charge Bliss, Inc.	Renewable Microgrid for a Medical Center	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.2 Demonstrate Renewable Energy-Based Microgrids Capable Of Sharing Resources Across the Larger Power Grid	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,776,171	\$4,776,171	\$729,842	\$2,095,835	Competitive 2	N/A	CBE, Micro Business	6/10/2015	6/8/2015	12/28/2018	Completed
PON-14-304	EPC-14-081	AgMonitor Inc.	Irrigation Optimization and Well Pump Monitoring to Reduce Energy and Water Consumption	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,292,829	\$2,292,829	\$332,162	\$535,568	Competitive 2	N/A	CBE, Small Business	6/10/2015	6/15/2015	4/1/2018	Completed
PON-14-307	EPC-14-082	Sierra Institute for Community and Environment	Advancing Biomass Combined Heat and Power Technology to Support Rural California, the Environment, and the Electrical Grid	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.2 Demonstrate and Deploy Pre-Commercial Technologies and Strategies for Combined Heat and Power Applications	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,603,228	\$2,385,261	\$262,813	\$593,316	Competitive 2	N/A	CBE	6/10/2015	7/10/2015	12/31/2019	Completed
PON-14-307	EPC-14-082	Sierra Institute for Community and Environment	Advancing Biomass Combined Heat and Power Technology to Support Rural California, the Environment, and the Electrical Grid	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.2 Demonstrate and Deploy Pre-Commercial Technologies and Strategies for Combined Heat and Power Applications	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	-\$217,967	\$0	\$0	\$0	Competitive 2	N/A	CBE	6/10/2015	7/10/2015	12/31/2019	Completed
PON-14-307	EPC-14-083	Prospect Silicon Valley	College of San Mateo Internet of Energy	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.3 Demonstrate Technologies and Strategies to Facilitate the Integration of Intermittent Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,999,601	\$2,999,601	\$411,350	\$1,235,000	Competitive 2	N/A	CBE	6/10/2015	6/29/2015	9/30/2018	Terminated
PON-14-307	EPC-14-084	ABEC #4 LLC CE&S Dairy Biogas	ABEC #4 Renewable Combined Heat and Power Project	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.2 Demonstrate and Deploy Pre-Commercial Technologies and Strategies for Combined Heat and Power Applications	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,000,000	\$3,000,000	None	\$4,983,619	Competitive 2	N/A	CBE	6/10/2015	6/30/2015	3/29/2019	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
PON-14-307	EPC-14-085	The Regents of the University of California on behalf of the Davis Campus	Demonstration of Community Scale Low Cost Highly Efficient PV and Energy Management System	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.3 Demonstrate Technologies and Strategies to Facilitate the Integration of Intermittent Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,238,491	\$1,238,491	\$124,883	\$739,726	Competitive 2	N/A	CBE	6/10/2015	6/30/2015	3/31/2021	Ended
PON-14-310	EPC-14-086	Electric Power Research Institute, Inc.	Distribution System Aware Vehicle to Grid Services for Improved Grid Stability and Reliability	S9: Advance Technologies and Strategies That Optimize the Benefits of Plug in Electric Vehicles to the Electricity System	S9.2 Develop Grid Communication Interfaces for Plug-In Electric Vehicle Charging to Support Vehicle-to-Grid Services	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,499,977	\$1,499,977	\$666,988	\$795,754	Competitive 2	N/A	CBE	6/10/2015	6/30/2015	6/30/2018	Completed
PON-14-304	EPC-14-088	Asetek USA, Inc.	Demonstration of Low-Cost Liquid Cooling Technology for Data Centers	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,552,678	\$3,552,678	\$1,038,931	\$1,519,738	Competitive 2	N/A	CBE	6/10/2015	6/13/2015	3/29/2019	Ended
PON-14-307	EPC-15-003	The Regents of the University of California on behalf of the Riverside campus	Demonstration of Community Scale Generation System at the Chemehuevi Community Center	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.3 Demonstrate Technologies and Strategies to Facilitate the Integration of Intermittent Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,588,906	\$2,588,906	\$525,157	\$802,478	Competitive 2	N/A	CBE	10/14/2015	10/29/2015	6/30/2021	Ended
PON-13-301	EPC-15-004	Electric Power Research Institute, Inc.	Climate appropriate HVAC Systems for Commercial Buildings to Reduce Energy Use and Demand	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,834,721	\$2,834,721	\$1,088,673	\$440,509	Competitive 2	N/A	CBE	7/8/2015	8/3/2015	6/30/2020	Ended
GFO-15-303	EPC-15-005	ICF Incorporated, L.L.C.	Potential Impacts and Adaptation Options for the Electricity System from Sea Level Rise in the San Diego Area.	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$499,929	\$499,929	\$240,425	\$166,200	Competitive 2	N/A	CBE	10/14/2015	12/4/2015	5/30/2018	Completed
GFO-15-303	EPC-15-006	Lawrence Berkeley National Laboratory	Modeling the Impact of Wildfires on California's Transmission and Distribution Grid	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$169,786	\$17,157	Competitive 2	N/A	CBE	10/14/2015	11/1/2015	6/1/2018	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-303	EPC-15-007	The Regents of the University of California on behalf of the Los Angeles Campus	Climate Change in Los Angeles County: Grid Vulnerability to Extreme Heat	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$84,000	\$183,753	Competitive 2	N/A	CBE	10/14/2015	12/1/2015	9/30/2018	Completed
GFO-15-303	EPC-15-008	The Regents of the University of California on behalf of the Berkeley campus	Visualizing Climate-Related Risks to the Electricity System using Cal-Adapt	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$400,000	\$400,000	\$74,324	\$0	Competitive 2	N/A	CBE	11/12/2015	11/16/2015	6/28/2019	Completed
GFO-15-302	EPC-15-009	California Homebuilding Foundation (CHF)	Workforce Instruction for Standards and Efficiency (WISE)	S17: Strengthen the Clean Energy Workforce by Creating Tools and Resources that Connect the Clean Energy Industry to the Labor Market	S17.1 Provide Grants to Develop and Enhance Training and Apprenticeship Programs to Support Clean Energy Deployment Programs in IOU Service Territories	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$4,431,918	\$4,431,918	\$1,667,291	\$15,685,075	Competitive 2	N/A	CBE	11/12/2015	11/30/2015	6/30/2020	Ended
GFO-15-302	EPC-15-010	Center for Sustainable Energy	Expanding Energy-Related Career Pathways in the Electrical Industry: Increasing Workforce Development Opportunities in Disadvantaged Communities and Delivering Training on Automated Demand Response Communication Equipment to Inside Wireman Apprentice	S17: Strengthen the Clean Energy Workforce by Creating Tools and Resources that Connect the Clean Energy Industry to the Labor Market	S17.1 Provide Grants to Develop and Enhance Training and Apprenticeship Programs to Support Clean Energy Deployment Programs in IOU Service Territories	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$4,476,189	\$4,476,189	\$863,874	\$16,165,080	Competitive 2	N/A	CBE	11/12/2015	12/8/2015	6/30/2020	Ended
PON-14-304	EPC-15-012	Kennedy/Jenks Consultants	Improving Membrane Treatment Energy Efficiency through Monitoring the Removal of Colloidal Particle Foullants	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,167,034	\$1,167,034	\$429,784	\$336,000	Competitive 2	N/A	CBE	12/9/2015	1/30/2016	3/29/2019	Ended
PON-14-310	EPC-15-013	The Regents of the University of California on behalf of the Berkeley campus	Open Source Platform For Plug-In Electric Vehicle Smart Charging in California	S9: Advance Technologies and Strategies That Optimize the Benefits of Plug in Electric Vehicles to the Electricity System	S9.1 Investigate Smart and Efficient Charging Technologies and Approaches to Integrate Plug-In Electric Vehicles into the Power	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$262,826	\$90,000	Competitive 2	N/A	CBE	2/10/2016	2/1/2016	1/31/2019	Completed

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PON-14-310	EPC-15-015	Andromeda Power, LLC	Grid Communication Interface for Smart Electric Vehicle Services Research and Development	S9: Advance Technologies and Strategies That Optimize the Benefits of Plug In Electric Vehicles to the Electricity	S9.2 Develop Grid Communication Interfaces for Plug-In Electric Vehicle Charging to Support Vehicle-to-Grid Services	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$681,693	\$681,693	\$223,081	\$465,000	Competitive ²	N/A	CBE	1/13/2016	2/1/2016	1/30/2019	Completed
PON-13-302	EPC-15-016	Amber Kinetics, Inc.	A Transformative Flywheel R&D Project	S8: Integrate Grid Level Energy Storage Technologies and Determine Best Applications That Provide Locational Benefits	S8.2 Develop Innovative Utility-Scale and Generation Energy Storage Technologies and Applications to Mitigate Intermittent Renewables and Meet Peak Demand.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$388,000	\$7,500,000	Competitive ²	N/A	CBE	1/13/2016	1/27/2016	3/30/2018	Completed
PON-13-302	EPC-15-018	Eos Energy Storage, LLC	Pilot Testing of Eos Znyth Battery Technology in Distributed Energy Storage Systems	S8: Integrate Grid Level Energy Storage Technologies and Determine Best Applications That Provide Locational Benefits	S8.2 Develop Innovative Utility-Scale and Generation Energy Storage Technologies and Applications to Mitigate Intermittent Renewables and Meet Peak Demand.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,894,866	\$1,894,866	\$218,866	\$1,436,801	Competitive ²	N/A	None	1/13/2016	1/15/2016	3/31/2021	Ended
PON-13-301	EPC-15-019	Regents of the University of California, Davis	Low Cost, Large Diameter, Shallow Ground Loops for Ground-Coupled Heat Pumps	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration Systems; S1.7 Develop and Evaluate Ideal Strategies to Improve Indoor Air Quality in Energy-Efficient Buildings; S1.8 Develop Cost-Effective Technologies and Approaches to Achieve California's Zero Net Energy Buildings Goals	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,212,186	\$1,212,186	\$338,049	\$18,826	Competitive ²	N/A	CBE	3/9/2016	2/15/2016	3/31/2020	Completed

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PON-13-301	EPC-15-020	Electric Power Research Institute, Inc.	Intelligent HVAC Controls for Low Income Households: A Low Cost Non-connected Device that Understands Consumer Preferences and Performs Adaptive Optimization	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.2 Develop, Test Demonstrate, and Integrate Equipment, Systems, and Components that Improve the Advanced heating, Ventilation, Air Conditioning, and Refrigeration Systems; S1.4 Investigate and Improve Understanding of Building occupant Behavior and Related Consumer Choice Motivation to Increase and Sustain Energy Efficiency Improvements in	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,705,759	\$2,705,759	\$903,766	\$427,072	Competitive 2	N/A	CBE	2/10/2016	3/1/2016	3/31/2020	Ended
GFO-15-310	EPC-15-021	AGGIOS, Inc	Mobile Efficiency for Plug Load Devices	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,996,999	\$1,996,999	\$136,800	\$6,030,450	Competitive 2	N/A	CBE, Micro Business	3/9/2016	5/1/2016	12/31/2018	Completed
GFO-15-310	EPC-15-022	University of California, Irvine	Power Management User Interface	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$785,124	\$785,124	\$300,159	50	Competitive 2	N/A	None	3/9/2016	4/1/2016	4/30/2019	Ended
GFO-15-310	EPC-15-023	Lawrence Berkeley National Laboratory	Gaming System Energy Efficiency without Performance Compromises	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,386,530	\$1,386,530	\$658,250	50	Competitive 2	N/A	CBE	3/9/2016	6/1/2016	12/31/2018	Completed

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GFO-15-310	EPC-15-024	Lawrence Berkeley National Laboratory	Efficient and ZNE-Ready Plug Loads	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,600,000	\$1,600,000	\$634,531	\$495,000	Competitive ²	N/A	CBE	3/9/2016	4/11/2016	4/30/2019	Ended
GFO-15-310	EPC-15-025	Home Energy Analytics	Plug Load Reduction App:RYPL	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$884,100	\$884,100	\$634,531	\$350,000	Competitive ²	N/A	CBE, Small Business, Micro Business, Woman-Owned	3/9/2016	4/11/2016	12/31/2019	Ended
GFO-15-310	EPC-15-026	Lawrence Berkeley National Laboratory	Unlocking Plug Load Energy Savings through Energy Reporting	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,630,699	\$1,630,699	\$123,700	\$494,318	Competitive ²	N/A	CBE	3/9/2016	5/1/2016	4/30/2019	Ended
GFO-15-310	EPC-15-027	Fisher-Nickel, Inc.	Electric Plug Load Savings Potential of Commercial Foodservice Equipment	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$937,469	\$937,469	\$392,763	\$202,450	Competitive ²	N/A	CBE	4/13/2016	5/16/2016	6/30/2020	Ended
GFO-15-309	EPC-15-028	Electric Power Research Institute, Inc.	Real World Electrification Options of Energy Services and Environmental Justice (EJ) Considerations	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.1 Conduct Air Quality Research to Address Environmental and Public Health Effects of Conventional and Renewable Energy and to Facilitate Renewable Energy Deployment.; S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$799,444	\$799,444	\$234,351	\$759,213	Competitive ²	N/A	CBE	4/13/2016	5/13/2016	5/13/2019	Completed

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GFO-15-309	EPC-15-029	Black & Veatch Corporation	Distributed Generation Environmental Planner	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$199,976	\$199,976	\$44,350	\$0	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	1/31/2018	Completed
GFO-15-306	EPC-15-030	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$10,000,000	\$880,681	\$4,668,434	Competitive 2	N/A	CBE	4/13/2016	5/1/2016	3/31/2026	Active
GFO-15-306	EPC-15-030	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S18: Foster the Development of the Most Promising Energy Technologies into Successful	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,000,000	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/13/2016	5/1/2016	3/31/2026	Active
Follow-on Funding Project	EPC-15-030	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S1: Close the Innovation Gap from Idea to Investment	S1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$5,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	6/9/2021	5/1/2016	3/31/2026	Active
GFO-15-310	EPC-15-031	Electric Power Research Institute, Inc.	Flexible Control Strategies for Plug Loads with Context-Aware Smart Power Outlets to Mitigate Electricity Waste and Support Demand Response	S1: Develop Next-Generation End-Use Energy Efficiency Technologies and Strategies for the Building Sector	S1.6 Reduce the Energy Use of Plug-Load Devices Through the Development of Products, Systems, and Controls, and Evaluation of Consumer Behavior That Affects Energy Use.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,050,022	\$1,050,022	\$366,082	\$335,120	Competitive 2	N/A	CBE	4/13/2016	5/2/2016	3/31/2021	Completed
GFO-15-306	EPC-15-032	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$9,960,000	\$282,411	\$10,245,061	Competitive 2	N/A	CBE	4/13/2016	5/12/2016	3/31/2026	Active
GFO-15-306	EPC-15-032	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S18: Foster the Development of the Most Promising Energy Technologies into Successful	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,980,000	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/13/2016	5/12/2016	3/31/2026	Active
Follow-on Funding Project	EPC-15-032	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S1: Close the Innovation Gap from Idea to Investment	S1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,980,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	6/9/2021	5/12/2016	3/31/2026	Active

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GFO-15-309	EPC-15-033	Regents of the University of California, Davis	Ventilation Solutions for Energy Efficient California Schools: Improving Indoor Air Quality through Advanced, High Performance HVAC	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.1 Conduct Air Quality Research to Address Environmental and Public Health Effects of Conventional and Renewable Energy and to Facilitate Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$439,287	\$0	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	9/30/2019	Completed
GFO-15-309	EPC-15-034	Public Health Institute	Emerging Energy Public Health Research Roadmap	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.1 Conduct Air Quality Research to Address Environmental and Public Health Effects of Conventional and Renewable Energy and to Facilitate Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$151,000	\$151,000	\$21,163	\$0	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	7/31/2017	Completed
GFO-15-309	EPC-15-035	Lawrence Berkeley National Laboratory	Clarifying and Quantifying Current and Near-Term Groundwater Pumping Energy Use and Costs in California to Improve Energy and Water Systems Reliability	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.3 Develop Analytical Tools and Technologies to Reduce Energy Stresses on Aquatic Resources and Improve Water-Energy Management	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$625,000	\$625,000	\$260,000	\$22,550	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	6/30/2019	Ended
GFO-15-309	EPC-15-036	Eagle Rock Analytics, Inc.	Probabilistic Seasonal and Decadal Forecasts for the Electricity System Using Linear Inverse Modeling	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$400,000	\$400,000	\$26,898	\$0	Competitive 2	N/A	CBE, Small Business, Micro Business	4/13/2016	5/13/2016	9/30/2019	Completed
GFO-15-309	EPC-15-037	Lawrence Berkeley National Laboratory	Smart Ventilation for Advanced California Homes	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.1 Conduct Air Quality Research to Address Environmental and Public Health Effects of Conventional and Renewable Energy and to Facilitate Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$649,037	\$1,300,000	Competitive 2	N/A	CBE	4/13/2016	5/13/2016	1/30/2020	Completed
GFO-15-306	EPC-15-038	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$10,000,000	\$718,347	\$2,655,684	Competitive 2	N/A	CBE	4/13/2016	5/16/2016	3/31/2027	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-306	EPC-15-038	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,000,000	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/13/2016	5/16/2016	3/31/2027	Active
Follow-on Funding Project	EPC-15-038	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$5,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	6/9/2021	5/16/2016	3/31/2027	Active
GFO-15-309	EPC-15-039	The Regents of the University of California on behalf of the Berkeley campus	Carbon Balance with Renewable Energy: Effects of Solar Installations on Desert Soil Carbon Cycle	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$499,181	\$499,181	\$80,312	\$72,000	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	2/28/2020	Completed
GFO-15-309	EPC-15-040	Zoological Society of San Diego dba San Diego Zoo Wildlife Alliance	Assessing California's Mitigation Guidelines for Burrowing Owls Impacted by Renewable Energy	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$598,671	\$598,671	\$54,425	\$602,936	Competitive 2	N/A	CBE	5/17/2016	6/1/2016	9/2/2019	Completed
GFO-15-308	EPC-15-041	Prospect Silicon Valley	MarketZero: Taking an existing grocery store to scalable near-ZNE	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,999,591	\$2,999,591	\$846,723	\$650,000	Competitive 2	N/A	CBE	4/13/2016	5/1/2016	6/30/2020	Ended
GFO-15-308	EPC-15-042	California Homebuilding Foundation (CHF)	Zero Energy Residential Optimization - Community Achievement (ZERO-CA)	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.1 Demonstrate Zero-Net Energy Buildings and Communities	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$4,819,805	\$4,819,805	\$1,488,701	\$2,611,014	Competitive 2	N/A	CBE	5/17/2016	5/1/2016	3/31/2021	Ended
GFO-15-309	EPC-15-043	The Regents of the University of California on behalf of the Los Angeles Campus	Development of a Genoscape Framework for Assessing Population-Level Impacts of Renewable Energy Development on Migratory Bird Species in California	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$599,236	\$599,236	\$114,848	\$888,250	Competitive 2	N/A	CBE	4/13/2016	6/1/2016	9/30/2019	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-313	EPC-15-044	Electric Power Research Institute, Inc.	Certified Open-Source Software to Support the Interconnection Compliance of Distributed Energy Resources	S7: Develop Operational Tools, Models, and Simulations to Improve Grid Resource Planning	S7.4 Develop Interoperability Test Tools and Procedures to Validate New Subsystem Integration into the Grid	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$816,539	\$816,539	\$203,973	\$243,722	Competitive 2	N/A	CBE	5/17/2016	5/18/2016	3/29/2019	Completed
GFO-15-311	EPC-15-045	Electric Power Research Institute, Inc.	Transactive Incentive Signals to Manage Electricity Consumption for Demand Response	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.1 Develop Cost-Effective Metering and Telemetry to Allow Customers With Demand Response, Distributed Generation, Plug-in Electric Vehicles, and Energy Storage to Participate in California ISO Markets and/or Provide Grid Services.; S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets;	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$498,054	\$498,054	\$190,201	\$110,450	Competitive 2	N/A	CBE	5/17/2016	5/18/2016	6/30/2020	Completed
GFO-15-313	EPC-15-046	Siemens Corporation, Corporate Technology	Developing a Distribution Substation Management System	S6: Develop Technologies, Tools, and Strategies to Enable the Smart Grid of 2020	S6.2 Develop Controls and Equipment to Expand Distribution Automation Capabilities.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$171,526	\$455,000	Competitive 2	N/A	CBE	5/17/2016	5/24/2016	3/29/2019	Completed
GFO-15-313	EPC-15-047	SLAC National Accelerator Laboratory	Powernet - A Cloud Based Method for Managing Distribution Resources	S6: Develop Technologies, Tools, and Strategies to Enable the Smart Grid of 2020	S6.2 Develop Controls and Equipment to Expand Distribution Automation Capabilities.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,210,720	\$2,210,720	\$865,939	\$0	Competitive 2	N/A	CBE	5/17/2016	5/18/2016	3/31/2020	Completed
GFO-15-311	EPC-15-048	Alternative Energy Systems Consulting, Inc.	Residential Intelligent Energy Management Solution: Advanced Intelligence to Enable Integration of Distributed Energy Resources	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.4 Develop and Test Novel Technologies, Strategies, and Applications That Improve the Business Case for Customer-Side Dispatchable Distributed Resources and/or Expansion of Demand Response	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,996,560	\$3,996,560	\$637,870	\$0	Competitive 2	N/A	CBE	5/17/2016	5/30/2016	3/31/2020	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-309	EPC-15-049	Antelope Valley Water Storage, LLC	Electricity Pumped Storage Systems Using Underground Reservoirs: A Feasibility Study for the Antelope Valley Water Storage System	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.3 Develop Analytical Tools and Technologies to Reduce Energy Stresses on Aquatic Resources and Improve Water-Energy Management	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$197,300	\$197,300	\$15,276	\$199,353	Competitive 2	N/A	CBE	5/17/2016	6/1/2016	9/29/2017	Completed
GFO-15-317	EPC-15-050	Regents of the University of California, Davis	Winery Water and Energy Savings	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,989,201	\$1,989,201	\$157,088	\$404,625	Competitive 2	N/A	CBE	5/17/2016	6/30/2016	3/31/2020	Ended
GFO-15-311	EPC-15-051	Lawrence Berkeley National Laboratory	The Value Proposition for Cost Effective, DR-Enabling, Nonresidential Lighting System Retrofits in California Buildings	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer-side-of-the-Meter Energy Choices	S2.4 Develop and Test Novel Technologies, Strategies, and Applications That Improve the Business Case for Customer-Side Dispatchable Distributed Resources and/or Expansion of Demand Response	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$130,529	\$138,648	Competitive 2	N/A	CBE	5/17/2016	6/1/2016	6/30/2018	Ended
GFO-15-308	EPC-15-053	Electric Power Research Institute, Inc.	Customer-Centric Approach to Scaling IDSM Retrofits	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,894,721	\$3,894,721	\$1,382,796	\$799,559	Competitive 2	N/A	CBE	5/17/2016	6/30/2016	6/30/2021	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-311	EPC-15-054	Universal Devices, Inc.	Complete and Low Cost Retail Automated Transactive Energy System (RATES)	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,187,370	\$3,187,370	None	\$1,087,710	Competitive ²	N/A	CBE, Small Business	5/17/2016	6/30/2016	3/29/2019	Ended
GFO-15-312	EPC-15-055	Charge Bliss, Inc.	The Charge Bliss Advanced Renewable Energy Community for a Disadvantaged Southern California Community	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,500,000	\$1,500,000	\$197,815	\$96,937	Competitive ²	N/A	CBE, Micro Business	5/17/2016	6/1/2016	3/30/2018	Completed
GFO-15-312	EPC-15-056	Natural Capitalism Solutions, dba Clean Coalition	Peninsula Advanced Energy Community (PAEC)	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,318,997	\$1,318,997	\$312,711	\$330,000	Competitive ²	N/A	None	5/17/2016	6/27/2016	6/30/2018	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-311	EPC-15-057	The Regents of the University of California (CIEE)	Customer-controlled, Price-mediated, Automated Demand Response for Commercial Buildings	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$4,000,000	\$4,000,000	\$1,373,762	\$424,000	Competitive ²	N/A	None	5/17/2016	6/30/2016	9/30/2019	Ended
GFO-15-312	EPC-15-058	The Regents of the University of California on behalf of the Berkeley campus	The Oakland EcoBlock - A Zero Net Energy, Low Water Use Retrofit Neighborhood Demonstration Project	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,500,000	\$1,500,000	\$117,432	\$769,846	Competitive ²	N/A	CBE	5/17/2016	6/27/2016	3/23/2018	Completed
GFO-15-313	EPC-15-059	Onset, Inc.	UniGen Smart System for Renewable Integration	S6: Develop Technologies, Tools, and Strategies to Enable the Smart Grid of 2020	S6.4 Develop Grid Operation Practices and Applications that Use Renewable Availability Data.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$638,993	\$638,993	None	\$0	Competitive ²	N/A	CBE	5/17/2016	5/24/2016	3/29/2019	Ended
GFO-15-309	EPC-15-060	Regents of the University of California, Davis	Optimizing Solar Facility Configuration Effects on Habitat, Managed Plants, and Essential Species Interactions	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$597,865	\$597,865	\$99,801	\$103,297	Competitive ²	N/A	CBE	5/17/2016	6/1/2016	9/30/2019	Completed

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GFO-15-312	EPC-15-061	The Regents of the University of California on behalf of the Los Angeles Campus	Using Data-Driven Approaches to Design Advanced Energy Communities for Existing Buildings	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,497,996	\$1,497,996	\$449,666	\$381,074	Competitive ²	N/A	CBE	5/17/2016	6/13/2016	3/30/2018	Completed
GFO-15-309	EPC-15-062	University of California, Irvine	Robust, Low-Cost, Real-Time, NOx Sensor for Optimization of Dispatchable Distributed Generation Systems	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.1 Conduct Air Quality Research to Address Environmental and Public Health Effects of Conventional and Renewable Energy and to Facilitate Renewable Energy	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$53,531	\$0	Competitive ²	N/A	None	5/17/2016	6/1/2016	4/18/2019	Completed
GFO-15-308	EPC-15-064	Prospect Silicon Valley	Innovative Net Zero: ZNE Demonstration in Existing Low-Income Mixed-Use Housing	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,995,653	\$2,995,653	\$408,130	\$800,000	Competitive ²	N/A	CBE	5/17/2016	6/30/2016	3/31/2020	Terminated
GFO-15-312	EPC-15-065	Office of Energy and Sustainable Development, City of Berkeley	Berkeley Energy Assurance Transformation (BEAT) Project	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,499,214	\$1,499,214	\$500,070	\$250,121	Competitive ²	N/A	CBE	5/17/2016	5/31/2016	6/30/2018	Completed

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GFO-15-312	EPC-15-066	Groundwork San Diego-Chollas Creek	Developing an Advanced Energy Master Plan for the Encanto Neighborhood in San Diego	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,500,000	\$1,500,000	\$129,898	\$520,000	Competitive ²	N/A	CBE	5/17/2016	6/1/2016	3/30/2018	Completed
GFO-15-312	EPC-15-067	Local Government Commission	Integrated Community Resource Marketplace	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,500,000	\$1,500,000	\$432,890	\$12,445	Competitive ²	N/A	CBE	5/17/2016	6/1/2016	3/30/2018	Completed
GFO-15-309	EPC-15-068	Lawrence Berkeley National Laboratory	Understanding and Mitigating Barriers to Wind Energy Expansion in California	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$74,830	\$70,000	Competitive ²	N/A	CBE	5/17/2016	6/30/2016	3/30/2018	Completed

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GFO-15-312	EPC-15-069	Zero Net Energy (ZNE) Alliance	Lancaster Advanced Energy Community (AEC) Project	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,469,779	\$1,469,779	\$507,982	\$1,500,000	Competitive ²	N/A	CBE	5/17/2016	7/13/2016	3/30/2018	Completed
GFO-15-309	EPC-15-070	Altostratus, Inc.	Intra-urban Enhancements to Probabilistic Climate Forecasting for the Electric System	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$193,326	\$193,326	\$14,035	\$5,000	Competitive ²	N/A	CBE, Small Business	5/17/2016	6/1/2016	5/30/2019	Completed
GFO-15-312	EPC-15-071	Biodico, Inc.	Zero Net Energy Farms	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,175,919	\$1,175,919	\$122,540	\$1,140,419	Competitive ²	N/A	CBE	5/17/2016	5/1/2016	3/31/2018	Completed
GFO-15-309	EPC-15-072	Regents of the University of California, Davis	New Chemical Compounds for Cost-Effective Carbon Capture	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$40,000	\$0	Competitive ²	N/A	CBE	5/17/2016	6/30/2016	6/30/2020	Completed

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GFO-15-311	EPC-15-073	The Regents of the University of California on behalf of the Los Angeles Campus	Identifying Effective Demand Response Program Designs to Increase Residential Customer Participation	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.4 Develop and Test Novel Technologies, Strategies, and Applications That Improve the Business Case for Customer-Side Dispatchable Distributed Resources and/or Expansion of Demand Response	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,007,875	\$2,007,875	\$203,115	\$562,633	Competitive ²	N/A	CBE	5/17/2016	6/30/2016	3/31/2019	Completed
GFO-15-311	EPC-15-074	Center for Sustainable Energy	Meeting Customer and Supply-side Market Needs with Electrical and Thermal Storage, Solar, Energy Efficiency and Integrated Load Management Systems	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.1 Develop Cost-Effective Metering and Telemetry to Allow Customers With Demand Response, Distributed Generation, Plug-in Electric Vehicles, and Energy Storage to Participate in California ISO Markets and/or Provide Grid Services.; S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets;	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,960,805	\$3,960,805	\$746,794	\$1,981,262	Competitive ²	N/A	CBE	5/17/2016	4/1/2016	6/30/2020	Ended

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GFO-15-311	EPC-15-075	Electric Power Research Institute, Inc.	Customer-centric Demand Management using Load Aggregation and Data Analytics	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer side-of-the-Meter Energy Choices	S2.1 Develop Cost-Effective Metering and Telemetry to Allow Customers With Demand Response, Distributed Generation, Plug-in Electric Vehicles, and Energy Storage to Participate in California ISO Markets and/or Provide Grid Services.; S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets;	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,998,587	\$3,998,587	\$1,163,894	\$1,270,312	Competitive ²	N/A	CBE	5/17/2016	5/18/2016	6/30/2020	Ended
GFO-15-312	EPC-15-076	Zero Net Energy (ZNE) Alliance	Richmond Advanced Energy Community Project	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,480,111	\$1,480,111	\$370,990	\$2,590,134	Competitive ²	N/A	CBE	5/17/2016	6/1/2016	3/30/2018	Ended

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GFO-15-312	EPC-15-077	University of California, Irvine	Huntington Beach Advanced Energy Community Blueprint	S16: Collaborate With Local Jurisdictions and Stakeholder Groups in IOU Territories to Establish Strategies for Enhancing Current Regulatory Assistance and Permit Streamlining Efforts That Facilitate Coordinated Investments and Widespread Deployment of Clean Energy Infrastructure	S16.2 Provide Planning Grants to Cities and Counties to Incorporate Clean Energy Technology Planning and Permitting Processes into Local Government Land Use Planning	2012-2014 EPIC Program 1st Investment Plan	Market Facilitation	\$1,500,000	\$1,500,000	\$508,226	\$810,998	Competitive ²	N/A	None	5/17/2016	6/15/2016	7/31/2018	Completed
GFO-15-309	EPC-15-078	The Regents of the University of California on behalf of the Berkeley campus	Risk Modeling and Cognitive Science Characterization of Barriers to Climate Change Adaptation in California Electricity Sector	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$350,000	\$350,000	\$48,887	\$0	Competitive ²	N/A	CBE	5/17/2016	5/30/2016	3/29/2019	Completed
GFO-15-317	EPC-15-079	Victor Valley Wastewater Reclamation Authority (VWVRA)	Advanced Renewable Energy Storage and Recycled Water Project	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,734,059	\$1,734,059	\$220,423	\$902,215	Competitive ²	N/A	CBE	5/17/2016	6/13/2016	3/31/2021	Ended
GFO-15-309	EPC-15-080	Thalassa Research & Consulting, LLC	Interdependencies of Electric Grid and Critical Lifelines: Identifying Climate Exposure and Adaptation Strategies	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$128,188	\$128,188	None	\$0	Competitive ²	N/A	None	5/17/2016	6/1/2016	1/17/2018	Completed

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GFO-15-309	EPC-15-081	Ghoulem Research	Historical Insights for Electricity Transition Scenarios in California and Flexible Energy Demand Modeling for Residential Air Conditioning with Improved Behavioral Specificity	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$400,000	\$400,000	None	\$0	Competitive 2	N/A	CBE, Woman-Owned Business	5/17/2016	6/13/2016	6/28/2019	Completed
GFO-15-309	EPC-15-082	The Regents of the University of California, Merced	Low-Temperature Microplasma-Assisted Hydrogen Production from Biogas for Electricity Generation	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts	S5.4 Develop Analytical Tools and Technologies to Plan for and Minimize the Impacts of Climate Change on the Electricity System	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$35,171	\$47,199	Competitive 2	N/A	CBE	5/17/2016	6/1/2016	6/24/2019	Completed
GFO-15-311	EPC-15-083	OhmConnect, Inc.	Empowering Proactive Consumers to Participate in Demand Response Programs	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer-side-of-the-Meter Energy Choices	S2.1 Develop Cost-Effective Metering and Telemetry to Allow Customers With Demand Response, Distributed Generation, Plug-in Electric Vehicles, and Energy Storage to Participate in California ISO Markets and/or Provide Grid Services; S2.2 Develop Demand Response Technologies and Strategies to Allow Customers to Participate in Ancillary Service Markets and/or in Dynamic Price and Reliability-Based DR Programs and Market Transactions in Retail and Wholesale Markets;	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,995,028	\$3,995,028	\$245,265	\$1,877,378	Competitive 2	N/A	CBE	5/17/2016	5/18/2016	6/28/2019	Ended
GFO-15-311	EPC-15-084	BMW of North America, LLC	Total Charge Management: Advanced Charge Management for Renewable Integration	S2: Develop New Technologies and Applications that Enable Cost-Beneficial Customer-side-of-the-Meter Energy Choices	S2.1 Develop Cost-Effective Metering and Telemetry to Allow Customers With Demand Response, Distributed Generation, Plug-in Electric Vehicles, and Energy Storage to Participate in California ISO Markets and/or Provide Grid Services.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,999,900	\$3,999,900	\$330,779	\$444,931	Competitive 2	N/A	CBE	5/17/2016	6/30/2016	6/30/2020	Completed

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GFO-15-308	EPC-15-085	Center for Sustainable Energy	San Diego Libraries Zero Net Energy and Integrated Demand Side Management Demonstration Project	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$2,715,516	\$2,715,516	\$725,052	\$544,312	Competitive 2	N/A	CBE	6/14/2016	6/30/2016	3/31/2021	Completed
GFO-15-313	EPC-15-086	Advanced Power and Energy Program (APEP) - University of California, Irvine	Substation Automation and Optimization of Distribution Circuit Operations	S6: Develop Technologies, Tools, and Strategies to Enable the Smart Grid of 2020	S6.2 Develop Controls and Equipment to Expand Distribution Automation Capabilities.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$932,718	\$932,718	\$124,021	\$112,281	Competitive 2	N/A	CBE	6/14/2016	6/22/2016	3/29/2019	Completed
GFO-15-317	EPC-15-087	Electric Power Research Institute, Inc.	Cooling Tower Water Treatment using Vortex Process Technology for Energy and Water Savings	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization And Utility Rebate Programs	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,999,995	\$1,999,995	\$485,121	\$449,990	Competitive 2	N/A	CBE	6/14/2016	6/30/2016	6/30/2020	Ended
GFO-15-317	EPC-15-088	Kennedy/Jenks Consultants	Biofiltration as an Advanced Primary Treatment Method to Achieve Substantial Energy Savings	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,306,185	\$1,306,185	\$442,698	\$271,750	Competitive 2	N/A	CBE	6/14/2016	6/30/2016	3/31/2020	Ended
GFO-15-313	EPC-15-089	Electric Power Research Institute, Inc.	Expanding Standards and Developing Tools to Enable DNP3 Support of Energy Storage Use Cases	S7: Develop Operational Tools, Models, and Simulations to Improve Grid Resource Planning	S7.4 Develop Interoperability Test Tools and Procedures to Validate New Subsystem Integration into the Grid	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$873,516	\$873,516	\$187,517	\$360,828	Competitive 2	N/A	CBE	6/14/2016	6/22/2016	3/29/2019	Completed

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GFO-15-313	EPC-15-090	The Regents of the University of California on behalf of the Riverside campus	Integrated Distributed Energy Resources Management System (IDERMS)	S6: Develop Technologies, Tools, and Strategies to Enable the Smart Grid of 2020	S6.2 Develop Controls and Equipment to Expand Distribution Automation Capabilities.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$1,119,437	\$1,119,437	\$97,356	\$530,392	Competitive 2	N/A	CBE	6/14/2016	6/22/2016	1/31/2020	Ended
GFO-15-317	EPC-15-091	Electric Power Research Institute, Inc.	Energy Efficiency and Water Savings in Agriculture by Innovative Plant-Aware Irrigation System	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,097,990	\$1,097,990	\$220,794	\$331,000	Competitive 2	N/A	CBE	6/14/2016	6/30/2016	12/30/2019	Completed
GFO-15-317	EPC-15-092	Tomorrow Water dba BKT United	Low Energy Biofiltration System with Low Backwash Rate for Groundwater Contaminant Removal	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,722,072	\$1,722,072	None	\$417,497	Competitive 2	N/A	CBE, Minority-Owned Business	6/14/2016	6/30/2016	3/31/2020	Completed
GFO-15-317	EPC-15-093	Water Energy Innovations, Inc.	Accelerating Drought Resilience Through Innovative Technologies	S20: Accelerate the Deployment of Energy Technologies in IOU Territories Through Innovative Local Planning and Permitting Approaches.	S20.1 Develop Innovative Approaches to Integrate Utility and Local Government Planning for Emerging Technology Deployment.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$178,824	\$5,000	Competitive 2	N/A	CBE, Small Business, Minority-Owned Business, Woman-Owned Business	6/14/2016	7/13/2016	10/31/2018	Completed

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GFO-15-308	EPC-15-094	Electric Power Research Institute, Inc.	Demonstration of Affordable, Comfortable, Grid Integrated Zero Net Energy Communities	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.1 Demonstrate Zero-Net Energy Buildings and Communities	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,207,432	\$4,942,809	\$1,460,838	\$1,109,482	Competitive 2	N/A	CBE	6/14/2016	6/15/2016	3/30/2023	Ended
GFO-15-308	EPC-15-094	Electric Power Research Institute, Inc.	Demonstration of Affordable, Comfortable, Grid Integrated Zero Net Energy Communities	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,735,377	\$0	\$0	\$0	Competitive 2	N/A	CBE	6/14/2016	6/15/2016	3/30/2023	Ended
GFO-15-317	EPC-15-096	American Water Works Company, Inc.	Demonstrating Innovative Leakage Reduction Strategies: Correlating Continuous Acoustic Monitoring, Satellite Imagery and Flow Sensitive Pressure Reducing Valve System	S12: Demonstrate and Evaluate the Technical and Economic Performance of Emerging Energy Efficiency and Demand-Side Management Technologies and Strategies	S12.2 Demonstrate Integrated Demand Side Management Programs – Using Emerging Efficiency, Demand Response, Distributed Generation, Metering and Other Grid-Related Technologies – For the Residential, Commercial, Industrial and Agriculture Sectors	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$1,517,780	\$1,517,780	\$222,664	\$391,461	Competitive 2	N/A	None	6/14/2016	6/30/2016	3/30/2020	Ended
GFO-15-308	EPC-15-097	Franklin Energy Services, LLC	Achieving Zero Net Energy in Multi-family Buildings	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,955,811	\$1,955,811	\$180,555	\$290,090	Competitive 2	N/A	CBE	6/14/2016	7/1/2016	3/30/2021	Ended
GFO-15-308	EPC-16-001	Institute of Gas Technology dba GTI Energy	Measure Results from Affordable Zero Net Energy Homes	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$325,815	\$168,500	Competitive 2	N/A	CBE	7/13/2016	7/30/2016	6/30/2023	Ended

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GFO-15-308	EPC-16-002	Lawrence Berkeley National Laboratory	Pathways to More Cost-Effective ZNE Homes	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$436,541	\$50,000	Competitive 2	N/A	CBE	7/13/2016	9/1/2016	6/30/2019	Completed
GFO-15-308	EPC-16-003	Regents of the University of California, Davis - California Lighting Technology Center	Pilot-Scale Evaluation of an Integrated Building Control Retrofit Package	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.; S1.4 Develop and Evaluate Strategies to Improve Indoor Air Quality in Energy-Efficient Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,999,089	\$1,999,089	\$349,266	\$267,363	Competitive 2	N/A	CBE	7/13/2016	7/18/2016	3/31/2021	Completed
GFO-15-308	EPC-16-004	Lawrence Berkeley National Laboratory	Integrated Whole-Building Zero Net Energy Retrofits for Small Commercial Offices	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$781,092	\$2,000,000	Competitive 2	N/A	CBE	7/13/2016	7/30/2016	3/31/2023	Completed
GFO-15-308	EPC-16-005	Regents of the University of California, Davis	Energy Efficient HVAC Packages for Existing Residential Buildings	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,200,000	\$1,200,000	\$366,421	50	Competitive 2	N/A	CBE	7/13/2016	8/1/2016	3/31/2021	Completed
GFO-15-317	EPC-16-006	ES Engineering Services, LLC	Low Energy, Zero Liquid Discharge Adsorption Technology to Remove Contaminants and Recover Source Water	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$986,262	\$986,262	None	\$194,904	Competitive 2	N/A	CBE	7/13/2016	7/28/2016	3/23/2020	Ended
GFO-15-308	EPC-16-007	Regents of the University of California, Davis	Optimization of Energy Efficiency to Achieve Zero-Net Energy in Multifamily and Commercial Buildings	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$151,821	\$105,000	Competitive 2	N/A	CBE	7/13/2016	8/1/2016	3/30/2022	Completed

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GFO-15-312	EPC-16-008	City of Santa Monica	Santa Monica Advanced Energy District	S20: Accelerate the Deployment of Energy Technologies in IOU Territories Through Innovative Local Planning and Permitting Approaches.	S20.1 Develop Innovative Approaches to Integrate Utility and Local Government Planning for Emerging Technology Deployment.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$1,487,609	\$1,487,609	\$570,347	\$253,030	Competitive 2	N/A	CBE	8/10/2016	9/15/2016	12/31/2018	Completed
GFO-15-317	EPC-16-009	Porifera, Inc.	Testing a Low-Energy Water Treatment System for Fail-Safe Direct Potable Reuse	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use and Costs.; S1.6 Advance Strategies to Reduce California Buildings' Impact on the Water-Energy Nexus.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$999,795	\$999,795	\$248,634	\$144,784	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	8/10/2016	8/31/2016	8/30/2019	Ended
GFO-15-317	EPC-16-010	Regents of the University of California, Davis	Improving Water and Energy Efficiency in California's Dairy Industry	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.6 Advance Strategies to Reduce California Buildings' Impact on the Water-Energy Nexus.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$191,936	\$164,710	Competitive 2	N/A	CBE	8/10/2016	10/1/2016	3/31/2021	Completed
GFO-15-317	EPC-16-011	Kennedy/Jenks Consultants	Novel Membrane Technology to Improve Energy Efficiency and Water Savings in Wastewater Treatment Operations	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use and Costs.; S1.6 Advance Strategies to Reduce California Buildings' Impact on the Water-Energy Nexus.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$882,430	\$882,430	\$304,611	\$98,600	Competitive 2	N/A	CBE	8/10/2016	9/1/2016	4/30/2019	Ended
GFO-15-317	EPC-16-012	Altex Technologies Corporation	Power and Water Saving Advanced Hybrid Air/Wet Cooling System	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.6 Advance Strategies to Reduce California Buildings' Impact on the Water-Energy Nexus.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$999,994	\$999,994	\$529,685	\$187,207	Competitive 2	N/A	CBE	8/10/2016	9/12/2016	9/30/2019	Ended
GFO-15-308	EPC-16-013	The Regents of the University of California on behalf of the Berkeley campus	Integrating Smart Ceiling Fans and Communicating Thermostats to Provide Energy-Efficient Comfort	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,888,683	\$1,888,683	\$188,176	\$315,926	Competitive 2	N/A	CBE	8/10/2016	9/8/2016	3/30/2020	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-15-317	EPC-16-014	Lawrence Livermore National Laboratory	A New Solution to California's Energy and Water Challenges: Reducing the Cost of Desalination and Increasing Water Reuse	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$999,040	\$999,040	\$448,176	\$0	Competitive 2	N/A	CBE	8/10/2016	9/1/2016	12/31/2021	Ended
GFO-15-321	EPC-16-015	Los Angeles Cleantech Incubator	Los Angeles Regional Energy Innovation Cluster	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses.	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.; S18.2 Integrate Market Insight into the Selection and Management of EPIC Funded Technologies and Strategies.; S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$4,999,247	\$9,998,494	\$541,645	\$3,658,099	Competitive 2	N/A	CBE	8/10/2016	8/17/2016	3/31/2026	Active
Follow-on Funding Project	EPC-16-015	Los Angeles Cleantech Incubator	Los Angeles Regional Energy Innovation Cluster	S.1 Close the Innovation Gap from Idea to Investment	S.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,999,247	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	6/9/2021	8/17/2016	3/31/2026	Active
PON-14-308	EPC-16-016	Hyperlight Energy	Commercializing a Disruptively Low Cost Solar Collector	S11: Provide Federal Cost Share for Applied Research Awards	S11.1 Provide Federal Cost Share for Applied Research Awards	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$750,000	\$750,000	\$177,896	\$0	Competitive 2	N/A	CBE	10/19/2016	10/14/2016	3/31/2019	Completed
GFO-15-323	EPC-16-017	Silicon Valley Clean Water	Maximizing Energy Efficiency and Reducing Bio-solids Waste from New Anaerobic Wastewater Treatment Technology	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,999,962	\$1,999,962	\$327,386	\$1,219,943	Competitive 2	N/A	None	10/19/2016	11/10/2016	3/15/2022	Ended
GFO-15-323	EPC-16-018	BDP Technologies	Biological Double-Efficiency Process as an Advanced Wastewater Treatment Method to Achieve Substantial Energy and Water Savings	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,565,400	\$1,565,400	\$15,486	\$330,904	Competitive 2	N/A	CBE	11/9/2016	11/21/2016	6/30/2024	Active
GFO-16-301	EPC-16-019	Regents of the University of California, Davis	21st Century Solutions for 20th Century Wind Projects	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.4 Upgrade California's Aging Wind Turbines: Design, Cost, and Development Improvements That Meet Local Needs.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$810,438	\$810,438	\$322,793	\$124,916	Competitive 2	N/A	CBE	3/8/2017	2/13/2017	5/30/2019	Completed

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-301	EPC-16-020	SRI International	Recovery of Lithium from Geothermal Brines	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.3 Develop Advanced Technologies and Strategies to Improve the Cost-Effectiveness of Geothermal Energy Production.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$873,387	\$873,387	\$452,445	\$0	Competitive 2	N/A	CBE	12/14/2016	1/16/2017	8/12/2019	Completed
GFO-16-301	EPC-16-021	Lawrence Berkeley National Laboratory	High-Resolution Imaging of Geothermal Flow Paths Using a Cost Effective Dense Seismic Network	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.3 Develop Advanced Technologies and Strategies to Improve the Cost-Effectiveness of Geothermal Energy Production.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,672,639	\$1,672,639	\$678,255	\$50,000	Competitive 2	N/A	CBE	12/14/2016	2/13/2017	12/31/2020	Completed
GFO-16-301	EPC-16-022	Lawrence Berkeley National Laboratory	Comprehensive Physical-Chemical Modeling to Reduce Risks and Costs of Flexible Geothermal Energy Production	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.3 Develop Advanced Technologies and Strategies to Improve the Cost-Effectiveness of Geothermal Energy Production.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$999,032	\$999,032	\$480,995	\$0	Competitive 2	N/A	CBE	12/14/2016	2/13/2017	12/31/2021	Ended
GFO-16-301	EPC-16-024	San Gabriel Valley Water Company	San Gabriel Valley Water Company "Plug and Play" In-Conduit Hydropower Development Project (SGVWC Project)	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.3 Generate Electricity While Moving Water: Developing Solutions to Expand California's Use of In-Conduit Hydrokinetic Power.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$13,082	\$782,000	Competitive 2	N/A	CBE	1/25/2017	3/1/2017	12/31/2019	Completed
GFO-16-301	EPC-16-025	Stantec Consulting Services Inc.	Comprehensive Assessment, Tools and Resources for Advancing In-Conduit Hydropower in California	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.3 Generate Electricity While Moving Water: Developing Solutions to Expand California's Use of In-Conduit Hydrokinetic Power.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$400,000	\$400,000	\$121,338	\$83,018	Competitive 2	N/A	CBE	1/25/2017	2/13/2017	10/31/2019	Completed
GFO-16-305	EPC-16-026	Electric Power Research Institute, Inc.	Develop and Pilot Test Flexible Demand Response Control Strategies for Water Pumping Stations and Industrial Refrigeration Plants	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$888,920	\$465,000	Competitive 2	N/A	CBE	5/10/2017	6/15/2017	3/31/2022	Ended

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-305	EPC-16-027	Irrigation for the Future, Inc.	Facilitating On-farm Participation in Energy Demand Management Programs	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,588,872	\$1,588,872	\$153,035	\$126,663	Competitive 2	N/A	None	3/8/2017	4/3/2017	3/31/2022	Ended
GFO-16-305	EPC-16-028	Advanced Microgrid Solutions, Inc.	Irvine Ranch Water District Load Shifting and Demand Response Pilot Project	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,403,465	\$1,403,465	\$832,615	\$760,427	Competitive 2	N/A	CBE, Woman-Owned Business	3/8/2017	4/7/2017	12/31/2020	Ended
GFO-16-305	EPC-16-029	Antelope Valley Water Storage, LLC	Water/Energy Bank Proof-of-Concept	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$150,000	\$225,000	Competitive 2	N/A	CBE	3/8/2017	4/13/2017	7/31/2019	Completed
GFO-16-305	EPC-16-030	The Regents of the University of California on behalf of the Riverside campus	Enabling Energy Efficient Data Centers in Smart Power Distribution Systems	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,783,118	\$1,783,118	\$306,631	\$297,064	Competitive 2	N/A	CBE	3/8/2017	4/8/2017	6/30/2021	Ended
PON-14-308	EPC-16-031	SLAC National Accelerator Laboratory	VOLTRON Testing Tool Kit	S11: Provide Federal Cost Share for Applied Research Awards	S11.1 Provide Federal Cost Share for Applied Research Awards	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$70,000	\$70,000	\$28,501	\$0	Competitive 2	N/A	CBE	3/8/2017	3/31/2017	3/29/2019	Ended
GFO-16-304	EPC-16-032	New Buildings Institute, Inc.	Leading in Los Angeles: Demonstrating Scalable Emerging Energy Efficient Technologies for Integrated Facade, Lighting and Plug Loads	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2 Demonstrate Large-Scale Deployment of Integrated Demand-Side Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,981,000	\$4,981,000	\$1,767,847	\$1,725,500	Competitive 2	N/A	CBE	3/8/2017	5/15/2017	6/30/2021	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-304	EPC-16-033	California State University, Long Beach Research Foundation	Internet of Things and Ubiquitous Sensing in University Building Energy Management: Design Optimization and Technology Demonstration	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.; S12.2 Demonstrate Large-Scale Deployment of Integrated Demand-Side Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,509,946	\$2,509,946	\$78,271	\$1,072,958	Competitive 2	N/A	CBE	3/8/2017	4/30/2017	5/31/2021	Ended
GFO-16-304	EPC-16-034	Zero Net Energy (ZNE) Alliance	Automated Cloud-Based Continuously Optimizing Building Energy Management System	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,500,000	\$2,500,000	\$552,488	\$1,184,891	Competitive 2	N/A	CBE	3/8/2017	4/1/2017	1/3/2022	Ended
PON-14-308	EPC-16-035	Sunpreme, Inc.	High-Performance Cu-Plating for Heterojunction Silicon Cells, Based on Ultra-Low-Cost Printed Circuit Board (PCB) Technology (Stage 1)	S11: Provide Federal Cost Share for Applied Research Awards.	S11.1 Provide Federal Cost Share for Applied Research Awards.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,430,000	\$2,430,000	\$730,620	\$0	Competitive 2	N/A	CBE	4/12/2017	4/12/2017	12/31/2019	Completed
GFO-16-302	EPC-16-036	AltaRock Energy, Inc.	Thermoelectric Generator Application and Pilot Test in a Geothermal Field	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable Resources.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,280,000	\$1,280,000	\$310,473	\$118,095	Competitive 2	N/A	None	4/12/2017	5/15/2017	12/31/2021	Completed
GFO-16-301	EPC-16-037	Amador Water Agency	The Amador Water Agency In-Conduit Hydropower Development Project (AWA Project)	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.3 Generate Electricity While Moving Water: Developing Solutions to Expand California's Use of In-Conduit Hydrokinetic Power.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$750,000	\$750,000	None	\$1,115,000	Competitive 2	N/A	CBE	4/12/2017	5/15/2017	3/31/2022	Completed
GFO-16-306	EPC-16-038	Regents of the University of California, Davis	Use of Indoor Rearing for Head-Starting Desert Tortoises	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$493,089	\$493,089	\$106,461	\$61,119	Competitive 2	N/A	CBE	4/12/2017	5/8/2017	3/31/2021	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-306	EPC-16-039	University of California, Irvine	A Life Cycle Assessment of the Environmental and Human Health Impacts of Emerging Energy Storage Technology Deployment	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$600,000	\$600,000	\$98,142	\$186,219	Competitive 2	N/A	None	4/12/2017	5/8/2017	8/31/2020	Completed
GFO-16-306	EPC-16-040	Regents of the University of California, Davis	Assessing Cooling Tower PM2.5 and PM10 Emissions using Advanced Instrumentation, Plume Transects, and Plume Modeling	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.3 Improve Science for Water Management in Power Generation: Hydropower Forecasting and Alternative Sources of Cooling Water	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$700,000	\$700,000	\$108,004	\$0	Competitive 2	N/A	CBE	4/12/2017	6/8/2017	3/31/2021	Ended
GFO-16-306	EPC-16-041	Lawrence Berkeley National Laboratory	Benefits and Challenges in Deployment of Low GWP A3 Refrigerants in Residential and Commercial Cooling Equipment	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$221,625	\$500,000	Competitive 2	N/A	CBE	4/12/2017	5/8/2017	8/31/2021	Ended
GFO-16-302	EPC-16-042	Lawrence Berkeley National Laboratory	Low-Cost High-Reliability Thermoelectrics for Waste Heat Conversion	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable Resources.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$734,342	\$516,502	Competitive 2	N/A	CBE	4/12/2017	5/15/2017	3/31/2023	Ended
GFO-16-301	EPC-16-043	Natel Energy	Cost-Effective and Climate Resilient In-Conduit Hydropower and Civil Works Innovation	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.3 Generate Electricity While Moving Water: Developing Solutions to Expand California's Use of In-Conduit Hydrokinetic Power.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$954,715	\$954,715	None	\$954,715	Competitive 2	N/A	None	4/12/2017	4/12/2017	3/30/2020	Terminated
GFO-16-305	EPC-16-044	Terzo Power Systems, LLC.	Hyper Efficient Pump Motor Unit with Fully Integrated Permanent Magnet Motor and Motor Controls with Combined Liquid Cooling	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,311,050	\$2,311,050	\$99,350	\$145,689	Competitive 2	N/A	CBE	4/12/2017	5/1/2017	12/31/2020	Ended
GFO-16-305	EPC-16-045	Polaris Energy Services Inc.	Development of New Technologies for Agricultural Loads to Participate in Renewables Integration, RTP Programs, and/or New Time of Use Rates	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,884,912	\$2,884,912	\$415,408	\$649,485	Competitive 2	N/A	CBE	4/12/2017	5/1/2017	12/31/2020	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-305	EPC-16-046	Institute of Gas Technology dba GTI Energy	Pilot Testing of Isothermal Compression	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,570,946	\$2,570,946	\$628,022	\$238,700	Competitive 2	N/A	CBE	4/12/2017	4/12/2017	3/31/2022	Ended
GFO-16-306	EPC-16-047	Cal Poly Humboldt Sponsored Programs Foundation	California Biopower Impact Project	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$247,784	\$131,575	Competitive 2	N/A	CBE	4/12/2017	5/10/2017	7/30/2021	Completed
GFO-16-305	EPC-16-048	Electric Power Research Institute, Inc.	Development and Testing of an Energy Efficient Ultra-low Charge Ammonia Refrigeration System in a Food Processing Plant	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,406,054	\$2,406,054	\$804,238	\$605,000	Competitive 2	N/A	CBE	4/12/2017	6/5/2017	12/30/2022	Ended
GFO-16-302	EPC-16-049	The Regents of the University of California, Merced	Ultra-High Power Density Roadway Piezoelectric Energy Harvesting System	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable Resources.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,270,000	\$1,270,000	\$310,100	\$0	Competitive 2	N/A	CBE	4/12/2017	5/15/2017	12/31/2021	Ended
GFO-16-302	EPC-16-050	The Regents of California, San Diego	Scaling Reliable, Next-Generation Perovskite Solar Cell Modules	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.; S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable Resources.; S3.5 Develop Piezoelectric-Based Systems for Harvesting Energy to Maximize Efficient Use of Emerging Energy Sources in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,450,000	\$1,450,000	\$184,540	\$146,050	Competitive 2	N/A	CBE	5/16/2017	5/15/2017	1/31/2022	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-305	EPC-16-051	AgMonitor Inc.	Increased Energy Efficiency via Programmable Irrigation and Fertigation	S1: Improve Energy Efficiency via Programmable Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,992,660	\$2,992,660	\$341,285	\$350,547	Competitive 2	N/A	CBE, Small Business	4/12/2017	4/12/2017	12/31/2020	Ended
GFO-16-302	EPC-16-052	Pyro-E, LLC	Force Multiplier Actuated Piezoelectric Energy Harvester for Roadway Energy Recovery	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.5 Develop Piezoelectric-Based Systems for Harvesting Energy to Maximize Efficient Use of Emerging Energy Sources in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$234,596	\$100,007	Competitive 2	N/A	CBE	4/12/2017	5/15/2017	12/31/2021	Ended
GFO-16-306	EPC-16-053	Zoological Society of San Diego dba San Diego Zoo Wildlife Alliance	Habitat Influences on Desert Tortoise Translocation Success	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$499,605	\$499,605	\$32,237	\$390,528	Competitive 2	N/A	CBE	4/27/2017	6/1/2017	3/31/2022	Completed
GFO-16-303	EPC-16-054	Electric Power Research Institute, Inc.	Open Vehicle to Building/Microgrid Integration Enabling ZNE and Improved Distribution Grid Services	S9: Advance Electric Vehicle Infrastructure to Provide Electricity System Benefits.	S9.2 Advance Vehicle-Grid Integration Technologies and Methods for Broader Use and Benefit for Residential, Private, and Public Users.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$540,024	\$2,341,001	Competitive 2	N/A	CBE	4/27/2017	6/30/2017	9/30/2021	Ended
GFO-16-303	EPC-16-055	Zeco Systems, Inc. dba Greenlots	Improving Commercial Viability of Fast Charging by Providing Renewable Integration and Grid Services with Integrated Multiple DC Fast Chargers	S9: Advance Electric Vehicle Infrastructure to Provide Electricity System Benefits.	S9.1 Advance Electric Vehicle Charging to Increase Renewable Energy Levels and Improve Grid Reliability.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$826,250	\$826,250	None	\$302,008	Competitive 2	N/A	CBE	4/27/2017	6/30/2017	9/30/2021	Ended
PON-14-308	EPC-16-056	Lawrence Berkeley National Laboratory	Open Building Control-Performance Evolution, Specification and Verification of Building Control	S11: Provide Federal Cost Share for Applied Research Awards.	S11.1 Provide Federal Cost Share for Applied Research Awards.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$473,633	\$0	Competitive 2	N/A	CBE	5/10/2017	6/10/2017	12/30/2020	Completed
GFO-16-303	EPC-16-057	Board of Trustees of the Leland Stanford Junior University (SLAC National Accelerator Laboratory)	Development of Smart Charging Infrastructure Planning Tool (SCRIPT)	S9: Advance Electric Vehicle Infrastructure to Provide Electricity System Benefits.	S9.1 Advance Electric Vehicle Charging to Increase Renewable Energy Levels and Improve Grid Reliability.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$328,945	\$94,153	Competitive 2	N/A	CBE	5/10/2017	6/30/2017	11/30/2020	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-303	EPC-16-058	Prospect Silicon Valley	Advanced Transit Bus VGI Project	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,899,199	\$1,675,417	\$412,909	\$1,064,569	Competitive ²	N/A	CBE	5/10/2017	5/15/2017	6/30/2021	Completed
GFO-16-303	EPC-16-058	Prospect Silicon Valley	Advanced Transit Bus VGI Project	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	-\$223,782	\$0	\$0	\$0	Competitive ²	N/A	CBE	5/10/2017	5/15/2017	6/30/2021	Completed
GFO-16-303	EPC-16-059	Lawrence Berkeley National Laboratory	Advanced VGI Control to Maximize Battery Life and Use of Second-Life Batteries to Increase Grid Service and Renewable Power	S9: Advance Electric Vehicle Infrastructure to Provide Electricity System Benefits.	S9.2 Advance Vehicle-Grid Integration Technologies and Methods for Broader Use and Benefit for Residential, Private, and Public Users.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$2,500,000	\$407,071	\$1,700,000	Competitive ²	N/A	CBE	5/10/2017	6/16/2017	12/31/2025	Active
Follow-on Funding Project	EPC-16-059	Lawrence Berkeley National Laboratory	Advanced VGI Control to Maximize Battery Life and Use of Second-Life Batteries to Increase Grid Service and Renewable Power	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$1,000,000	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	12/14/2022	6/16/2017	12/31/2025	Active
GFO-16-303	EPC-16-061	Nuve Holding Corp.	Intelligent Electric Vehicle Integration (INVENT)	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,200,000	\$3,967,165	\$212,026	\$3,697,744	Competitive ²	N/A	None	6/14/2017	7/3/2017	6/30/2021	Completed
GFO-16-303	EPC-16-061	Nuve Holding Corp.	Intelligent Electric Vehicle Integration (INVENT)	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	-\$232,835	\$0	\$0	\$0	Competitive ²	N/A	None	6/14/2017	7/3/2017	6/30/2021	Completed
GFO-16-305	EPC-16-062	Regents of the University of California, Davis	Advancing Demand Response in the Water Sector	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,984,983	\$2,984,983	\$295,427	\$90,865	Competitive ²	N/A	CBE	5/10/2017	6/5/2017	3/31/2022	Ended
GFO-16-306	EPC-16-063	The Regents of California, San Diego	Advanced Statistical-Dynamical Downscaling Methods and Products for California Electricity System Climate Planning	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Provide Tools and Information for Regional Climate Change Adaptation Measures for the Electricity Sector.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,399,888	\$1,399,888	\$192,928	\$0	Competitive ²	N/A	CBE	4/27/2017	6/30/2017	8/30/2021	Ended

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GFO-16-306	EPC-16-064	U.S. Geological Survey	Investigating Avian Attraction to Solar Energy Facilities Through a Lake Effect	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$499,785	\$499,785	\$200,240	\$739,757	Competitive 2	N/A	CBE	5/10/2017	6/8/2017	3/31/2022	Ended
GFO-16-303	EPC-16-065	Zero Net Energy (ZNE) Alliance	California E-Bus to Grid Integration Project	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,327,953	\$2,633,670	\$658,112	\$2,900,097	Competitive 2	N/A	CBE	5/10/2017	6/30/2017	12/31/2020	Completed
GFO-16-303	EPC-16-065	Zero Net Energy (ZNE) Alliance	California E-Bus to Grid Integration Project	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	-\$694,283	\$0	\$0	\$0	Competitive 2	N/A	CBE	5/10/2017	6/30/2017	12/31/2020	Completed
PON-14-308	EPC-16-067	Lawrence Berkeley National Laboratory	Robust Super Insulation at a Competitive Price	S11: Provide Federal Cost Share for Applied Research Awards	S11.1 Provide Federal Cost Share for Applied Research Awards	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$100,000	\$100,000	\$42,679	\$0	Competitive 2	N/A	CBE	6/14/2017	6/30/2017	12/2/2020	Completed
GFO-16-309	EPC-16-068	Electric Power Research Institute, Inc.	Integrated Community-Level Solutions for Resource Management for a Grid and Customer Benefits	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,976,991	\$2,976,991	\$864,761	\$1,030,166	Competitive 2	N/A	CBE	6/14/2017	6/30/2017	3/31/2022	Ended
GFO-16-309	EPC-16-070	Electric Power Research Institute, Inc.	Integrating Front-of-the-Meter Energy Storage with Smart PV Inverters and Solar Forecasting	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,832,770	\$1,832,770	\$604,973	\$591,438	Competitive 2	N/A	CBE	6/14/2017	6/30/2017	3/31/2025	Active
GFO-16-309	EPC-16-073	Natural Capitalism Solutions, dba Clean Coalition	Valencia Gardens Energy Storage	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,994,687	\$1,994,687	\$251,310	\$620,470	Competitive 2	N/A	None	6/14/2017	9/1/2017	3/31/2023	Ended

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GFO-16-309	EPC-16-077	The Regents of the University of California on behalf of the Riverside campus	Solar+ Storage Integrated Energy Management Demonstration in a Supportive Housing Facility	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,110,657	\$2,110,657	\$332,995	\$411,509	Competitive 2	N/A	CBE	6/14/2017	6/30/2017	7/31/2025	Active
GFO-16-309	EPC-16-079	Electric Power Research Institute, Inc.	Impact Assessment & Secure Implementation of California Rule 21 Phase 3 Smart Inverter Functions to Support High PV Penetration	S6: Advance the Use of Smart Inverters as a Tool to Manage Areas with High Penetrations of PV.	S6.1 Develop Smart Inverter Capabilities to Improve Grid Operations.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,935,822	\$2,935,822	\$601,394	\$1,659,077	Competitive 2	N/A	CBE	6/14/2017	6/30/2017	9/30/2020	Completed
GFO-16-304	EPC-17-001	Taylor Engineering	Best-in-Class: Demonstrating Scalable Operational Efficiency through Optimized Controls Sequences and Plug-and-Play Solutions	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,966,716	\$2,966,716	\$934,507	\$2,773,750	Competitive 2	N/A	CBE, Small Business	7/12/2017	7/3/2017	12/31/2021	Completed
GFO-16-309	EPC-17-002	Cal Poly Humboldt Sponsored Programs Foundation	Scaling Solar+ for Small and Medium Commercial Buildings	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$413,443	\$354,959	Competitive 2	N/A	CBE	7/12/2017	7/12/2017	12/31/2021	Ended
GFO-16-309	EPC-17-003	Clean Power Research, L.L.C.	Developing a Comprehensive, System-Wide Forecasting to Support High-Penetration Solar	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.2 Develop Innovative Tools and Strategies to Increase Predictability and Reliability of Wind and Solar Energy Generation.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$750,000	\$750,000	\$261,080	\$320,000	Competitive 2	N/A	CBE	7/12/2017	7/1/2017	6/30/2020	Completed
GFO-16-309	EPC-17-004	Energy & Environmental Economics, Inc.	Enhanced Modeling Tools to Maximize Solar + Storage Benefits	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$987,379	\$987,379	\$457,030	\$115,463	Competitive 2	N/A	CBE	7/12/2017	7/31/2017	3/31/2020	Completed
GFO-16-309	EPC-17-005	Electric Power Research Institute, Inc.	Integrating Building-Scale Solar + Storage Advanced Technologies Maximizing Value to Customer and the Distribution Grid	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,491,764	\$1,491,764	\$360,079	\$271,090	Competitive 2	N/A	CBE	7/12/2017	7/1/2017	12/31/2023	Ended

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GFO-16-309	EPC-17-006	Electric Power Research Institute, Inc.	Assessing the Ability of Smart Inverters and Smart Consumer Devices to Enable more Residential Solar Energy	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.2 Develop Innovative Tools and Strategies to Increase Predictability and Reliability of Wind and Solar Energy Generation.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$749,740	\$749,740	\$365,395	\$324,830	Competitive 2	N/A	CBE	7/12/2017	7/1/2017	3/31/2021	Completed
GFO-16-309	EPC-17-007	Center for Sustainable Energy	Integrated Community Solar and Storage at a Low-Income Mobile Home Park	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,005,923	\$2,005,923	\$499,016	\$340,905	Competitive 2	N/A	CBE	7/12/2017	7/1/2017	12/31/2021	Terminated
GFO-16-304	EPC-17-008	Center for Sustainable Energy	Empowering Energy Efficiency in Existing Big-Box Retail/ Grocery Stores	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.; S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,824,685	\$2,824,685	\$544,329	\$759,984	Competitive 2	N/A	CBE	7/12/2017	8/1/2017	1/31/2022	Ended
GFO-16-304	EPC-17-009	Willdan Energy Solutions	Bundle-Based Energy Efficiency Technology Solutions for California (BEETS for California)	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.; S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,994,256	\$3,994,256	\$875,037	\$2,382,225	Competitive 2	N/A	CBE	7/12/2017	8/1/2017	3/31/2022	Completed
PON-14-308	EPC-17-010	Lawrence Berkeley National Laboratory	Integrated Heat and Moisture Calculation Tool for Building Envelopes	S11: Provide Federal Cost Share for Applied Research Awards.	S11.1 Provide Federal Cost Share for Applied Research Awards.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$125,000	\$125,000	\$59,209	\$0	Competitive 2	N/A	CBE	8/9/2017	7/14/2017	12/1/2020	Completed

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GFO-15-325	EPC-17-011	HZIU Kompogas SLO Inc.	Demonstration of an Innovative, Community-Scale, Organic Waste-to-Energy Facility	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.2 Accelerate the Demonstration and Early Deployment of Emerging BioDigester and Integrated Clean Generation to Efficiently Use Agricultural, Municipal, and Other Organic Waste.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	None	\$5,278,373	Competitive 2	N/A	None	8/9/2017	7/12/2017	9/30/2020	Completed
GFO-15-325	EPC-17-012	Taylor Energy	Biomass-to-Electricity: Pilot-Scale Testing of Baseload Compared to Flexible Power	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,499,000	\$1,499,000	\$254,980	\$0	Competitive 2	N/A	CBE, Woman-Owned Business	7/12/2017	8/1/2017	12/31/2021	Ended
GFO-15-325	EPC-17-013	Altex Technologies Corporation	Small Scale Forest Waste Power System	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,499,994	\$1,499,994	\$768,611	\$161,728	Competitive 2	N/A	CBE	7/12/2017	9/1/2017	3/31/2021	Completed
GFO-16-304	EPC-17-014	Newcomb Anderson McCormick, Inc.	Advanced Plug Load Controls and Management in the Educational Environment	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$1,264,296	\$181,505	\$625,486	Competitive 2	N/A	CBE	8/9/2017	9/1/2017	3/31/2021	Completed
GFO-16-304	EPC-17-014	Newcomb Anderson McCormick, Inc.	Advanced Plug Load Controls and Management in the Educational Environment	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	-\$3,735,704	\$0	\$0	\$0	Competitive 2	N/A	CBE	8/9/2017	9/1/2017	3/31/2021	Completed
PON-14-308	EPC-17-015	Nevados Engineering, Inc.	Installation and Soft Cost Reduction for Horizontal Single Axis Trackers (Stage II)	S17: Provide Federal Cost Share for Technology Demonstration and Deployment Awards.	S17.1 Provide Federal Cost Share for Technology Demonstration and Deployment Awards.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$999,822	\$999,822	\$76,846	\$0	Competitive 2	N/A	CBE	8/8/2017	8/21/2017	12/31/2019	Completed
GFO-15-325	EPC-17-016	Regents of the University of California, Davis	An Online Siting Tool Application for Woody Biomass-to-Electricity Facilities in California	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,222,284	\$1,222,284	\$203,977	\$28,523	Competitive 2	N/A	CBE	8/9/2017	9/1/2017	12/31/2023	Ended

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GFO-15-325	EPC-17-017	All Power Labs, Inc.	The Nexus of Clean Energy, Healthy Forests, and a Stable Climate: Innovative Biomass Gasification for Sustainable Forest Management	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	None	\$750,000	Competitive 2	N/A	CBE, Small Business, Micro Business	10/11/2017	10/27/2017	9/29/2023	Ended
GFO-15-325	EPC-17-018	Regents of the University of California, Davis	Demonstrating the Potential for On-Site Electricity Generation from Food Waste Using Containerized Anaerobic Digestion Units	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.2 Accelerate the Demonstration and Early Deployment of Emerging BioDigerster and Integrated Clean Generation to Efficiently Use Agricultural, Municipal, and Other Organic Waste.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,411,007	\$2,411,007	\$171,649	\$756,133	Competitive 2	N/A	CBE	9/13/2017	10/18/2017	3/31/2024	Active
GFO-15-325	EPC-17-019	Fall River Resource Conservation District	Burney-Hat Creek Bioenergy	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	None	\$5,000,000	Competitive 2	N/A	None	9/13/2017	10/18/2017	3/31/2025	Active
GFO-16-303	EPC-17-020	Board of Trustees of the Leland Stanford Junior University (SLAC National Accelerator Laboratory)	Demonstration of Vehicle-Grid Integration under Non-residential Scenarios	S16: Expand Smart Charging and Vehicle-to-Grid Power Transfer for Electric Vehicles.	S16.1 Demonstrate the Ability of Electric Vehicles To Provide Advanced Grid Services.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,340,000	\$2,340,000	\$741,146	\$597,593	Competitive 2	N/A	CBE	9/13/2017	10/10/2017	12/31/2022	Ended
GFO-15-325	EPC-17-021	Mariposa County Resource Conservation District (MCRCD)	Mariposa Biomass Project	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$8,842	\$11,135,367	Competitive 2	N/A	CBE	3/21/2018	10/18/2017	3/31/2026	Active
GFO-15-325	EPC-17-022	Lystek International Limited	Skid Mounted Mobile Pilot/Education Unit for Source Separated Organics Processing with Cogeneration Capabilities	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.2 Accelerate the Demonstration and Early Deployment of Emerging BioDigerster and Integrated Clean Generation to Efficiently Use Agricultural, Municipal, and Other Organic Waste.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,589,163	\$1,589,163	\$19,396	\$493,075	Competitive 2	N/A	CBE	11/8/2017	11/28/2017	11/29/2021	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-310	EPC-17-023	RCAM Technologies	High Performance, Ultra-Tall, Low Cost Concrete Wind Turbine Towers Additively Manufactured On-Site	S4: Improve Power Plant Performance, Reduce Cost, and Accelerate Market Acceptance of Existing and Emerging Utility-Scale Renewable Energy Generation Systems.	S4.4 Upgrade California's Aging Wind Turbines: Design, Cost, and Development Improvements That Meet Local Needs.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,249,982	\$1,249,982	\$164,368	\$62,558	Competitive 2	N/A	CBE	11/8/2017	12/26/2017	6/30/2022	Ended
PON-14-308	EPC-17-024	Southern California Edison	Electric Access System Enhancement (EASE)	S17: Provide Federal Cost Share for Technology Demonstration and Deployment Awards.	S17.1 Provide Federal Cost Share for Technology Demonstration and Deployment Awards.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,000,000	\$2,000,000	\$75,160	\$8,008,123	Competitive 2	N/A	CBE	1/17/2018	5/1/2019	12/31/2021	Ended
GFO-17-301	EPC-17-025	Cohen Ventures, Inc. dba Energy Solutions	TradePro Connect Product and Service Procurement Project	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.; S19.2 Facilitate Innovative Procurement Strategies to Reduce Costs for Clean Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$991,110	\$991,110	\$159,260	\$994,084	Competitive 2	N/A	Small Business	3/21/2018	3/22/2018	1/31/2022	Ended
GFO-17-301	EPC-17-026	Lawrence Berkeley National Laboratory	Accelerating the Adoption of EVs as DERs through Fleet Procurement	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.; S19.2 Facilitate Innovative Procurement Strategies to Reduce Costs for Clean Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$115,875	\$1,779,718	Competitive 2	N/A	CBE	3/21/2018	4/16/2018	12/31/2021	Ended
GFO-16-311	EPC-17-027	The Regents of the University of California on behalf of the Berkeley campus	The Distributional Electricity Impacts of Climate Change on California's Residential Communities	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Provide Tools and Information for Regional Climate Change Adaptation Measures for the Electricity Sector.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$36,240	\$0	Competitive 2	N/A	CBE	3/21/2018	4/1/2016	6/30/2020	Completed

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-311	EPC-17-028	Lawrence Berkeley National Laboratory	High Resolution Source Importance Mapping to Minimize Impacts of Waste Biomass Distributed Generation on Ozone Air Quality in Disadvantaged Communities in the San Joaquin Valley	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts.	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$200,000	\$200,000	\$89,052	\$0	Competitive 2	N/A	CBE	3/21/2018	5/1/2018	3/31/2022	Ended
GFO-16-311	EPC-17-029	Cal Poly Corporation	Lowering Costs of Underwater Biological Surveys to Inform Offshore Renewable Energy	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to Climate Impacts.	S5.2 Develop Environmental Tools and Information for Future Renewable Energy Conservation Plans.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$199,978	\$199,978	\$29,057	\$0	Competitive 2	N/A	CBE	3/21/2018	4/4/2018	7/31/2020	Completed
GFO-17-301	EPC-17-030	Prospect Silicon Valley	California Opportunities for Procurement to Accelerate Clean Energy (Cal-OP ACE)	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.; S19.2 Facilitate Innovative Procurement Strategies to Reduce Costs for Clean Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$3,998,715	\$3,998,715	\$128,875	\$1,244,450	Competitive 2	N/A	CBE	3/21/2018	4/2/2018	12/31/2023	Ended
GFO-17-302	EPC-17-031	City of Long Beach	Port of Long Beach Microgrid - Resilience for Critical Facilities	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$95,909	\$2,120,000	Competitive 2	N/A	CBE	3/21/2018	4/23/2018	3/31/2026	Active
GFO-17-302	EPC-17-032	The Regents of California, San Diego	Miramar Microgrid - Flight Line Resilience through Landfill Gas and Energy Storage	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$425,962	\$6,002,320	Competitive 2	N/A	CBE	3/21/2018	4/23/2018	1/31/2025	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-311	EPC-17-033	The Regents of the University of California on behalf of the Berkeley campus	Building on the Cal-Adapt Platform to Deliver Actionable Information in Support of Electricity Sector Resilience	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Provide Tools and Information for Regional Climate Change Adaptation Measures for the Electricity Sector.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$900,000	\$900,000	\$172,916	\$0	Competitive 2	N/A	CBE	3/21/2018	4/20/2018	3/31/2022	Ended
GFO-17-301	EPC-17-034	The Regents of the University of California on behalf of the Davis Campus	California Energy Product Evaluation Hub	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$10,993,646	\$10,993,646	\$3,915,128	\$2,347,629	Competitive 2	N/A	CBE	3/21/2018	4/23/2018	12/31/2025	Active
GFO-16-311	EPC-17-035	Lawrence Berkeley National Laboratory	Building Healthier and More Energy-Efficient Communities in Fresno and the Central Valley	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.3 Apply Advanced Social Science Research Methods to Improve Adoption of Next Generation Energy Efficiency Solutions.; S1.4 Develop and Evaluate Strategies to Improve Indoor Air Quality in Energy-Efficient Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,100,000	\$1,100,000	\$401,103	\$0	Competitive 2	N/A	CBE	4/11/2018	5/1/2018	7/29/2022	Ended
GFO-17-302	EPC-17-038	Lawrence Berkeley National Laboratory	Camp Parks Army Microgrid - A Blueprint for Nested, Modular Design	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$817,221	\$11,410,900	Competitive 2	N/A	CBE	3/21/2018	4/23/2018	3/30/2025	Active
GFO-17-305	EPC-17-039	Electric Power Research Institute, Inc.	Validated, Transparent, and Accessible Microgrid Valuation and Optimization Tool (DER-VET)	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$530,067	\$568,110	Competitive 2	N/A	CBE	5/9/2018	5/11/2018	3/31/2024	Active

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-17-304	EPC-17-040	Rocky Mountain Institute	Mass Deployment of Energy Efficiency Retrofits in Disadvantaged Communities	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.; S1.3 Apply Advanced Social Science Research Methods to Improve Adoption of Next Generation Energy Efficiency Solutions.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,401,436	\$7,204,308	\$1,555,647	\$6,705,308	Competitive 2	N/A	None	6/13/2018	5/1/2018	9/30/2024	Active
GFO-17-304	EPC-17-040	Rocky Mountain Institute	Mass Deployment of Energy Efficiency Retrofits in Disadvantaged Communities	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,802,872	\$0	\$0	\$0	Competitive 2	N/A	None	6/13/2018	5/1/2018	9/30/2024	Active
GFO-17-304	EPC-17-041	Sonoma Clean Power Authority	Lead Locally	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$3,271,532	\$9,814,596	\$4,687,705	\$3,335,500	Competitive 2	N/A	CBE	4/11/2018	5/1/2018	3/31/2024	Active
GFO-17-304	EPC-17-041	Sonoma Clean Power Authority	Lead Locally	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$6,543,064	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/11/2018	5/1/2018	3/31/2024	Active
GFO-15-325	EPC-17-042	Camptonville Community Partnership	Camptonville Biomass-to-Energy Project	4.4 Improve the Value Proposition of Bioenergy	4.4.2 Demonstrating Modular Bioenergy Systems and Feedstock Densifying and Handling Strategies to Improve Conversion of Accessibility-Challenged Forest Biomass Resources	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,999,830	\$4,999,830	\$203,204	\$13,030,225	Competitive 2	N/A	CBE	1/22/2020	4/20/2018	3/31/2026	Active
GFO-17-305	EPC-17-043	Hitachi America LTD	GLOW: A User-friendly Interface for GridLAB-D	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,999,699	\$2,999,699	\$193,906	\$1,255,060	Competitive 2	N/A	None	5/9/2018	5/11/2018	9/29/2023	Ended

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-17-304	EPC-17-044	InTech Energy, Inc.	Researching, Developing, Demonstrating the Commoditization of Building Energy Efficiency Retrofits in Southern California	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,399,772	\$7,199,315	\$2,139,730	\$2,600,274	Competitive 2	N/A	CBE	6/13/2018	6/13/2018	3/31/2022	Terminated
GFO-17-304	EPC-17-044	InTech Energy, Inc.	Researching, Developing, Demonstrating the Commoditization of Building Energy Efficiency Retrofits in Southern California	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,799,543	\$0	\$0	\$0	Competitive 2	N/A	CBE	6/13/2018	6/13/2018	3/31/2022	Terminated
GFO-16-311	EPC-17-045	University of California, Irvine	Oak View Microgrid: Using Microgrid Technologies to Simultaneously Improve Quality of Life and Electric Grid Operations	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,099,760	\$1,099,760	\$157,594	\$367,804	Competitive 2	N/A	None	4/11/2018	5/16/2018	3/31/2024	Active
GFO-17-305	EPC-17-046	SLAC National Accelerator Laboratory	HIPAS GridLAB-D: A High-Performance Agent-based Simulation using GridLAB-D	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$3,068,781	\$3,068,781	\$1,149,270	\$300,000	Competitive 2	N/A	CBE	5/9/2018	5/11/2018	9/29/2023	Ended
GFO-17-305	EPC-17-047	SLAC National Accelerator Laboratory	OpenFIDO: An Open source Framework for Integrated Data Operations	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$367,282	\$30,000	Competitive 2	N/A	CBE	5/9/2018	5/11/2018	9/29/2023	Ended
GFO-16-311	EPC-17-048	The Regents of the University of California on behalf of the Berkeley campus	Engaging Communities in the Design of Sustainable Energy and Localized Futures (SELF) Models in California's San Joaquin Valley	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Provide Tools and Information for Regional Climate Change Adaptation Measures for the Electricity Sector.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,100,000	\$1,100,000	\$228,397	\$0	Competitive 2	N/A	CBE	4/11/2018	4/16/2018	6/30/2022	Ended
GFO-17-302	EPC-17-049	San Diego Unified Port District (Port of San Diego)	Port of San Diego Microgrid - Resiliency in Terminal Operations	S14: Take Microgrids to the Next Level. Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,985,272	\$4,985,272	\$528,929	\$4,629,936	Competitive 2	N/A	CBE	5/9/2018	6/13/2018	6/13/2026	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-16-311	EPC-17-050	The Regents of the University of California on behalf of the Los Angeles Campus	Using Big Data to Holistically Assess Benefits from Building Energy System Transition Pathways in Disadvantaged Communities	S5: Reduce the Environmental and Public Health Impacts of Electricity Generation and Make the Electricity System Less Vulnerable to	S5.4 Provide Tools and Information for Regional Climate Change Adaptation Measures for the Electricity Sector.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,098,662	\$1,098,662	\$233,968	\$54,740	Competitive 2	N/A	CBE	7/11/2018	7/11/2018	12/31/2021	Completed
PON-14-308	EPC-17-051	The Regents of California, San Diego	LEED: A Lightweight Energy-Efficient Datacenter	S11: Provide Federal Cost Share for Applied Research Awards	S11.1 Provide Federal Cost Share for Applied Research Awards	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$475,000	\$475,000	\$78,440	\$0	Competitive 2	N/A	CBE	5/9/2018	6/18/2018	1/31/2020	Ended
GFO-17-302	EPC-17-052	Gridscape Solutions, Inc.	Urban Microgrids for Grid Resiliency and Disaster Readiness	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,995,498	\$4,995,498	\$581,490	\$4,136,602	Competitive 2	N/A	CBE, Minority-Owned Business	5/9/2018	7/18/2018	3/31/2026	Active
GFO-17-302	EPC-17-053	Sonoma County Junior College District/ Santa Rosa Junior College	Santa Rosa Junior College Urban Microgrid Project	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,999,005	\$4,999,005	\$359,118	\$8,689,759	Competitive 2	N/A	CBE	6/13/2018	6/30/2018	3/31/2026	Active
GFO-17-302	EPC-17-054	Rialto Bioenergy Facility LLC	Rialto Resilient Clean Power Microgrid	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$627,582	\$6,515,000	Competitive 2	N/A	CBE	7/11/2018	7/18/2018	3/31/2026	Active
GFO-17-302	EPC-17-055	Cal Poly Humboldt Sponsored Programs Foundation	Redwood Coast Airport Microgrid	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$551,455	\$6,322,728	Competitive 2	N/A	CBE	6/13/2018	6/30/2018	9/30/2024	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-17-302	EPC-18-001	Electric Power Research Institute, Inc.	Port Hueneme Navy Data Center Microgrid	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,998,345	\$4,998,345	\$848,609	\$3,502,754	Competitive ²	N/A	CBE	9/21/2018	11/1/2018	3/31/2025	Active
GFO-17-301	EPC-18-002	California Clean Energy Fund dba CalCEF Ventures	California Test Bed Initiative	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$10,999,701	\$21,998,402	\$566,364	\$916,095	Competitive ²	N/A	None	12/10/2018	4/2/2018	3/31/2028	Active
Follow-on Funding Project	EPC-18-002	California Clean Energy Fund dba CalCEF Ventures	California Test Bed Initiative	S Enable Successful Clean Energy Entrepreneurship Across California	S.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Market Facilitation	\$10,998,701	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	None	8/10/2022	4/2/2018	3/31/2028	Active
GFO-17-308	EPC-18-003	Lucent Optics, Inc.	Ultra-thin Flexible LED Lighting Panels	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,692,069	\$1,692,069	\$516,434	\$169,207	Competitive ²	N/A	CBE	1/9/2019	1/23/2019	3/31/2023	Ended
GFO-17-308	EPC-18-004	Ubiquitous Energy, Inc.	Accelerating Commercialization of Advanced Energy Efficient Windows	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,998,055	\$2,998,055	\$407,192	\$4,310,659	Competitive ²	N/A	None	1/9/2019	2/8/2019	12/12/2022	Ended
GFO-17-308	EPC-18-005	Heliotope Technologies, Inc.	Building Energy Impact Analysis of Low Cost NanoEC Electrochromic Window Control Algorithm Optimization	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,667,104	\$3,667,104	\$1,182,911	\$952,276	Competitive ²	N/A	None	1/9/2019	1/16/2019	3/31/2025	Active
GFO-17-308	EPC-18-006	SkyCool Systems Inc.	Radiative Sky Cooling-Enabled Efficiency Improvements on Commercial Cooling Systems	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,770,563	\$1,770,563	\$332,658	\$304,288	Competitive ²	N/A	CBE	2/20/2019	2/9/2019	3/30/2025	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-17-308	EPC-18-007	Glint Photonics, Inc.	High Efficiency Dynamic Lighting Systems	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,999,990	\$1,999,990	\$43,764	\$200,064	Competitive 2	N/A	CBE	1/9/2019	2/18/2019	12/1/2021	Completed
GFO-17-308	EPC-18-008	MicroBio Engineering, Inc.	Improving Energy Efficiency and Performance of Wastewater Recycling	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,550,227	\$1,550,227	\$548,356	\$160,000	Competitive 2	N/A	CBE	2/20/2019	3/6/2019	3/31/2025	Active
GFO-17-308	EPC-18-009	Porifera, Inc.	Energy Savings Through Osmotic Concentration for the Food and Beverage Processing Industry	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,800,687	\$2,800,687	\$908,606	\$605,073	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	3/12/2019	4/1/2019	8/1/2023	Completed
GFO-17-308	EPC-18-010	Porifera, Inc.	Energy and Water Savings in Food and Beverage Wastewater Reuse	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,777,132	\$1,777,132	\$480,430	\$195,000	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	3/12/2019	4/1/2019	8/1/2023	Ended
GFO-15-312p2	EPC-18-011	Zero Net Energy (ZNE) Alliance	Lancaster Advanced Energy Community (AEC) Project	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,738,300	\$4,999,060	\$809,583	\$5,674,720	Competitive 2	N/A	CBE	5/15/2019	6/1/2019	3/31/2026	Active
GFO-15-312p2	EPC-18-011	Zero Net Energy (ZNE) Alliance	Lancaster Advanced Energy Community (AEC) Project	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,260,760	\$0	\$0	\$0	Competitive 2	N/A	CBE	5/15/2019	6/1/2019	3/31/2026	Active
GFO-15-312p2	EPC-18-013	The Regents of the University of California on behalf of the Berkeley campus	The Oakland EcoBlock, Phase II: A Zero Net Energy, Low Water-Use Retrofit Neighborhood	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,740,181	\$5,000,000	\$700,249	\$3,491,600	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	5/30/2025	Active
GFO-15-312p2	EPC-18-013	The Regents of the University of California on behalf of the Berkeley campus	The Oakland EcoBlock, Phase II: A Zero Net Energy, Low Water-Use Retrofit Neighborhood	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,259,819	\$0	\$0	\$0	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	5/30/2025	Active

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GFO-18-302	EPC-18-014	Spark Thermionics, Inc.	Production Scale-Up of Thermionic Energy Harvesters	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,349,933	\$1,349,933	\$382,031	\$270,000	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	12/31/2024	Active
GFO-18-302	EPC-18-015	Cuberg, Inc.	Improved Batteries for California's Zero-Emissions Vehicle Future	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,566,639	\$1,566,639	\$229,783	\$316,200	Competitive 2	N/A	None	6/12/2019	6/28/2019	6/30/2023	Ended
GFO-18-302	EPC-18-016	Halo Industries, Inc.	Production Scale-Up of Advanced Wafer Technology for Drastic Solar Photovoltaics Cost Reduction	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,000,000	\$4,000,000	\$584,267	\$1,250,000	Competitive 2	N/A	None	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-302	EPC-18-017	Sepon Technologies, Inc.	Scaling Up Pilot Production of Nanoporous Membranes for Battery Storage Technologies	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,675,793	\$2,675,793	\$382,307	\$2,489,417	Competitive 2	N/A	None	6/12/2019	6/28/2019	3/29/2024	Active
GFO-18-302	EPC-18-018	Caban Systems, Inc.	Prototype to Production: Modular Battery Platform Project for California Critical Infrastructure	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,878,760	\$1,878,760	None	\$1,396,943	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-302	EPC-18-019	Treau, Inc.	Treau: Low-GWP, High-Efficiency Heat Pump and Air Conditioner	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,805,907	\$2,805,907	\$834,152	\$1,901,907	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	1/31/2024	Active
GFO-18-302	EPC-18-020	Glint Photonics, Inc.	Production Scale-Up of High Efficiency Adjustable Lighting Products	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,998,922	\$1,998,922	\$619,177	\$399,831	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	3/29/2024	Active
GFO-18-302	EPC-18-021	South 8 Technologies	Production Scale-Up for Next Generation Batteries Using Liquefied Gas Electrolytes	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$231,451	\$1,028,059	\$230,205	\$466,416	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-302	EPC-18-021	South 8 Technologies	Production Scale-Up for Next Generation Batteries Using Liquefied Gas Electrolytes	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$796,608	\$0	\$0	\$0	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-304	EPC-18-022	Natron Energy, Inc.	Advanced Energy Storage for Electric Vehicle Charging Support	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,998,064	\$2,998,064	\$96,753	\$1,239,515	Competitive 2	N/A	CBE	6/12/2019	6/28/2019	12/1/2025	Active

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GFO-18-304	EPC-18-023	Eos Energy Storage, LLC	Utility Demonstration of Non-Flammable, Aqueous-Zinc Battery Storage: Innovation Scale-Up to Alleviate T&D Congestion and Mitigate Wildfire	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,986,110	\$2,986,110	\$356,447	\$4,010,876	Competitive ²	N/A	None	6/12/2019	6/28/2019	12/30/2023	Completed
GFO-18-304	EPC-18-024	Element 16 Technologies, Inc	Large-Scale Sulfur Thermal Battery Demonstration for Enhanced Grid Flexibility and Increased Renewable Penetration	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$262,119	\$3,000,000	\$430,000	\$640,000	Competitive ²	N/A	CBE	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-304	EPC-18-024	Element 16 Technologies, Inc	Large-Scale Sulfur Thermal Battery Demonstration for Enhanced Grid Flexibility and Increased Renewable	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,737,881	\$0	\$0	\$0	Competitive ²	N/A	CBE	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-302	EPC-18-025	General Engineering & Research, L.L.C.	Scale-up of Magnetocaloric Materials for High Efficiency Magnetic Refrigeration	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,088,188	\$1,088,188	\$409,462	\$306,791	Competitive ²	N/A	CBE, Small Business, Woman-Owned Business	6/12/2019	6/28/2019	3/31/2024	Active
GFO-18-301	EPC-18-026	Spatial Informatics Group, LLC	Comprehensive Open Source Development of Next Generation Wildfire Models for Grid Resiliency	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$4,021,416	\$5,000,000	\$546,431	\$1,890,382	Competitive ²	N/A	CBE, Micro Business	6/12/2019	6/28/2019	6/30/2025	Active
GFO-18-301	EPC-18-026	Spatial Informatics Group, LLC	Comprehensive Open Source Development of Next Generation Wildfire Models for Grid Resiliency	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.2 Clarify Interactions between Renewable Electricity Systems and Climate Change to Ensure an Effective, Resilient Transition to Low-Carbon Energy in California; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$978,584	\$0	\$0	\$0	Competitive ²	N/A	CBE, Micro Business	6/12/2019	6/28/2019	6/30/2025	Active

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GFO-18-303	EPC-19-002	The Regents of the University of California on behalf of the Los Angeles Campus	"Smart Greenhouse": Integrated Photovoltaics/Photosynthesis for Energy and Food	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$600,000	\$600,000	\$97,807	\$60,000	Competitive 2	N/A	CBE	9/11/2019	10/1/2019	12/31/2023	Ended
GFO-18-303	EPC-19-003	Tandem PV, Inc.	Processing and Architecture Design to Develop and Demonstrate Stable and Efficient Perovskite + Silicon Tandem Modules	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$999,802	\$999,802	\$161,295	\$999,986	Competitive 2	N/A	CBE	9/11/2019	10/1/2019	3/31/2023	Completed
GFO-18-303	EPC-19-004	The Regents of the University of California, on behalf of the San Diego campus	High-Efficiency Perovskite Tandem Modules with Resilient Interfaces	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$993,458	\$993,458	\$103,945	\$659,295	Competitive 2	N/A	CBE	9/11/2019	10/1/2019	3/31/2024	Active
GFO-15-312p3	EPC-19-005	Zero Net Energy (ZNE) Alliance	Richmond Advanced Energy Community (AEC) Phase II Project	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,998,555	\$4,998,555	\$1,092,030	\$2,813,454	Competitive 2	N/A	CBE	3/11/2020	3/2/2020	3/31/2025	Active
GFO-15-312p3	EPC-19-006	The Energy Coalition	Basset-Avocado Advanced Energy Community	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$9,093,833	\$9,093,833	\$1,487,220	\$5,459,863	Competitive 2	N/A	CBE	5/13/2020	5/1/2020	12/31/2025	Active
GFO-19-302	EPC-19-007	RCAM Technologies	On-site 3D Concrete Printing for Next-Generation Low-Cost Wind Plants	4.2 Develop Technologies that Enable Increased Wind Capacity in California	4.2.1 Advanced Manufacturing and Installation Approach for Utility-Scale Land-Based Wind Turbine Components	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,999,979	\$2,999,979	\$507,530	\$302,000	Competitive 2	N/A	CBE	4/8/2020	5/1/2020	12/31/2024	Active
GFO-19-302	EPC-19-008	Aker Offshore Wind USA LLC	NextWind Real-time Monitoring System	4.2 Develop Technologies that Enable Increased Wind Capacity in California	4.2.2 Real-Time Remote Monitoring System for Offshore and Land-Based Wind Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,586,914	\$1,586,914	\$503,271	\$201,775	Competitive 2	N/A	None	4/8/2020	5/13/2020	3/31/2023	Ended
GFO-19-302	EPC-19-009	Integral Consulting Inc.	A Risk Assessment Framework to Evaluate Effects of Offshore Wind Farms on the California Upwelling Ecosystem	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	7.3.1 Find Environmental and Land Use Solutions to Facilitate the Transition to a Decarbonized Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$174,739	\$152,821	Competitive 2	N/A	None	4/8/2020	5/1/2020	12/31/2023	Ended
GFO-19-302	EPC-19-010	Lawrence Berkeley National Laboratory	Integrated Distributed Fiber Optic Sensing for Real-Time Monitoring of OWT Gearbox and Tower Operation and Marine Animal	4.2 Develop Technologies that Enable Increased Wind Capacity in California	4.2.2 Real-Time Remote Monitoring System for Offshore and Land-Based Wind Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$684,912	\$520,000	Competitive 2	N/A	CBE	4/8/2020	5/1/2020	3/31/2024	Active

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GFO-19-302	EPC-19-011	Cal Poly Humboldt Sponsored Programs Foundation	Seabird 3D Distribution and Relative Risk from California Offshore Wind Turbines	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	7.3.1 Find Environmental and Land Use Solutions to Facilitate the Transition to a Decarbonized Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$500,000	\$123,126	\$20,046	Competitive 2	N/A	CBE	4/8/2020	5/1/2020	6/28/2024	Active
GFO-19-301	EPC-19-012	Franklin Energy Services, LLC	Affordable Space Conditioning and Domestic Hot Water Systems with Low Emissions and High Performance	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,499,925	\$1,499,925	\$305,761	\$163,750	Competitive 2	N/A	CBE	5/13/2020	5/20/2020	3/31/2024	Active
GFO-19-301	EPC-19-013	Lawrence Berkeley National Laboratory	HP-Flex: Next Generation Heat Pump Load Flexibility	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$989,122	\$386,500	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	3/31/2024	Active
GFO-19-301	EPC-19-014	Electric Power Research Institute, Inc.	A zero GWP heat pump and distribution system for all-electric heating and cooling in California	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,498,557	\$2,498,557	\$648,140	\$440,000	Competitive 2	N/A	CBE	5/13/2020	6/1/2020	3/31/2025	Active
GFO-19-301	EPC-19-015	The Regents of the University of California on behalf of the Davis Campus	Optimizing Heat Pump Load Flexibility for Cost, Comfort, and Carbon Emissions	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,537,436	\$2,537,436	\$570,955	\$256,701	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	6/30/2025	Active
GFO-19-301	EPC-19-016	The Regents of the University of California on behalf of the Davis Campus	Affordable Near- and Medium-Term Solutions for Integration of Low GWP Heat Pumps in Residential Buildings	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,916,306	\$1,916,306	\$455,123	\$200,000	Competitive 2	N/A	CBE	5/13/2020	5/13/2020	1/2/2025	Active
GFO-19-303	EPC-19-017	Materials Research LLC	Pilot Scale Recovery of Lithium from Geothermal Brines	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,878,634	\$1,878,634	\$25,000	\$0	Competitive 2	N/A	CBE	5/13/2020	6/1/2020	12/15/2023	Ended
GFO-19-303	EPC-19-018	Hell's Kitchen Geothermal LLC	Hell's Kitchen Geothermal Lithium Extraction Pilot	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$64,400	\$64,400	\$117,874	\$480,000	Competitive 2	N/A	CBE	6/10/2020	6/1/2020	3/1/2023	Terminated

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GFO-19-303	EPC-19-019	Lawrence Berkeley National Laboratory	Joint Time-Lapse Acquisition and Inversion of Passive Seismic and Magnetotelluric Data for Monitoring Reservoir Processes at the Geysers Geothermal Field	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,661,032	\$1,661,032	\$720,023	\$247,611	Competitive 2	N/A	CBE	5/13/2020	6/1/2020	3/29/2024	Active
GFO-19-303	EPC-19-020	BHER Minerals, LLC	Salton Sea Geothermal Lithium Recovery Demonstration Project	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$6,000,000	\$6,000,000	\$107,508	\$4,025,000	Competitive 2	N/A	CBE	5/13/2020	6/1/2020	3/31/2024	Active
GFO-19-304	EPC-19-021	General Engineering & Research, L.L.C.	High Efficiency Magnetic Refrigeration for Industrial Cryogenic Applications	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,699,066	\$1,699,066	None	\$545,658	Competitive 2	N/A	CBE, Small Business, Woman-Owned Business	5/13/2020	6/15/2020	3/31/2024	Active
GFO-19-304	EPC-19-022	The Regents of the University of California, Merced	Stirling cycle heat pumps for industrial heat recovery	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$656,630	\$656,630	None	\$135,927	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	12/31/2024	Active
GFO-19-304	EPC-19-023	Institute of Gas Technology dba GTI Energy	Booster Ejector Enhancement of Compressor Refrigeration Facilities Utilizing Industrial Process Waste Heat	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,621,556	\$1,621,556	\$404,995	\$173,707	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	12/31/2025	Active
GFO-19-304	EPC-19-024	Electric Power Research Institute, Inc.	Development of an Advanced High Temperature Heat Pump for the Efficient Recovery of Low-Grade Industrial Waste Heat	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,483	\$1,999,483	\$458,916	\$405,848	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	3/31/2024	Active
GFO-19-304	EPC-19-025	Nelumbo Inc.	Advanced Heat Exchanger Coatings to Improve Energy Efficiency of Industrial Refrigeration System	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,997,411	\$1,997,411	\$59,837	\$925,500	Competitive 2	N/A	CBE	5/13/2020	6/15/2020	11/29/2024	Active
GFO-18-305	EPC-19-026	Center for Sustainable Energy	Developing Lessons Learned, Best Practices, Training Materials, and Guidebooks for Customer Side of the Meter Energy Storage	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$349,527	\$244,000	Competitive 2	N/A	CBE	5/13/2020	6/1/2020	3/31/2027	Active
GFO-19-303	EPC-19-029	Hell's Kitchen Geothermal LLC	Improved Silica Removal for Enhanced Geothermal Plant Performance	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,999,599	\$2,999,599	\$1,055,530	\$45,000	Competitive 2	N/A	CBE	6/10/2020	6/1/2020	6/30/2025	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-19-301	EPC-19-030	Association for Energy Affordability	Large Capacity CO2 Central Heat Pump Water Heating Technology Evaluation and Demonstration	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,800,193	\$2,800,193	\$422,709	\$1,227,128	Competitive 2	N/A	CBE	6/10/2020	6/17/2020	9/30/2025	Active
GFO-19-305	EPC-19-031	Antora Energy, Inc.	Solid-state Long Duration Energy Storage for Industrial Applications	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,787	\$1,999,787	\$99,176	\$2,071,313	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/31/2027	Active
GFO-19-301	EPC-19-032	Association for Energy Affordability	Low-GWP Mechanical Modules for Rapid Deployment Project (LG-MM)	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,499,926	\$1,499,926	\$104,657	\$58,520	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/31/2025	Active
GFO-19-307	EPC-19-033	Lawrence Berkeley National Laboratory	Demonstrating Benefits of Highly Insulating Thin-Triple Window Retrofits in California	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	1.2.1 Deploy Next Generation Window and Building Envelope Systems in Existing Residential and Commercial Buildings	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,850,000	\$1,850,000	\$465,885	\$630,000	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/31/2026	Active
GFO-19-305	EPC-19-034	e-Zinc Inc	Commercialization of Lowest-Cost, Long Duration Energy Storage Systems	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,286,777	\$1,286,777	\$73,640	\$411,010	Competitive 2	N/A	None	6/10/2020	6/30/2020	3/31/2027	Active
GFO-19-307	EPC-19-035	Electric Power Research Institute, Inc.	Advancing Energy Efficiency in Manufactured Homes Through High Performance Envelope	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	1.2.3 Multifamily Factory Built Homes Competition for Highly Efficient Building Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,982	\$1,999,982	\$457,245	\$402,998	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	6/30/2025	Active
GFO-19-307	EPC-19-036	Rocky Mountain Institute	Varieties of Prefabricated Envelope Solutions for CA Low-Rise Buildings	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	1.2.2 Builder Competition for Best Residential Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,917,967	\$1,917,967	\$269,494	\$170,624	Competitive 2	N/A	None	6/10/2020	6/30/2020	3/31/2024	Active
GFO-19-305	EPC-19-037	DashZenergy LLC	Demand Based Renewable Hydrogen Power-to-Power Project	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,275,475	\$1,275,475	\$70,935	\$275,000	Competitive 2	N/A	CBE, Minority-Owned Business	6/10/2020	6/30/2020	3/31/2026	Active
GFO-19-310	EPC-19-038	Smartville, Inc.	Low-Cost and Easy-to-Integrate Second-Life Battery HUB	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,035,787	\$2,035,787	\$79,875	\$955,256	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/31/2025	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-19-310	EPC-19-039	RePurpose Energy, Inc.	Reuse of Electric Vehicle Batteries for Solar Energy Storage	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$210,998	\$1,042,541	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	6/30/2025	Active
GFO-19-305	EPC-19-040	Salient Energy Inc.	California Zinc-ion Energy Storage Development and Validation Project	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,583,125	\$1,583,125	\$64,904	\$1,598,812	Competitive 2	N/A	None	6/10/2020	6/30/2020	3/31/2025	Active
GFO-19-305	EPC-19-041	Form Energy, Inc.	Demonstrating an Aqueous Air-Breathing Energy Storage System for Multi-Day Resiliency	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,998,215	\$1,998,215	None	\$1,603,079	Competitive 2	N/A	None	6/10/2020	6/30/2020	12/31/2025	Active
GFO-19-305	EPC-19-042	Zelos Energy LTD	Anzode: Zinc Batteries for California Electrical Customer Power Backup	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,747,721	\$1,747,721	\$355,461	\$621,870	Competitive 2	N/A	None	6/10/2020	6/30/2020	3/31/2025	Active
GFO-19-307	EPC-19-043	Institute of Gas Technology dba GTI Energy	Advanced Energy-efficient and Fire-resistant Envelope Systems Utilizing Vacuum Insulation for Manufactured Homes	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	1.2.3 Multifamily Factory Built Homes Competition for Highly Efficient Building Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$658,603	\$801,557	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/31/2024	Active
GFO-19-305	EPC-19-044	T2M Global LLC	Ultra-high Efficiency, Lower-Cost, Green Electrolytic H2 for Microgrids in California	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$995,250	\$995,250	\$117,500	\$300,433	Competitive 2	N/A	CBE	6/10/2020	6/30/2020	3/29/2024	Active
GFO-19-306	EPC-19-045	GRID Alternatives	Critical Resilience for Fire and Emergency Facilities with the Soboba Band of Luiseño	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,710,494	\$1,710,494	\$298,664	\$472,610	Competitive 2	N/A	CBE, Woman-Owned Business	7/8/2020	6/30/2020	3/31/2026	Active
GFO-19-306	EPC-19-046	Indian Energy LLC	Demonstrating a Long-duration Flywheel Energy Storage System	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,218,374	\$1,218,374	\$32,360	\$1,344,305	Competitive 2	N/A	CBE, Minority-Owned Business	7/8/2020	6/30/2020	12/31/2026	Active
GFO-19-306	EPC-19-047	BoxPower Inc.	CATAPULT: "California Title 24 Advanced Power Utilization Technology"	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Markets	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,099	\$999,099	\$287,885	\$253,095	Competitive 2	N/A	CBE, Micro Business	7/8/2020	6/30/2020	3/31/2026	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-19-306	EPC-19-050	Rincon Band of Luiseño Indians	Rincon Long Duration Energy Storage Solar Microgrid	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$7,282,496	\$6,618,744	None	\$8,634,550	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2027	Active
GFO-19-306	EPC-19-050	Rincon Band of Luiseño Indians	Rincon Long Duration Energy Storage Solar Microgrid	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	-\$663,752	\$0	\$0	\$0	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2027	Active
GFO-19-306	EPC-19-051	Indian Energy LLC	Hybrid Modular Storage System (HMSS) as a long-duration energy storage technology Demonstration	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$5,002,334	\$5,002,334	\$401,225	\$10,766,756	Competitive 2	N/A	CBE, Minority-Owned Business	7/8/2020	6/30/2020	3/31/2026	Active
GFO-19-310	EPC-19-053	San Diego State University Foundation	Cost-Effective Integration of Second-life EV Batteries with Solar PV Systems for Commercial Buildings	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,837,672	\$2,837,672	\$407,945	\$835,375	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2026	Active
GFO-19-306	EPC-19-054	Electric Power Research Institute, Inc.	Demonstrating Code-compliant Energy Storage Systems and Their Capabilities for Grid Harmonization	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,841	\$999,841	\$344,172	\$200,017	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2026	Active
GFO-19-310	EPC-19-055	Rejoule Incorporated	Enabling EV Battery Circular Economy	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,970,774	\$2,970,774	\$162,057	\$331,891	Competitive 2	N/A	Minority-Owned Business	7/8/2020	6/30/2020	5/30/2025	Active
GFO-19-308	EPC-19-056	Energy & Environmental Economics, Inc.	Assessing Long-duration Energy Storage Deployment Scenarios to Meet California's Energy Goals	3.4 Define and Demonstrating the Locational Benefit and Best Configuration of Grid-Level Energy Storage as the California Grid Transitions to More Distributed Energy	3.4.1 Assessment and Simulation Study of California Grid with Optimized Grid-Level Energy Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$540,062	\$315,322	Competitive 2	N/A	CBE	7/8/2020	8/17/2020	3/31/2024	Active
GFO-19-306	EPC-19-058	Antelope Valley Water Storage, LLC	Long Duration 50 kW Energy Storage with Aquifer Pumped Hydro	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,000,000	\$2,000,000	\$12,402	\$500,000	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2024	Active

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GFO-19-306	EPC-19-059	The Regents of the University of California on behalf of the Riverside campus	Residential Solar+Storage Control Unit for Providing Grid Services and Demand Side Management	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$939,232	\$939,232	\$147,600	\$362,250	Competitive 2	N/A	CBE	7/8/2020	7/1/2020	3/29/2024	Active
GFO-19-308	EPC-19-060	The Regents of the University of California, Merced	Modeling of Long-Duration Storage for Decarbonization of California Energy System	3.4 Define and Demonstrating the Locational Benefit and Best Configuration of Grid-Level Energy Storage as the California Grid Transitions to More Distributed Energy	3.4.1 Assessment and Simulation Study of California Grid with Optimized Grid-Level Energy Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,254,955	\$1,254,955	\$188,844	\$505,826	Competitive 2	N/A	CBE	7/8/2020	6/30/2020	3/31/2024	Active
GFO-18-902	EPC-20-001	Lawrence Berkeley National Laboratory	Energy-Water Desalination Hub	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	6.1.1 Develop and Test Novel Energy Efficient Treatment Methods for Conventional and Non-Conventional Sources of Water Supply ; 6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations ; 6.1.3 Develop and Demonstrate Advanced Energy Efficiency Improvements to Allow for On-Site Wastewater Treatment and Reuse for Industrial Facilities and Water Intensive Industries	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$1,493,597	\$0	Competitive 2	N/A	CBE	8/12/2020	8/30/2020	3/31/2025	Active
GFO-19-306	EPC-20-002	Charge Bliss, Inc.	Essential Power Support for the Kaiser Permanente Ontario Medical Center using Long Duration Batteries within a Renewable Energy Microgrid	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$8,351,000	\$8,351,000	\$142,698	\$7,549,000	Competitive 2	N/A	CBE, Micro Business	9/9/2020	6/30/2020	3/29/2024	Active
GFO-19-306	EPC-20-003	The Pechanga Band of Luiseño Indians	Pechanga Tribal Microgrid Long Duration Storage Project	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,998,101	\$1,998,101	None	\$849,140	Competitive 2	N/A	CBE	10/14/2020	11/15/2020	3/31/2024	Pending Final Approval

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GFO-19-301	EPC-20-004	Redwood Energy, LLC	Central Heat Pump Water Heater Load Flexibility	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,043,755	\$2,043,755	\$119,460	\$48,200	Competitive ²	N/A	CBE	1/25/2021	1/3/2021	3/31/2025	Active
GFO-19-305	EPC-20-005	Technology & Investment Solutions, LLC	Hy2green - Electrolytic Hydrogen Energy Storage Using Novel Metal Hydrides	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,766,775	\$1,766,775	None	\$167,450	Competitive ²	N/A	CBE	4/14/2021	5/1/2021	3/31/2025	Active
GFO-19-311	EPC-20-006	The Regents of California, San Diego	Development of Climate Projections for California and Identification of Priority Projections	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	\$289,305	\$116,955	Competitive ²	N/A	CBE	1/25/2021	1/30/2021	3/31/2026	Active
GFO-19-311	EPC-20-007	Eagle Rock Analytics, Inc.	A Co-Produced Climate Data and Analytics Platform to Support California's Electricity Resilience Investments	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,500,000	\$3,500,000	\$690,361	\$339,500	Competitive ²	N/A	CBE, Small Business, Micro Business	1/25/2021	1/13/2021	3/31/2026	Active
GFO-19-306	EPC-20-008	Antelope Valley Water Storage, LLC	Long Duration 200 kW Energy Storage with Aquifer Pumped Hydro	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$6,406,950	\$6,406,950	\$70,470	\$3,200,000	Competitive ²	N/A	CBE	3/17/2021	2/15/2021	6/28/2026	Active
GFO-20-303	EPC-20-009	The Regents of the University of California, on behalf of the San Diego campus	Smart Plug Load Controls Integrated with Building Energy Management Systems	1.5 Increase Plug Loads and Consumer Electronics Efficiency	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,028,125	\$1,028,125	\$73,078	\$370,125	Competitive ²	N/A	CBE	2/10/2021	3/1/2021	1/31/2025	Active
GFO-20-303	EPC-20-010	California Energy Alliance	Energy and Appliance Standards for Plug Loads: Assessing Current Needs and Future Opportunities	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$996,974	\$996,974	\$198,525	\$19,580	Competitive ²	N/A	None	2/10/2021	3/1/2021	9/30/2024	Active

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GFO-20-301	EPC-20-011	Packetized Energy	Increasing Access to Smart and Affordable Energy for Customers and Resource Adequacy for the California Grid	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,000,000	\$2,000,000	None	\$1,500,000	Competitive 2	N/A	None	3/17/2021	4/16/2021	3/1/2025	Active
GFO-20-301	EPC-20-012	All Power Labs, Inc.	Development and Demonstration of Distributed Biomass CHP Microgrid Systems	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,287,890	\$3,287,890	\$496,500	\$1,988,074	Competitive 2	N/A	CBE, Small Business, Micro Business	4/14/2021	4/19/2021	3/31/2025	Active
GFO-20-301	EPC-20-013	Noon Energy Inc.	Pilot Demo of Ultra Low Cost, Long-Duration Energy Storage Coupled to Solar Power	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,166,000	\$2,166,000	\$438,095	\$1,950,000	Competitive 2	N/A	CBE	3/17/2021	4/15/2021	9/30/2026	Active
GFO-20-301	EPC-20-014	Next Energy Technologies	Rapid Innovation Development of Energy Generating Windows for Zero- and Negative-Carbon Emission Buildings	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$923,875	\$2,500,128	Competitive 2	N/A	CBE	3/17/2021	4/16/2021	3/31/2025	Active
GFO-20-301	EPC-20-015	Seigon Technologies, Inc.	Hybrid Lithium-Metal Batteries for Low-Cost and Long-Range Electric Vehicles	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,400,000	\$1,400,000	\$260,994	\$1,299,897	Competitive 2	N/A	None	3/17/2021	4/1/2021	3/31/2024	Active
GFO-20-301	EPC-20-016	South 8 Technologies	Advanced Li-ion Chemistry for Safer and Greener Electric Vehicle and Energy Storage Systems	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,010,227	\$1,010,227	\$296,525	\$506,381	Competitive 2	N/A	CBE	3/17/2021	4/1/2021	8/1/2024	Active
GFO-20-301	EPC-20-017	Treau, Inc.	Increasing the Thermal Range and Efficiency of Affordable User-Installable Room Heat Pumps	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,761,606	\$2,761,606	\$789,624	\$1,669,742	Competitive 2	N/A	CBE	3/17/2021	4/1/2021	3/31/2025	Active
GFO-20-301	EPC-20-018	Skyven Technologies, Inc.	Transforming the techno-economics of decarbonization in California's bespoke industrial sector with a scalable front-end engineering AI	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,110,500	\$1,110,500	\$157,000	\$1,001,100	Competitive 2	N/A	Minority-Owned Business	3/17/2021	4/1/2021	10/30/2024	Active
Follow-on Funding Project	EPC-20-019	Polaris Energy Services Inc.	Accelerated Deployment of Irrigation Pumping Demand Flexibility	6.2 Increase the Energy and Water Efficiency of California's Food and Agricultural Sector	6.2.1 Demonstrate Advanced Water and/or Energy Efficiency Technologies to Reduce Carbon Intensity of Production	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,884,912	\$2,884,912	\$466,190	\$576,982	Non-Competitive Follow-on Funding ⁴	N/A	CBE	4/14/2021	3/31/2021	3/31/2025	Active
GFO-20-301	EPC-20-020	Feasible, Inc.	Machine Learning Enhanced Acoustic Inspection to Improve Battery Manufacturing	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	None	\$901,500	Competitive 2	N/A	None	3/17/2021	3/24/2021	6/30/2025	Active

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PON-14-308	EPC-20-021	The Regents of California, San Diego	LEED: A Lightweight Energy-Efficient Datacenter Phase 2	1.7 Enable Cost-Effective Decarbonization of Industrial Sector	1.7.3 Develop Strategies and Tools For Maximizing Cost Effective Energy Efficiency Strategies For Decarbonization of the Industrial Sector	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$425,000	\$425,000	\$137,496	\$0	Competitive 2	N/A	CBE	3/17/2021	3/1/2021	3/29/2024	Active
GFO-20-301	EPC-20-022	FreeWire Technologies, Inc.	FreeWire Boost 2.0 Development and Demonstration Project	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,468,490	\$3,468,490	None	\$4,895,575	Competitive 2	N/A	CBE, Small Business	4/14/2021	4/21/2021	9/30/2025	Active
GFO-18-902	EPC-20-023	Rocky Mountain Institute	Scaling Industrialized Zero Emissions Retrofits in California and Beyond	2.1 Achieve Cost-Effective and Sustainable Retrofits to Highly Energy Efficient Buildings and Communities	2.1.1 Develop Community Renovation for High Efficiency and Grid Resources	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$687,500	\$1,312,500	None	\$0	Competitive 2	N/A	None	4/14/2021	4/15/2021	4/30/2027	Active
GFO-18-902	EPC-20-023	Rocky Mountain Institute	Scaling Industrialized Zero Emissions Retrofits in California and Beyond	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.2 Building Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$625,000	\$0	\$0	\$0	Competitive 2	N/A	None	4/14/2021	4/15/2021	4/30/2027	Active
GFO-19-309	EPC-20-025	Lawrence Berkeley National Laboratory	Achieving Integrated and Equitable Decarbonized Loads with CalFlexHub	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	3.1.1 Pilot Test for the Next-Generation Demand Response Landscape; 3.1.3 Assess IDERs and Load Management Capabilities	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$7,000,000	\$16,000,000	\$4,213,091	\$3,362,000	Competitive 2	N/A	CBE	4/14/2021	5/1/2021	9/30/2026	Active
GFO-19-309	EPC-20-025	Lawrence Berkeley National Laboratory	Achieving Integrated and Equitable Decarbonized Loads with CalFlexHub	2.1 Achieve Cost-Effective and Sustainable Retrofits to Highly Energy Efficient Buildings and Communities	2.1.1 Develop Community Renovation for High Efficiency and Grid Resources	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$9,000,000	\$0	\$0	\$0	Competitive 2	N/A	CBE	4/14/2021	5/1/2021	9/30/2026	Active
GFO-20-301	EPC-20-026	Caban Systems, Inc.	Advanced Energy Storage for California's Critical Infrastructure Project	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,095,264	\$1,095,264	None	\$987,764	Competitive 2	N/A	CBE	4/14/2021	4/14/2021	3/31/2029	Active
GFO-20-301	EPC-20-027	Cuberg, Inc.	High-Performance Battery Systems to Power the Rise of Electric Mobility	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,499,525	\$3,499,525	\$1,124,175	\$3,322,300	Competitive 2	N/A	None	4/14/2021	5/1/2021	3/30/2024	Active
GFO-20-301	EPC-20-028	Nextech Batteries, Inc.	Bringing Lithium Sulfur Technology to Market	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,996,782	\$2,996,782	\$279,928	\$1,500,000	Competitive 2	N/A	None	4/14/2021	5/1/2021	3/31/2025	Active
GFO-20-302	EPC-20-029	Antora Energy, Inc.	Manufacturing Scale-up of Record-Breaking Solid-State Heat Engine for Deep Decarbonization in California	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,999,695	\$2,999,695	None	\$2,745,457	Competitive 2	N/A	CBE	4/14/2021	5/1/2021	3/31/2025	Active

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GFO-20-303	EPC-20-030	Electric Power Research Institute, Inc.	Smart, Hybrid, Grid-Connected Exterior Lighting Systems.	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$3,308,595	\$790,343	\$983,000	Competitive ²	N/A	CBE	4/14/2021	6/1/2021	3/31/2025	Active
GFO-20-303	EPC-20-030	Electric Power Research Institute, Inc.	Smart, Hybrid, Grid-Connected Exterior Lighting Systems.	1.5 Increase Plug Loads and Consumer Electronics Efficiency	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,808,595	\$0	\$0	\$0	Competitive ²	N/A	CBE	4/14/2021	6/1/2021	3/31/2025	Active
GFO-20-303	EPC-20-031	Regents of the University of California, Davis	Renewable Energy & Advanced Lighting Systems for Exterior Applications	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,026	\$4,166,306	\$506,771	\$1,250,000	Competitive ²	N/A	CBE	4/14/2021	6/1/2021	3/31/2025	Active
GFO-20-303	EPC-20-031	Regents of the University of California, Davis	Renewable Energy & Advanced Lighting Systems for Exterior Applications	1.5 Increase Plug Loads and Consumer Electronics Efficiency	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,163,280	\$0	\$0	\$0	Competitive ²	N/A	CBE	4/14/2021	6/1/2021	3/31/2025	Active
GFO-20-302	EPC-20-032	Ubiquitous Energy, Inc.	Productizing Transparent Solar Windows: Enabling Production of Transparent Renewable Energy Generating Windows	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,997,343	\$2,997,343	\$50,976	\$5,181,615	Competitive ²	N/A	None	4/14/2021	5/14/2021	3/31/2025	Active
GFO-20-302	EPC-20-033	Halo Industries, Inc.	Production Scale-Up of Conductive Silicon Carbide Wafer Technology for Electric Vehicle and Charging Infrastructure Power Electronics Cost Reduction	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	\$419,800	\$2,700,000	Competitive ²	N/A	None	4/14/2021	5/1/2021	3/31/2025	Active
Follow-on Funding Project	EPC-20-034	OhmConnect, Inc.	Building Resiliency from Within	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,000,000	\$3,000,000	None	\$600,000	Non-Competitive Follow-on ⁴ Funding ⁴	N/A	CBE	4/14/2021	6/1/2021	6/30/2024	Active
GFO-20-302	EPC-20-035	Opus 12 Incorporated	Low rate production pilot line for CO2 electroreduction Membrane Electrode Assembly fabrication	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	None	\$1,811,065	Competitive ²	N/A	None	4/14/2021	4/14/2021	3/31/2025	Active

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Follow-on Funding Project	EPC-20-036	AgMonitor Inc.	Load Shifting During Critical Summer Hours via Programmable Irrigation	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$349,972	\$349,972	\$59,400	\$87,368	Non-Competitive Follow-on Funding ⁴	N/A	CBE, Small Business	5/12/2021	5/15/2021	6/30/2023	Ended
GFO-20-301	EPC-20-037	Stasis Energy Group LLC	Stasis Energy Group Thermal Energy Storage System (TESS) for Packaged HVAC Systems	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,634,740	\$1,634,740	\$148,613	\$1,169,571	Competitive ²	N/A	CBE	5/12/2021	6/1/2021	3/31/2025	Active
GFO-20-304	EPC-20-038	MOEV Inc.	Artificial Intelligence Based Heavy-Duty Fleet Charging to enable Distributed Energy Resource Integration	3.2 Enable Electronic Vehicle-based Grid Services	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,319,387	\$3,319,387	\$555,129	\$3,000,000	Competitive ²	N/A	CBE	5/12/2021	6/1/2021	11/30/2024	Active
GFO-20-301	EPC-20-039	EPC Power Corp.	Solid-State DC-DC Power Electronics for Grid-Scale Lithium EV Battery Pack Integration	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,499,532	\$3,499,532	\$784,760	\$1,750,246	Competitive ²	N/A	CBE	5/12/2021	1/12/2022	3/31/2026	Active
GFO-20-304	EPC-20-040	Lawrence Berkeley National Laboratory	Innovative School Bus Charging for Resilient Communities	3.2 Enable Electronic Vehicle-based Grid Services	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$782,042	\$1,285,822	Competitive ²	N/A	CBE	5/12/2021	6/1/2021	3/31/2027	Active
GFO-20-304	EPC-20-042	TA Operating LLC	TAking Charge: TravelCenters of America Ultra-Fast En-Route Charging	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	None	\$1,200,000	Competitive ²	N/A	None	6/9/2021	7/26/2021	3/31/2025	Active
GFO-20-309	EPC-20-043	Regents of the University of California, Davis	Optimized Controls for Cooling California Dairy Cows	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,529,705	\$1,529,705	\$246,762	\$306,451	Competitive ²	N/A	CBE	6/9/2021	6/30/2021	3/31/2025	Active
GFO-20-309	EPC-20-044	Caliskaner Water Technologies, Inc.	Demonstration of Advanced Primary and Secondary Treatment Technologies for Energy and Performance Benefits to Wastewater Treatment	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$1,289,918	\$2,669,214	Competitive ²	N/A	CBE	6/9/2021	6/21/2021	3/31/2025	Active

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GFO-20-309	EPC-20-045	Empowered Solutions, LLC	Artificial Intelligence for Energy Efficiency Optimization in California Dairy Operations	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency; 1.7.4 Large Scale Deployment of Pre-Commercial Technologies with Demonstrated Potential	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,638,868	\$1,638,868	\$169,163	\$350,274	Competitive ²	N/A	None	6/9/2021	6/30/2021	3/31/2025	Active
GFO-20-304	EPC-20-046	Sysco Riverside, Inc.	Distributed Resources for Diversified Renewable Energy Project	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$298,396	\$17,934,535	Competitive ²	N/A	None	6/9/2021	7/1/2021	3/31/2027	Active
GFO-20-309	EPC-20-047	Zira Group Inc (DBA Lightapp)	Leveraging Artificial Intelligence and Machine Learning to Increase Energy Efficiency in California Dairies	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency; 1.7.4 Large Scale Deployment of Pre-Commercial Technologies with Demonstrated Potential	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,227,648	\$4,227,648	None	\$1,665,912	Competitive ²	N/A	CBE	6/9/2021	7/1/2021	3/31/2025	Active
GFO-20-309	EPC-20-048	Gate 5 Energy Partners, Inc	Demonstration of Advanced Primary and Secondary Wastewater Treatment Technology	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of Its Operations	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,603,779	\$1,603,779	None	\$332,920	Competitive ²	N/A	CBE	6/9/2021	6/30/2021	6/30/2025	Active
GFO-20-310	EPC-21-001	GRID Alternatives	Enabling California's Resilient Tribal Communities with Mobile Renewable Power	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,000,000	\$1,000,000	\$51,319	\$200,157	Competitive ²	N/A	CBE, Woman-Owned Business	7/15/2021	7/15/2021	3/31/2025	Active

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GFO-20-310	EPC-21-002	One-Cycle Control, Inc.	Demonstration of 15 kW Silicon-Carbide enabled OCC-MORBUGS	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,971,467	\$1,971,467	\$638,792	\$394,901	Competitive 2	N/A	CBE	7/15/2021	9/30/2021	3/31/2025	Active
GFO-20-310	EPC-21-003	Electric Power Research Institute, Inc.	Mobile Hydrogen Fuel Cell Generation System	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,999,953	\$1,999,953	\$349,290	\$932,121	Competitive 2	N/A	CBE	7/15/2021	7/16/2021	3/31/2025	Active
GFO-20-310	EPC-21-004	Uprise Energy, LLC	Demonstrating Mobile Renewable Back-up generation with Uprise Energy's Mobile Power Station	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,589,012	\$1,589,012	\$348,637	\$663,598	Competitive 2	N/A	CBE	7/15/2021	8/1/2021	3/30/2026	Active
GFO-20-304	EPC-21-006	WattEV, Inc.	21st Century Truck Stop: 1st MD/HD eTruckStop in California	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	None	\$6,758,594	Competitive 2	N/A	None	9/8/2021	6/1/2021	3/31/2025	Active
GFO-20-304	EPC-21-007	eIQ Mobility	Building a Scalable and Repeatable School Bus Electrification Business (BuSy Buses)	3.2 Enable Electronic Vehicle-based Grid Services	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,192,175	\$2,192,175	None	\$197,586	Competitive 2	N/A	None	10/13/2021	10/22/2021	3/31/2025	Active
GFO-20-308	EPC-21-008	The Regents of California, San Diego	Development of Efficient and Scalable Direct Recycling Technology for Lithium-Ion Batteries	3.2 Enable Electronic Vehicle-based Grid Services	3.2.2 Battery Second Use	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,684,308	\$1,684,308	\$141,867	\$1,364,060	Competitive 2	N/A	CBE	8/11/2021	8/30/2021	3/31/2025	Active
GFO-20-308	EPC-21-009	OnTo Technology LLC	Cathode-Healing for Recycling and Manufacturing of Lithium-ion Batteries	3.2 Enable Electronic Vehicle-based Grid Services	3.2.2 Battery Second Use	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,001,807	\$1,001,807	\$282,761	\$924,651	Competitive 2	N/A	None	8/11/2021	8/30/2021	3/31/2026	Active
GFO-20-306	EPC-21-010	Electric Power Research Institute, Inc.	Electric Truck Research and Utilization Center (eTRUC) for RHETTA	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$4,999,155	\$12,999,155	\$2,158,367	\$6,327,619	Competitive 2	N/A	CBE	10/13/2021	11/1/2021	3/31/2026	Active
GFO-20-306	EPC-21-010	Electric Power Research Institute, Inc.	Electric Truck Research and Utilization Center (eTRUC) for RHETTA	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$8,000,000	\$0	\$0	\$0	Competitive 2	N/A	CBE	10/13/2021	11/1/2021	3/31/2026	Active

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Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-20-301	EPC-21-012	Swift Solar Inc.	High Efficiency Perovskite Tandems for Solar Electric Vehicles	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,995,200	\$2,995,200	None	\$1,760,000	Competitive 2	N/A	CBE	1/26/2022	1/26/2022	6/30/2026	Active
GFO-20-301	EPC-21-013	Yotta Energy, Inc.	Demonstrating Distributed Solar Plus Storage with Battery Backup Capability for Grid Resilience and Reliability	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,229,174	\$1,229,174	None	\$861,650	Competitive 2	N/A	None	2/16/2022	2/1/2022	1/26/2026	Active
GFO-20-301	EPC-21-014	Intertie Incorporated	Advanced Power Electronics to Enable Fast Charging While Avoiding Grid Unravel	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	\$205,625	\$1,000,000	Competitive 2	N/A	CBE	1/26/2022	1/30/2022	3/31/2027	Active
GFO-20-301	EPC-21-015	GreenFire Energy, Inc.	Steam Dominated GreenLoop: Proof of Concept at The Geysers, California	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,705,228	\$2,705,228	\$123,584	\$1,486,008	Competitive 2	N/A	CBE	2/16/2022	1/26/2022	3/31/2027	Active
GFO-20-301	EPC-21-016	Icarus RT, Inc.	R3A08: Icarus Hybrid Photovoltaic/Thermal Solar Plus Storage Cogeneration System	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,087,588	\$1,087,588	\$21,048	\$346,253	Competitive 2	N/A	CBE	1/26/2022	2/4/2022	3/31/2026	Active
GFO-20-301	EPC-21-017	Carnot Compression Inc.	R3A05: Carnot Compressor Field Testing	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,028,350	\$2,028,350	\$183,032	\$510,000	Competitive 2	N/A	CBE	1/26/2022	1/26/2022	3/31/2027	Active
GFO-20-310	EPC-21-018	Rocketruck, Inc.	Development and Demonstration of a Mobile Fuel Cell Generator (MFCG)	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$753,877	\$1,210,567	Competitive 2	N/A	None	2/16/2022	2/16/2022	3/31/2026	Active
GFO-20-302	EPC-21-019	Porifera, Inc.	Manufacturing of Large Format Osmotic Membrane Module	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,980,226	\$2,980,226	\$772,651	\$2,100,365	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	3/9/2022	4/8/2022	3/31/2026	Active
GFO-20-301	EPC-21-020	SPARKZ, Inc.	Ultra-High Energy Lithium Metal Battery System Based on Solid Electrolyte and Cobalt Free	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,676,670	\$2,676,670	\$726,751	\$1,142,346	Competitive 2	N/A	CBE	3/9/2022	3/10/2022	3/31/2026	Active
GFO-20-305	EPC-21-021	ConSol	Reimagining Affordable Mixed-Use Development in a Carbon-Constrained Future	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,936	\$999,936	\$204,546	\$180,338	Competitive 2	N/A	CBE, Small Business	4/26/2022	5/15/2022	6/30/2024	Active
GFO-20-305	EPC-21-022	Innovative Housing Opportunities, Inc.	Santa Ana Environmental Justice Innovation Zone	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$998,630	\$998,630	\$178,659	\$800,000	Competitive 2	N/A	None	4/26/2022	5/16/2022	3/29/2024	Active

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GFO-20-305	EPC-21-023	National Community Renaissance	Zero Emission Affordable Housing Design: Palm City Village	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$320,548	\$1,000,000	Competitive 2	N/A	None	4/26/2022	5/15/2022	6/30/2024	Active
GFO-20-305	EPC-21-024	Communities for Global Sustainability LLC (C4GS-ZEDlife - DBA)	The Zero Energy Live/Learn Residential Ecovillage	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$110,583	\$146,309	Competitive 2	N/A	CBE	4/26/2022	4/27/2022	6/30/2024	Active
GFO-20-305	EPC-21-025	Family Health Centers of San Diego, Inc.	The Newton Avenue Project	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$18,199	\$18,199	None	\$0	Competitive 2	N/A	CBE	4/26/2022	5/2/2022	6/30/2024	Terminated
GFO-20-305	EPC-21-026	Jamboree Housing Corporation	Paseo Adelanto: City Hall and Zero-Emission Affordable Housing Design	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	None	\$443,025	Competitive 2	N/A	CBE	4/26/2022	5/15/2022	3/31/2024	Active
GFO-20-305	EPC-21-027	Mutual Housing California	Mutual Housing at Fairview Terrace	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$326,528	\$211,175	Competitive 2	N/A	CBE	4/26/2022	5/15/2022	6/30/2024	Active
GFO-20-305	EPC-21-028	Electric Power Research Institute, Inc.	Net Positive Resilient All-Electric Affordable Housing at the Corona Station Residence in Petaluma	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$254,644	\$800,000	Competitive 2	N/A	CBE	4/26/2022	5/16/2022	6/30/2024	Active
GFO-20-305	EPC-21-029	Northern California Land Trust, Inc.	Berkeley Efficient & Resilient Mixed-Use Showcase (BERMUS)	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,595	\$999,595	\$71,945	\$1,061,733	Competitive 2	N/A	CBE	4/26/2022	5/16/2022	6/30/2024	Active
GFO-20-305	EPC-21-030	Association for Energy Affordability	Harmonized Resilience at Roosevelt Village: A zero-emissions model for supportive housing	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,315	\$999,315	\$55,286	\$0	Competitive 2	N/A	CBE	5/11/2022	5/15/2022	6/30/2025	Active
GFO-20-305	EPC-21-031	Self-Help Enterprises	Colegio ZNE Village	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	\$311,615	\$586,600	Competitive 2	N/A	CBE	5/11/2022	6/1/2022	6/30/2024	Active
GFO-20-305	EPC-21-032	Sola Impact Opportunity Zone Fund, LP	Making Green Accessible	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	None	\$0	Competitive 2	N/A	CBE, Minority-Owned Business	5/11/2022	6/13/2022	6/30/2024	Active
GFO-21-301	EPC-21-033	Lawrence Berkeley National Laboratory	The Cooking Electrification and Ventilation Improvements for Children's Asthma (CEVICA)	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	7.3.2 Enhance Human Health and Safety Associated with the Electricity Sector	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$4,000,000	\$4,000,000	\$717,899	\$409,280	Competitive 2	N/A	CBE	5/11/2022	5/30/2022	3/31/2026	Active

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GFO-20-301	EPC-21-034	Enzinc Inc.	A Safe, High-Performance, Rechargeable, Recyclable Zinc-Based Battery for Stationary Energy Storage	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,807,600	\$1,807,600	\$232,521	\$1,183,308	Competitive 2	N/A	None	6/8/2022	6/29/2022	3/31/2025	Active
GFO-20-301	EPC-21-035	Lookin, Inc.	In-Line Quality Control of Lithium-Ion Battery Electrodes through Terahertz Scanning	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,947	\$999,947	\$147,659	\$424,857	Competitive 2	N/A	CBE	6/8/2022	6/29/2022	3/31/2025	Active
GFO-20-301	EPC-21-036	Element 16 Technologies, Inc	Electrification of Industrial Processes with Sulfur Electric Thermal Storage	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	\$170,390	\$660,000	Competitive 2	N/A	CBE	6/8/2022	7/1/2022	3/31/2025	Active
GFO-21-302	EPC-21-037	Eagle Rock Analytics, Inc.	Climate-Informed Generation Capacity Modeling to Support a Climate Resilient Transition to a Clean Electricity System	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.2 Clarify Interactions between Renewable Electricity Systems and Climate Change to Ensure an Effective, Resilient Transition to Low-Carbon Energy in California; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$900,000	\$900,000	\$229,460	\$81,001	Competitive 2	N/A	CBE, Small Business, Micro Business	6/8/2022	6/15/2022	3/31/2026	Active
GFO-21-302	EPC-21-038	Eagle Rock Analytics, Inc.	Climate-Informed Energy Sector Adaptation Planning Web Application via Cal-Adapt	7.1 Identify Pathways for Achieving California's Energy and Climate Goals	7.1.1 Integrated Pathways for Energy Futures: Tools and Science-Based Research for Holistic Energy Decision Making	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$750,000	\$750,000	\$167,816	\$67,501	Competitive 2	N/A	CBE, Small Business, Micro Business	6/8/2022	6/30/2022	3/31/2025	Active
GFO-20-301	EPC-21-039	Solid Energies Inc.	High Safety, Wide-temperature, Low-cost All Solid-state Li-ion Battery Energy Storage	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	\$173,585	\$1,810,080	Competitive 2	N/A	CBE	6/8/2022	7/15/2022	3/31/2026	Active
GFO-20-301	EPC-21-040	Pyro-E, Inc.	Residential Water Bill Reduction with Self-powered Diagnostics & Services	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,548,602	\$1,548,602	\$282,333	\$795,311	Competitive 2	N/A	CBE	6/8/2022	6/30/2022	6/30/2027	Active
GFO-21-302	EPC-21-041	Energy & Environmental Economics, Inc.	Climate-Informed Load Forecasting & Electric Grid Modeling to Support a Climate Resilient Transition to Zero-Carbon	7.1 Identify Pathways for Achieving California's Energy and Climate Goals	7.1.1 Integrated Pathways for Energy Futures: Tools and Science-Based Research for Holistic Energy Decision Making	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,950,000	\$1,950,000	\$1,069,682	\$97,500	Competitive 2	N/A	CBE	6/8/2022	6/15/2022	3/31/2026	Active

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GFO-21-302	EPC-22-001	Lumen Energy Strategy, LLC	Advancing California's Electricity Resource Planning Tools to Assess and Improve Climate Resilience	2 Resilience and Reliability	2.6 R&R: Valuation of Investments in Electricity Sector Resilience	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,950,000	\$1,950,000	\$27,500	\$195,000	Competitive ²	N/A	Woman-Owned Business	7/13/2022	7/14/2022	3/31/2026	Active
GFO-21-303	EPC-22-002	Regents of the University of California, Davis	Heavy-Duty Vehicle Electrification and its Potential as a Clean Energy Alternative for Critical Operations	1 Decarbonization	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$3,000,362	\$3,000,362	\$339,391	\$2,027,631	Competitive ²	N/A	CBE	8/10/2022	8/30/2022	3/31/2026	Active
Follow-on Funding Project	EPC-22-003	Smartville, Inc.	Accelerate Development of SmartvilleSecond-Life Battery Repurposing Platform	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$769,559	\$2,000,000	\$72,000	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	8/10/2022	9/9/2022	3/31/2026	Active
Follow-on Funding Project	EPC-22-003	Smartville, Inc.	Accelerate Development of SmartvilleSecond-Life Battery Repurposing Platform	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$1,230,441	\$0	\$0	\$0	Non-Competitive Follow-on Funding ⁴	N/A	CBE	8/10/2022	9/9/2022	3/31/2026	Active
GFO-21-303	EPC-22-004	Gridractor, Inc.	Electric Farm Vehicles as Reliable Grid Assets	1 Decarbonization	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,999,567	\$2,999,567	\$222,172	\$1,071,244	Competitive ²	N/A	CBE	8/10/2022	8/31/2022	3/31/2026	Active
GFO-21-303	EPC-22-005	Gridscape Solutions, Inc.	Scalable, Resilient V2B Multi-Vehicle DC Platform (MVP DC) Demonstration at Public Buildings in California	1 Decarbonization	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	\$274,978	\$1,071,162	Competitive ²	N/A	CBE, Minority-Owned Business	8/10/2022	8/15/2022	1/31/2026	Active
GFO-21-303	EPC-22-006	Center for Transportation and the Environment, Inc.	"V2B Oakland"	1 Decarbonization	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$3,199,969	\$3,199,969	\$477,109	\$368,806	Competitive ²	N/A	CBE	9/14/2022	9/30/2022	6/30/2025	Active
GFO-21-303	EPC-22-007	Andromeda Power, LLC	Integrated Powertrain System - MotorTransformer	2 Resilience and Reliability	2.7 R&R: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,675,637	\$3,675,637	\$1,123,111	\$1,066,500	Competitive ²	N/A	CBE	9/14/2022	10/14/2022	3/31/2026	Active
GFO-20-310	EPC-22-008	The Latino Equity Advocacy & Policy Institute, The LEAP Institute	LEAP MORBUG	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$675,103	\$675,103	\$77,119	\$168,647	Competitive ²	N/A	CBE, Minority-Owned Business	10/12/2022	10/14/2022	3/31/2026	Active
Direct Agreement	EPC-22-009	National Offshore Wind Research and Development Consortium	National Offshore Wind Research and Development Consortium - CEC-NOWRDC Offshore Wind Block Grant Program	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,000,000	\$5,000,000	None	\$0	Non-competitive ³	12/8/2022 ³	None	3/6/2023	3/23/2023	9/30/2027	Active

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Direct Agreement	EPC-22-009	National Offshore Wind Research and Development Consortium	National Offshore Wind Research and Development Consortium - CEC-NOWRDC Offshore Wind Block Grant Program	1 Accelerate Advancements in Renewable Generation Technologies	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$4,000,000	\$0	\$0	\$0	Non-competitive ³	12/8/2022 ³	None	3/6/2023	3/23/2023	9/30/2027	Active
GFO-21-304	EPC-22-010	Liminal Insights Inc	Scaling up Production of Ultrasound-based Battery Inspection System	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,750,000	\$2,750,000	None	\$2,800,000	Competitive ²	N/A	CBE	4/12/2023	4/13/2023	12/31/2026	Active
GFO-21-304	EPC-22-011	Next Energy Technologies	Accelerating the Manufacturing of Energy Generating Windows for Zero-Emission Buildings Leveraging Pilot Scale Innovations	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,997,395	\$2,997,395	\$923,073	\$2,534,530	Competitive ²	N/A	CBE	4/12/2023	5/1/2023	3/31/2027	Active
GFO-21-304	EPC-22-012	Skyven Technologies, Inc.	Electrification of Industrial Heat with High-Temperature Steam-Generating Heat Pumps	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$72,845	\$2,971,730	\$328,800	\$2,775,500	Competitive ²	N/A	Minority-Owned Business	4/12/2023	6/15/2023	3/31/2027	Active
GFO-21-304	EPC-22-012	Skyven Technologies, Inc.	Electrification of Industrial Heat with High-Temperature Steam-Generating Heat Pumps	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,898,885	\$0	\$0	\$0	Competitive ²	N/A	Minority-Owned Business	4/12/2023	6/15/2023	3/31/2027	Active
GFO-21-304	EPC-22-013	TS Conductor Corp	FutureWire Manufacturing Facility	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	\$272,727	\$5,409,458	Competitive ²	N/A	CBE, Minority-Owned Business	4/12/2023	4/17/2023	8/31/2026	Active
GFO-21-304	EPC-22-014	American Lithium Energy Corp.	Advanced High Silicon Anode Prismatic Battery Production in California	5.1 Close the Innovation Gap from Idea to Investment	5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,927,155	\$2,997,617	\$314,567	\$3,000,227	Competitive ²	N/A	CBE	5/10/2023	4/24/2023	3/31/2028	Active
GFO-21-304	EPC-22-014	American Lithium Energy Corp.	Advanced High Silicon Anode Prismatic Battery Production in California	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$70,462	\$0	\$0	\$0	Competitive ²	N/A	CBE	5/10/2023	4/24/2023	3/31/2028	Active
GFO-21-304	EPC-22-015	ElectricFish Energy Inc.	Low Rate of Initial Production of a modular EV charger with extreme-fast vehicle charging capability	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$1,690,103	\$1,690,103	\$537,630	\$2,050,000	Competitive ²	N/A	CBE	5/10/2023	5/10/2023	3/31/2028	Active
GFO-21-304	EPC-22-016	LICAP Technologies Inc.	California-made Sustainable and Cost-effective Activated Dry Electrode (CASCADE)	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,791,222	\$2,927,155	\$189,187	\$4,172,105	Competitive ²	N/A	CBE, Minority-Owned Business, Woman-Owned Business	6/16/2023	6/16/2023	3/31/2027	Active
GFO-21-304	EPC-22-016	LICAP Technologies Inc.	California-made Sustainable and Cost-effective Activated Dry Electrode (CASCADE)	3 Entrepreneurship	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$135,933	\$0	\$0	\$0	Competitive ²	N/A	CBE, Minority-Owned Business, Woman-Owned Business	6/16/2023	6/16/2023	3/31/2027	Active

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-22-401	EPC-23-001	Integral Consulting Inc.	Integrated, Real-Time, Multi-Scale System for Monitoring Seabird Interactions with Floating Offshore Wind Technologies	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,400,868	\$3,400,868	\$636,048	\$820,070	Competitive 2	N/A	None	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-401	EPC-23-002	Lawrence Berkeley National Laboratory	Integrated Monitoring of Cetacean and Ocean Environmental Impacts from Floating Offshore Wind Development on the Pacific Coast	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,500,000	\$3,500,000	\$980,925	\$598,656	Competitive 2	N/A	CBE	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-402	EPC-23-003	RCAM Technologies, Inc.	Low-Cost, Environmentally-Friendly, Concrete Anchors Made In California	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,699,424	\$3,699,424	\$508,577	\$742,000	Competitive 2	N/A	CBE	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-304	EPC-23-004	RAND Corporation	Assessing the Role of Hydrogen in California's Decarbonizing Electric System	1 Decarbonization	1.5 Decarb: The Role of Green Hydrogen in a Decarbonized California—A Roadmap and Strategic Plan	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$798,348	\$798,348	\$373,759	\$80,000	Competitive 2	N/A	None	7/26/2023	8/1/2023	7/31/2025	Active
GFO-22-402	EPC-23-005	University of Maine System acting through the University of Maine	Design, Validation, and Certification of a Synthetic Mooring Line System for a 15+ MW Floating Wind Turbine in the Humboldt Bay Wind Energy Area	1 Accelerate Advancements in Renewable Generation Technologies	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,162,676	\$2,162,676	\$690,148	\$240,974	Competitive 2	N/A	None	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-401	EPC-23-006	Cal Poly Humboldt Sponsored Programs Foundation	Integrated Monitoring Approach to Reduce Entanglement Hazards for Floating Offshore Wind Developments	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$773,495	\$2,000,000	\$394,342	\$334,568	Competitive 2	N/A	CBE	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-401	EPC-23-006	Cal Poly Humboldt Sponsored Programs Foundation	Integrated Monitoring Approach to Reduce Entanglement Hazards for Floating Offshore Wind Developments	1 Accelerate Advancements in Renewable Generation Technologies	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$1,226,505	\$0	\$0	\$0	Competitive 2	N/A	CBE	7/26/2023	8/1/2023	3/31/2027	Active
GFO-22-402	EPC-23-007	Triton Anchor LLC	Advanced Anchoring System for California Floating Offshore Wind	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,447,131	\$3,447,131	\$1,041,600	\$2,533,616	Competitive 2	N/A	None	8/9/2023	8/1/2023	3/31/2027	Pending Final Approval
GFO-22-402	EPC-23-008	Alliance for Sustainable Energy, LLC	Comprehensive Shared-Mooring Solutions to Minimize the Cost, Risk, and Footprint of GW-Scale Floating Wind Farms	1 Decarbonization	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$553,445	\$2,560,000	\$970,362	\$314,442	Competitive 2	N/A	None	7/26/2023	8/1/2023	3/31/2027	Pending Final Approval

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-22-402	EPC-23-008	Alliance for Sustainable Energy, LLC	Comprehensive Shared-Mooring Solutions to Minimize the Cost, Risk, and Footprint of GW-Scale Floating Wind Farms	1 Accelerate Advancements in Renewable Generation Technologies	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,006,555	\$0	\$0	\$0	Competitive 2	N/A	None	7/26/2023	8/1/2023	3/31/2027	Pending Final Approval
GFO-22-304	EPC-23-009	Energy and Environmental Economics, Inc.	Techno-economic Assessment of Hydrogen as a Decarbonization Measure for California's Electric System	1 Decarbonization	1.5 Decarb: The Role of Green Hydrogen in a Decarbonized California—A Roadmap—A Strategic Plan	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$798,805	\$798,805	\$314,027	\$102,400	Competitive 2	N/A	CBE	7/26/2023	8/15/2023	12/15/2025	Active
Follow-on Funding Project	EPC-23-010	Antora Energy, Inc.	Manufacturability of Low-Cost InGaAs Thermophotovoltaic Devices	5 Enable Successful Clean Energy Entrepreneurship Across California	5.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Market Facilitation	\$2,999,695	\$2,999,695	None	\$1,242,445	Non-Competitive Follow-on Funding ⁴	N/A	CBE	8/9/2023	8/23/2023	7/31/2026	Active
GFO-22-301	EPC-23-011	Porifera, Inc.	Low-Energy, High Recovery Treatment of Pulp and Paper Wastewater	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$4,998,521	\$4,998,521	\$999,704	\$5,048,662	Competitive 2	N/A	CBE, Minority-Owned Business, Woman-Owned Business	9/13/2023	8/16/2023	3/31/2028	Active
GFO-22-301	EPC-23-012	Element 16 Technologies, Inc	Demonstration of Sulfur Electric Thermal Storage for Industrial Electrification and Decarbonization	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$3,000,000	\$3,000,000	\$635,580	\$661,000	Competitive 2	N/A	CBE	9/13/2023	9/30/2023	3/31/2028	Active
GFO-22-301	EPC-23-013	Caliskaner Water Technologies, Inc.	Demonstration of Advanced Sludge Separation Treatment Technologies for Decarbonization of Wastewater Treatment Plants	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$7,190,593	\$7,190,593	\$1,097,651	\$1,968,829	Competitive 2	N/A	CBE	9/13/2023	9/30/2023	3/31/2028	Active
GFO-22-301	EPC-23-014	Capture6 Corp	Project Monarch	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$8,153,623	\$8,153,623	\$91,418	\$1,692,742	Competitive 2	N/A	None	9/13/2023	9/14/2023	3/31/2028	Active
GFO-22-301	EPC-23-015	Twelve Benefit Corporation	Long Duration CO2 Storage via CO2-derived Cement Additives	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$2,792,088	\$2,792,088	None	\$2,975,970	Competitive 2	N/A	CBE	10/18/2023	11/1/2023	3/31/2028	Active
GFO-21-901r3	EPC-23-016	Smartville, Inc.	Low-Cost and Scalable Second Use Battery Demonstration in Central California for Equitable United States Based Manufacturing and Job Growth	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$1,499,995	\$1,499,995	\$271,990	\$10,519,485	Competitive 2	N/A	CBE	11/8/2023	11/15/2023	11/16/2026	Active

Appendix C: EPIC Projects Awarded through 2023 with Fiscal and Diversity Details

Solicitation Number	Agreement Number ¹	Recipient/ Contractor	Project Title	Strategic Objective	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Project Administrative and Overhead Costs	Match Funding	Funding Method	JLBC Action	CA-Based Entity (CBE), Diversity and Equity Information ⁵	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ⁶
GFO-22-302	EPC-23-017	Lawrence Berkeley National Laboratory	Estimating the Economic, Health, and Safety Benefits of Avoiding Long-duration Power Disruptions in Disadvantaged Communities	2 Resilience and Reliability	2.6 R&R: Valuation of Investments in Electricity Sector Resilience	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,200,000	\$1,200,000	\$458,706	\$150,000	Competitive ²	N/A	CBE	10/18/2023	3/14/2024	12/31/2026	Pending Final Approval
GFO-22-305	EPC-23-018	Institute of Gas Technology dba GTI Energy	Energy-efficient and Grid-interactive Zero Carbon Manufactured Homes	1 Decarbonization	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,775,570	\$2,775,570	\$950,780	\$150,000	Competitive ²	N/A	CBE	11/8/2023	12/25/2023	4/28/2028	Pending Final Approval
GFO-22-305	EPC-23-019	Lawrence Berkeley National Laboratory	Upscaling Grid-friendly, Resilient, Affordable, and Efficient modular housing	1 Decarbonization	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	\$1,503,323	\$2,371,000	Competitive ²	N/A	CBE	11/8/2023	12/25/2023	4/28/2028	Pending Final Approval
GFO-22-305	EPC-23-020	ReMo Homes Inc.	ReMo Habitats	1 Decarbonization	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,967,608	\$2,967,608	\$255,360	\$1,058,200	Competitive ²	N/A	CBE, Minority-Owned Business	11/8/2023	11/15/2023	4/28/2028	Active

Total Number of Agreements Awarded	Total Project Amount	Total Project Administrative and Overhead Costs	Total Match Funding
501	\$1,207,987,759	\$204,187,645	\$634,753,961

¹ Agreement Number may be repeated if it includes funding from multiple investment plans/program areas and/or strategic objectives/initiatives. Agreement Number will be counted only once.

² Competitive bid projects are awarded EPIC funds to passing proposals in scoring rank order.

³ For EPIC project awards made through interagency agreement or sole source method, Joint Legislative Budget Committee (JLBC) authorization is automatic 60 days following notification.

⁴ EPIC Projects awarded follow-on funding are exempt from the sole source process. The Energy Commission may award, through a non-competitive method, follow-on funding for projects that meet all of the requirements per Legislation SB 115 and Public Resources Code Section 25711.5. Legislation AB 148 extends SB 115 authority to 2025.

⁵ Identification of project award recipients/contractors that are California-based Entities (CBE), Small Business, Micro Business, Woman-Owned Business, Minority-Owned Business, or Disabled Veteran Business Enterprise (DVBE)

⁶ Project Status:

Active: Executed Agreement end date is open as of 2023.

Ended: Executed Agreement end date expired in 2023.

Completed: Executed Agreement end date expired and closing activities completed in 2023.

Terminated: Executed agreement terminated in 2023.

Pending Final Approval: Agreement has been approved at an Energy Commission Business Meeting, but did not receive final approval (executed) in 2023.

Appendix D: 2023 Data for CEC EPIC Projects by Strategic Objective and Initiative

Agreement Number ¹	Number of Projects by Initiative ²	Recipient/ Contractor	Project Title	SO #	Strategic Objective	SI #	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ³
300-15-007	1	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S10	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.1	S10.1 Provide Small Grants to Early-Stage Energy Companies and Entrepreneurs Through Regional Innovation Clusters.	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$9,788,043	\$60,000,000	3/9/2016	4/20/2016	3/31/2027	Active
300-15-007	1	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S10	S10: Advance the Early Development of Breakthrough Energy Concepts.	S10.1	S10.1 Provide Seed-Stage Funding for Disruptive Energy Technologies.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$20,211,957	\$0	3/9/2016	4/20/2016	3/31/2027	Active
300-15-007	1	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S5.1	5.1 Close the Innovation Gap from Idea to Investment	S5.1.1	5.1.1 Continue CalSEED Initiative to Provide Early Stage Support for Clean Energy Technology Entrepreneurs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$12,000,000	\$0	6/9/2021	4/20/2016	3/31/2027	Active
300-15-007	1	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$16,000,000	\$0	6/9/2021	4/20/2016	3/31/2027	Active
300-15-007	1	California Clean Energy Fund dba CalCEF Ventures	California Sustainable Energy Entrepreneurial Development (CalSEED) Initiative	S5	5 Enable Successful Clean Energy Entrepreneurship Across California	S5.1	5.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,000,000	\$0	6/9/2021	4/20/2016	3/31/2027	Active
300-18-001	1	Gladstein, Neandross & Associates, LLC	Technology Transfer for EPIC Research Projects	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.1	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$3,788,265	\$3,788,265	4/10/2019	5/10/2019	3/31/2023	Ended
EPC-14-033	1	The Watershed Research and Training Center	North Fork Community Power Forest Bioenergy Facility Demonstration	S13	S13: Demonstrate and Evaluate Emerging Clean Energy Generation Technologies and Deployment Strategies	S13.1	S13.1 Demonstrate and Appraise the Operational and Performance Characteristics of Pre-Commercial Biomass Conversion Technologies, Generation Systems, and Development Strategies	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,225,773	\$4,965,420	4/8/2015	5/15/2015	3/31/2024	Active

Appendix D: 2023 Data for CEC EPIC Projects by Strategic Objective and Initiative

Agreement Number ¹	Number of Projects by Initiative ²	Recipient/ Contractor	Project Title	SO #	Strategic Objective	SI #	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ³
EPC-14-033	1	The Watershed Research and Training Center	North Fork Community Power Forest Bioenergy Facility Demonstration	S13	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,739,647	\$0	4/8/2015	5/15/2015	3/31/2024	Active
EPC-15-030	1	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S10	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$10,000,000	4/13/2016	5/1/2016	3/31/2026	Active
EPC-15-030	1	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.1	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,000,000	\$0	4/13/2016	5/1/2016	3/31/2026	Active
EPC-15-030	1	Cleantech San Diego Association	San Diego Regional Energy Innovation Cluster	S5.1	S5.1 Close the Innovation Gap from Idea to Investment	S5.1.2	S5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$5,000,000	\$0	6/9/2021	5/1/2016	3/31/2026	Active
EPC-15-032	1	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S10	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$2,000,000	\$9,960,000	4/13/2016	5/12/2016	3/31/2026	Active
EPC-15-032	1	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.1	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,980,000	\$0	4/13/2016	5/12/2016	3/31/2026	Active
EPC-15-032	1	Activate Global, Inc	Bay Area Regional Energy Innovation Cluster	S5.1	S5.1 Close the Innovation Gap from Idea to Investment	S5.1.2	S5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,980,000	\$0	6/9/2021	5/12/2016	3/31/2026	Active

Appendix D: 2023 Data for CEC EPIC Projects by Strategic Objective and Initiative

Agreement Number ¹	Number of Projects by Initiative ²	Recipient/ Contractor	Project Title	SO #	Strategic Objective	SI #	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ³
EPC-15-038	1	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S10	S10: Leverage California's Regional Innovation Clusters to Accelerate the Deployment of Early Stage Clean Energy Technologies and Companies	S10.2	S10.2 Support Demonstration Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies	2012-2014 EPIC Program 1st Investment Plan	Applied Research and Development	\$3,000,000	\$10,000,000	4/13/2016	5/16/2016	3/31/2027	Active
EPC-15-038	1	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.1	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$2,000,000	\$0	4/13/2016	5/16/2016	3/31/2027	Active
EPC-15-038	1	California State University, Fresno Foundation	BlueTechValley Innovation Cluster	S5.1	S5.1 Close the Innovation Gap from Idea to Investment	S5.1.2	S5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$5,000,000	\$0	6/9/2021	5/16/2016	3/31/2027	Active
EPC-15-094	1	Electric Power Research Institute, Inc.	Demonstration of Affordable, Comfortable, Grid Integrated Zero Net Energy Communities	S14	S14: Demonstrate the Reliable Integration of Energy Efficient Demand-side Resources, Distributed Clean Energy Generation, and Smart Grid Components to Enable Energy Smart Community Development	S14.1	S14.1 Demonstrate Zero-Net Energy Buildings and Communities	2012-2014 EPIC Program 1st Investment Plan	Technology Demonstration and Deployment	\$3,207,432	\$4,942,809	6/14/2016	6/15/2016	3/30/2023	Ended
EPC-15-094	1	Electric Power Research Institute, Inc.	Demonstration of Affordable, Comfortable, Grid Integrated Zero Net Energy Communities	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.2	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,735,377	\$0	6/14/2016	6/15/2016	3/30/2023	Ended
EPC-16-001	1	Institute of Gas Technology dba GTI Energy	Measure Results from Affordable Zero Net Energy Homes	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1; S1.2	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	7/13/2016	7/30/2016	6/30/2023	Ended

Appendix D: 2023 Data for CEC EPIC Projects by Strategic Objective and Initiative

Agreement Number ¹	Number of Projects by Initiative ²	Recipient/ Contractor	Project Title	SO #	Strategic Objective	SI #	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ³
EPC-16-004	1	Lawrence Berkeley National Laboratory	Integrated Whole-Building Zero Net Energy Retrofits for Small Commercial Offices	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1; S1.2	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	7/13/2016	7/30/2016	3/31/2023	Completed
EPC-16-015	1	Los Angeles Cleantech Incubator	Los Angeles Regional Energy Innovation Cluster	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses.	S18.1; S18.2; S18.3	S18.1 Facilitate a Commercialization Assistance Network to Foster Successful Clean Energy Entrepreneurship.; S18.2 Integrate Market Insight into the Selection and Management of EPIC Funded Technologies and Strategies.; S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$4,999,247	\$9,998,494	8/10/2016	8/17/2016	3/31/2026	Active
EPC-16-015	1	Los Angeles Cleantech Incubator	Los Angeles Regional Energy Innovation Cluster	S5.1	S5.1 Close the Innovation Gap from Idea to Investment	S5.1.2	S5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,999,247	\$0	6/9/2021	8/17/2016	3/31/2026	Active
EPC-16-018	1	BDP Technologies	Biological Double-Efficiency Process as an Advanced Wastewater Treatment Method to Achieve Substantial Energy and Water Savings	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing	S12.2	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,565,400	\$1,565,400	11/9/2016	11/21/2016	6/30/2024	Active
EPC-16-042	1	Lawrence Berkeley National Laboratory	Low-Cost High-Reliability Thermoelectrics for Waste Heat Conversion	S3	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.4	S3.4 Advance Breakthroughs in Renewable Energy Technologies to Dramatically Increase Efficiencies Reduce Costs, and Enable Additional Renewable	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	4/12/2017	5/15/2017	3/31/2023	Ended

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EPC-16-059	1	Lawrence Berkeley National Laboratory	Advanced VGI Control to Maximize Battery Life and Use of Second-Life Batteries to Increase Grid Service and Renewable Power	S9	S9: Advance Electric Vehicle Infrastructure to Provide Electricity System Benefits.	S9.2	S9.2 Advance Vehicle-Grid Integration Technologies and Methods for Broader Use and Benefit for Residential, Private, and Public Users.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$2,500,000	5/10/2017	6/16/2017	12/31/2025	Active
EPC-16-059	1	Lawrence Berkeley National Laboratory	Advanced VGI Control to Maximize Battery Life and Use of Second-Life Batteries to Increase Grid Service and Renewable Power	S3	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	S3.2	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$1,000,000	\$0	12/14/2022	6/16/2017	12/31/2025	Active
EPC-16-070	1	Electric Power Research Institute, Inc.	Integrating Front-of-the-Meter Energy Storage with Smart PV Inverters and Solar Forecasting	S15	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,832,770	\$1,832,770	6/14/2017	6/30/2017	3/31/2025	Active
EPC-16-073	1	Natural Capitalism Solutions, dba Clean Coalition	Valencia Gardens Energy Storage	S15	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$1,994,687	\$1,994,687	6/14/2017	9/1/2017	3/31/2023	Ended
EPC-16-077	1	The Regents of the University of California on behalf of the Riverside campus	Solar+ Storage Integrated Energy Management Demonstration in a Supportive Housing Facility	S3	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,110,657	\$2,110,657	6/14/2017	6/30/2017	7/31/2025	Active

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Agreement Number ¹	Number of Projects by Initiative ²	Recipient/ Contractor	Project Title	SO #	Strategic Objective	SI #	Strategic Initiative	Investment Plan Program Period	Program Area	Investment Plan Funding	Total Project Amount	Business Meeting Date	Agreement Start Date	Agreement End Date	Project Status ³
EPC-17-005	1	Electric Power Research Institute, Inc.	Integrating Building Scale Solar + Storage Advanced Technologies Maximizing Value to Customer and the Distribution Grid	S3	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.2	S3.2 Develop Integrated and Hybrid Photovoltaic Technologies and Strategies to Reduce Costs and Advance Zero-Net Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,491,764	\$1,491,764	7/12/2017	7/1/2017	12/31/2023	Ended
EPC-17-016	1	Regents of the University of California, Davis	An Online Siting Tool Application for Woody Biomass-to-Electricity Facilities in California	S3	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,222,284	\$1,222,284	8/9/2017	9/1/2017	12/31/2023	Ended
EPC-17-017	1	All Power Labs, Inc.	The Nexus of Clean Energy, Healthy Forests, and a Stable Climate: Innovative Biomass Gasification for Sustainable Forest Management	S3	S3: Develop Innovative Solutions to Increase the Market Penetration of Distributed Renewable and Advanced Generation.	S3.1	S3.1 Efficient, Sustainable and Lower-Cost Bioenergy: Innovations to Improve Biomass-to-Energy Systems in California.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	10/11/2017	10/27/2017	9/29/2023	Ended
EPC-17-018	1	Regents of the University of California, Davis	Demonstrating the Potential for On-Site Electricity Generation from Food Waste Using Containerized Anaerobic Digestion Units	S13	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.2	S13.2 Accelerate the Demonstration and Early Deployment of Emerging BioDigester and Integrated Clean Generation to Efficiently Use Agricultural, Municipal, and Other Organic Waste.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,411,007	\$2,411,007	9/13/2017	10/18/2017	3/31/2024	Active
EPC-17-019	1	Fall River Resource Conservation District	Burney-Hat Creek Bioenergy	S13	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	9/13/2017	10/18/2017	3/31/2025	Active

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EPC-17-021	1	Mariposa County Resource Conservation District (MCRCD)	Mariposa Biomass Project	S13	S13: Demonstrate and Evaluate Biomass-to-Energy Conversion Systems, Enabling Tools, and Deployment Strategies.	S13.1	S13.1 Demonstrate and Evaluate Environmentally and Economically Sustainable Biomass-to-Energy Systems for Woody and Other Dry Biomass.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	3/21/2018	10/18/2017	3/31/2026	Active
EPC-17-030	1	Prospect Silicon Valley	California Opportunities for Procurement to Accelerate Clean Energy (Cal-OP ACE)	S19	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1; S19.2	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies.; S19.2 Facilitate Innovative Procurement Strategies to Reduce Costs for Clean Energy	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$3,998,715	\$3,998,715	3/21/2018	4/2/2018	12/31/2023	Ended
EPC-17-031	1	City of Long Beach	Port of Long Beach Microgrid - Resilience for Critical Facilities	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	3/21/2018	4/23/2018	3/31/2026	Active
EPC-17-032	1	The Regents of California, San Diego	Miramar Microgrid Flight Line Resilience through Landfill Gas and Energy Storage	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	3/21/2018	4/23/2018	1/31/2025	Active

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EPC-17-034	1	The Regents of the University of California on behalf of the Davis Campus	California Energy Product Evaluation Hub	S19	S19: Facilitate Inclusion of Emerging Clean Energy Technologies into Large-Scale Procurement Processes.	S19.1	S19.1 Develop Tools and Strategies to Encourage LargeScale Purchasers to Adopt Emerging Energy Technologies	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$10,993,646	\$10,993,646	3/21/2018	4/23/2018	12/31/2025	Active
EPC-17-038	1	Lawrence Berkeley National Laboratory	Camp Parks Army Microgrid - A Blueprint for Nested, Modular Design	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	3/21/2018	4/23/2018	3/30/2025	Active
EPC-17-039	1	Electric Power Research Institute, Inc.	Validated, Transparent, and Accessible Microgrid Valuation and Optimization Tool (DER-VET)	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	5/9/2018	5/11/2018	3/31/2024	Active
EPC-17-040	1	Rocky Mountain Institute	Mass Deployment of Energy Efficiency Retrofits in Disadvantaged Communities	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1; S1.2; S1.3	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and Buildings.; S1.3 Apply Advanced Social Science Research Methods to Improve Adoption of Next Generation Energy Efficiency Solutions.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,401,436	\$7,204,308	6/13/2018	5/1/2018	9/30/2024	Active
EPC-17-040	1	Rocky Mountain Institute	Mass Deployment of Energy Efficiency Retrofits in Disadvantaged Communities	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings	S12.1	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,802,872	\$0	6/13/2018	5/1/2018	9/30/2024	Active

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EPC-17-041	1	Sonoma Clean Power Authority	Lead Locally	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1; S1.2	S1.1 Advance Efficient Solutions for Lower Energy Buildings.; S1.2 Develop Model Designs and Strategies for Cost-Effective Zero Net Energy Homes and	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$3,271,532	\$9,814,596	4/11/2018	5/1/2018	3/31/2024	Active
EPC-17-041	1	Sonoma Clean Power Authority	Lead Locally	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing	S12.1	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$6,543,064	\$0	4/11/2018	5/1/2018	3/31/2024	Active
EPC-17-042	1	Camptonville Community Partnership	Camptonville Biomass-to-Energy Project	S4.4	4.4 Improve the Value Proposition of Bioenergy	S4.4.2	4.4.2 Demonstrating Modular Bioenergy Systems and Feedstock Densifying and Handling Strategies to Improve Conversion of Accessibility-Challenged Forest Biomass Resources	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,999,830	\$4,999,830	1/22/2020	4/20/2018	3/31/2026	Active
EPC-17-043	1	Hitachi America LTD	GLOW: A User-friendly Interface for GridLAB-D	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$2,999,699	\$2,999,699	5/9/2018	5/11/2018	9/29/2023	Ended
EPC-17-045	1	University of California, Irvine	Oak View Microgrid: Using Microgrid Technologies to Simultaneously Improve Quality of Life and Electric Grid Operations	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,099,760	\$1,099,760	4/11/2018	5/16/2018	3/31/2024	Active

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EPC-17-046	1	SLAC National Accelerator Laboratory	HIPAS GridLAB-D: A High-Performance Agent-based Simulation using GridLAB-D	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$3,068,781	\$3,068,781	5/9/2018	5/11/2018	9/29/2023	Ended
EPC-17-047	1	SLAC National Accelerator Laboratory	OpenFIDO: An Open-source Framework for Integrated Data Operations	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	5/9/2018	5/11/2018	9/29/2023	Ended
EPC-17-049	1	San Diego Unified Port District (Port of San Diego)	Port of San Diego Microgrid - Resiliency in Terminal Operations	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,985,272	\$4,985,272	5/9/2018	6/13/2018	6/13/2026	Active
EPC-17-052	1	Gridscape Solutions, Inc.	Urban Microgrids for Grid Resiliency and Disaster Readiness	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,995,498	\$4,995,498	5/9/2018	7/18/2018	3/31/2026	Active
EPC-17-053	1	Sonoma County Junior College District/ Santa Rosa Junior College	Santa Rosa Junior College Urban Microgrid Project	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,999,005	\$4,999,005	6/13/2018	6/30/2018	3/31/2026	Active

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EPC-17-054	1	Rialto Bioenergy Facility LLC	Rialto Resilient Clean Power Microgrid	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	7/11/2018	7/18/2018	3/31/2026	Active
EPC-17-055	1	Cal Poly Humboldt Sponsored Programs Foundation	Redwood Coast Airport Microgrid	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	6/13/2018	6/30/2018	9/30/2024	Active
EPC-18-001	1	Electric Power Research Institute, Inc.	Port Hueneme Navy Data Center Microgrid	S14	S14: Take Microgrids to the Next Level: Maximize the Value to Customers.	S14.1	S14.1 Use Microgrids to Evaluate a Combination of Emerging Technologies to Determine the Best Integrated Performance and Least Cost Configuration to Meet the Customers Energy	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$4,998,345	\$4,998,345	9/21/2018	11/1/2018	3/31/2025	Active
EPC-18-002	1	California Clean Energy Fund dba CalCEF Ventures	California Test Bed Initiative	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.3	S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$10,999,701	\$21,998,402	12/10/2018	4/2/2018	3/31/2028	Active
EPC-18-002	1	California Clean Energy Fund dba CalCEF Ventures	California Test Bed Initiative	S5	S5 Enable Successful Clean Energy Entrepreneurship Across California	S5.1	S5.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Market Facilitation	\$10,998,701	\$0	8/10/2022	4/2/2018	3/31/2028	Active

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EPC-18-003	1	Lucent Optics, Inc.	Ultra-thin Flexible LED Lighting Panels	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,692,069	\$1,692,069	1/9/2019	1/23/2019	3/31/2023	Ended
EPC-18-005	1	Heliotope Technologies, Inc.	Building Energy Impact Analysis of Low Cost NanoEC Electrochromic Window Control Algorithm Optimization	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,667,104	\$3,667,104	1/9/2019	1/16/2019	3/31/2025	Active
EPC-18-006	1	SkyCool Systems Inc.	Radiative Sky Cooling-Enabled Efficiency Improvements on Commercial Cooling Systems	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.1	S1.1 Advance Efficient Solutions for Lower Energy Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,770,563	\$1,770,563	2/20/2019	2/9/2019	3/30/2025	Active
EPC-18-008	1	MicroBio Engineering, Inc.	Improving Energy Efficiency and Performance of Wastewater Recycling	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,550,227	\$1,550,227	2/20/2019	3/6/2019	3/31/2025	Active
EPC-18-009	1	Porifera, Inc.	Energy Savings Through Osmotic Concentration for the Food and Beverage Processing Industry	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.1	S12.1 Identify and Demonstrate Promising Energy Efficiency and Demand Response Technologies Suitable for Commercialization and Utility Rebate Programs.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,800,687	\$2,800,687	3/12/2019	4/1/2019	8/1/2023	Completed
EPC-18-010	1	Porifera, Inc.	Energy and Water Savings in Food and Beverage Wastewater Reuse	S1	S1: Improve Energy Efficiency Technologies and Strategies in California's Building, Industrial, Agriculture, and Water Sectors.	S1.5	S1.5 Develop and Test Advanced Industrial, Agricultural, Water and Demand Response Technologies and Strategies to Reduce Energy Use in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$1,777,132	\$1,777,132	3/12/2019	4/1/2019	8/1/2023	Ended

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EPC-18-011	1	Zero Net Energy (ZNE) Alliance	Lancaster Advanced Energy Community (AEC) Project	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,738,300	\$4,999,060	5/15/2019	6/1/2019	3/31/2026	Active
EPC-18-011	1	Zero Net Energy (ZNE) Alliance	Lancaster Advanced Energy Community (AEC) Project	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,260,760	\$0	5/15/2019	6/1/2019	3/31/2026	Active
EPC-18-013	1	The Regents of the University of California on behalf of the Berkeley campus	The Oakland EcoBlock, Phase II: A Zero Net Energy, Low Water-Use Retrofit Neighborhood	S12	S12: Overcome Barriers to Emerging Energy Efficiency and Demand-Side Management Solutions through Demonstrations in New and Existing Buildings.	S12.2	S12.2 Demonstrate Large-Scale Deployment of Integrated DemandSide Management and Demand Response Programs in Buildings.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$3,740,181	\$5,000,000	6/12/2019	6/28/2019	5/30/2025	Active
EPC-18-013	1	The Regents of the University of California on behalf of the Berkeley campus	The Oakland EcoBlock, Phase II: A Zero Net Energy, Low Water-Use Retrofit Neighborhood	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,259,819	\$0	6/12/2019	6/28/2019	5/30/2025	Active
EPC-18-014	1	Spark Thermionics, Inc.	Production Scale-Up of Thermionic Energy Harvesters	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,349,933	\$1,349,933	6/12/2019	6/28/2019	12/31/2024	Active
EPC-18-015	1	Cuberg, Inc.	Improved Batteries for California's Zero-Emissions Vehicle Future	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,566,639	\$1,566,639	6/12/2019	6/28/2019	6/30/2023	Ended
EPC-18-016	1	Halo Industries, Inc.	Production Scale-Up of Advanced Wafer Technology for Drastic Solar Photovoltaics Cost Reduction	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$4,000,000	\$4,000,000	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-017	1	Sepion Technologies, Inc.	Scaling Up Pilot Production of Nanoporous Membranes for Battery Storage Technologies	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,675,793	\$2,675,793	6/12/2019	6/28/2019	3/29/2024	Active

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EPC-18-018	1	Caban Systems, Inc.	Prototype to Production: Modular Battery Platform Project for California Critical Infrastructure	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,878,760	\$1,878,760	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-019	1	Treau, Inc.	Treau: Low-GWP, High-Efficiency Heat Pump and Air Conditioner	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,805,907	\$2,805,907	6/12/2019	6/28/2019	1/31/2024	Active
EPC-18-020	1	Glint Photonics, Inc.	Production Scale-Up of High Efficiency Adjustable Lighting Products	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,998,922	\$1,998,922	6/12/2019	6/28/2019	3/29/2024	Active
EPC-18-021	1	South 8 Technologies	Production Scale-Up for Next Generation Batteries Using Liquefied Gas Electrolytes	S18	S18: Foster the Development of the Most Promising Energy Technologies into Successful Businesses	S18.3	S18.3 Provide Support for Entrepreneurs to Test, Verify, and Certify Their Innovations.	2015-2017 EPIC Program 2nd Investment Plan	Market Facilitation	\$231,451	\$1,028,059	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-021	1	South 8 Technologies	Production Scale-Up for Next Generation Batteries Using Liquefied Gas Electrolytes	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$796,608	\$0	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-022	1	Natron Energy, Inc.	Advanced Energy Storage for Electric Vehicle Charging Support	S15	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$2,998,064	\$2,998,064	6/12/2019	6/28/2019	12/1/2025	Active
EPC-18-023	1	Eos Energy Storage, LLC	Utility Demonstration of Non-Flammable, Aqueous-Zinc Battery Storage: Innovation Scale-Up to Alleviate T&D Congestion and Mitigate Wildfire Risk	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,986,110	\$2,986,110	6/12/2019	6/28/2019	12/30/2023	Completed

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EPC-18-024	1	Element 16 Technologies, Inc	Large-Scale Sulfur Thermal Battery Demonstration for Enhanced Grid Flexibility and Increased Renewable Penetration	S15	S15: Demonstrate Advanced Energy Storage Interconnection Systems to Lower Costs, Facilitate Market and Improve Grid Reliability.	S15.1	S15.1 Demonstrate Advanced Energy Storage Interconnection Technologies and Systems in Transmission, Distribution, and CustomerSide Applications to Transition to the Commercial Market.	2015-2017 EPIC Program 2nd Investment Plan	Technology Demonstration and Deployment	\$262,119	\$3,000,000	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-024	1	Element 16 Technologies, Inc	Large-Scale Sulfur Thermal Battery Demonstration for Enhanced Grid Flexibility and Increased Renewable Penetration	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,737,881	\$0	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-025	1	General Engineering & Research, L.L.C.	Scale-up of Magnetocaloric Materials for High Efficiency Magnetic Refrigeration	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,088,188	\$1,088,188	6/12/2019	6/28/2019	3/31/2024	Active
EPC-18-026	1	Spatial Informatics Group, LLC	Comprehensive Open Source Development of Next Generation Wildfire Models for Grid Resiliency	S7	S7: Develop Advanced Distribution Modeling Tools for the Future Smart Grid.	S7.1	S7.1 Develop Open-Source Electricity System Modeling Tools to Visualize California's Modern Distribution Systems.	2015-2017 EPIC Program 2nd Investment Plan	Applied Research and Development	\$4,021,416	\$5,000,000	6/12/2019	6/28/2019	6/30/2025	Active

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EPC-18-026	1	Spatial Informatics Group, LLC	Comprehensive Open Source Development of Next Generation Wildfire Models for Grid Resiliency	S7.2	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	S7.2.1 ; S7.2.2 ; S7.2.3	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.2 Clarify Interactions between Renewable Electricity Systems and Climate Change to Ensure an Effective, Resilient Transition to Low-Carbon Energy in California; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$978,584	\$0	6/12/2019	6/28/2019	6/30/2025	Active
EPC-19-002	1	The Regents of the University of California on behalf of the Los Angeles Campus	"Smart Greenhouse": Integrated Photovoltaics/Photosynthesis for Energy and Food	S4.1	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	S4.1.1	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$600,000	\$600,000	9/11/2019	10/1/2019	12/31/2023	Ended
EPC-19-003	1	Tandem PV, Inc.	Processing and Architecture Design to Develop and Demonstrate Stable and Efficient Perovskite + Silicon Tandem Modules	S4.1	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	S4.1.1	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$999,802	\$999,802	9/11/2019	10/1/2019	3/31/2023	Completed
EPC-19-004	1	The Regents of the University of California, on behalf of the San Diego campus	High-Efficiency Perovskite Tandem Modules with Resilient Interfaces	S4.1	4.1 Advance Emerging Thin-film PV Technologies for High Value Applications	S4.1.1	4.1.1 Advance the Material Science, Manufacturing Process, and In-Situ Maintenance of Thin-film PV Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$993,458	\$993,458	9/11/2019	10/1/2019	3/31/2024	Active
EPC-19-005	1	Zero Net Energy (ZNE) Alliance	Richmond Advanced Energy Community (AEC) Phase II Project	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,998,555	\$4,998,555	3/11/2020	3/2/2020	3/31/2025	Active
EPC-19-006	1	The Energy Coalition	Basset-Avocado Advanced Energy Community	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$9,093,833	\$9,093,833	5/13/2020	5/1/2020	12/31/2025	Active

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EPC-19-007	1	RCAM Technologies	On-site 3D Concrete Printing for Next-Generation Low-Cost Wind Plants	S4.2	4.2 Develop Technologies that Enable Increased Wind Capacity in California	S4.2.1	4.2.1 Advanced Manufacturing and Installation Approach for Utility-Scale Land-Based Wind Turbine Components	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,999,979	\$2,999,979	4/8/2020	5/1/2020	12/31/2024	Active
EPC-19-008	1	Aker Offshore Wind USA LLC	NextWind Real-time Monitoring System	S4.2	4.2 Develop Technologies that Enable Increased Wind Capacity in California	S4.2.2	4.2.2 Real-Time Remote Monitoring System for Offshore and Land-Based Wind Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,586,914	\$1,586,914	4/8/2020	5/13/2020	3/31/2023	Ended
EPC-19-009	1	Integral Consulting Inc.	A Risk Assessment Framework to Evaluate Effects of Offshore Wind Farms on the California Upwelling Ecosystem	S7.3	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	S7.3.1	7.3.1 Find Environmental and Land Use Solutions to Facilitate the Transition to a Decarbonized Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$500,000	4/8/2020	5/1/2020	12/31/2023	Ended
EPC-19-010	1	Lawrence Berkeley National Laboratory	Integrated Distributed Fiber Optic Sensing for Real-Time Monitoring of OWT Gearbox and Tower Operation and Marine Animal	S4.2	4.2 Develop Technologies that Enable Increased Wind Capacity in California	S4.2.2	4.2.2 Real-Time Remote Monitoring System for Offshore and Land-Based Wind Technologies	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	4/8/2020	5/1/2020	3/31/2024	Active
EPC-19-011	1	Cal Poly Humboldt Sponsored Programs Foundation	Seabird 3D Distribution and Relative Risk from California Offshore Wind Turbines	S7.3	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	S7.3.1	7.3.1 Find Environmental and Land Use Solutions to Facilitate the Transition to a Decarbonized Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$500,000	4/8/2020	5/1/2020	6/28/2024	Active
EPC-19-012	1	Franklin Energy Services, LLC	Affordable Space Conditioning and Domestic Hot Water Systems with Low Emissions and High Performance	S1.3	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration	S1.3.1	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,499,925	\$1,499,925	5/13/2020	5/20/2020	3/31/2024	Active
EPC-19-013	1	Lawrence Berkeley National Laboratory	HP-Flex: Next Generation Heat Pump Load Flexibility	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	S3.1.2	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	5/13/2020	6/15/2020	3/31/2024	Active

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EPC-19-014	1	Electric Power Research Institute, Inc.	A zero GWP heat pump and distribution system for all-electric heating and cooling in California	S1.3	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	S1.3.1	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,498,557	\$2,498,557	5/13/2020	6/1/2020	3/31/2025	Active
EPC-19-015	1	The Regents of the University of California on behalf of the Davis Campus	Optimizing Heat Pump Load Flexibility for Cost, Comfort, and Carbon Emissions	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	S3.1.2	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,537,436	\$2,537,436	5/13/2020	6/15/2020	6/30/2025	Active
EPC-19-016	1	The Regents of the University of California on behalf of the Davis Campus	Affordable Near- and Medium-Term Solutions for Integration of Low GWP Heat Pumps in Residential Buildings	S1.3	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	S1.3.1	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,916,306	\$1,916,306	5/13/2020	5/13/2020	1/2/2025	Active
EPC-19-017	1	Materials Research LLC	Pilot Scale Recovery of Lithium from Geothermal Brines	S4.3	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	S4.3.2	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,878,634	\$1,878,634	5/13/2020	6/1/2020	12/15/2023	Ended
EPC-19-018	1	Hell's Kitchen Geothermal LLC	Hell's Kitchen Geothermal Lithium Extraction Pilot	S4.3	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	S4.3.2	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$64,400	\$64,400	6/10/2020	6/1/2020	3/1/2023	Terminated
EPC-19-019	1	Lawrence Berkeley National Laboratory	Joint Time-Lapse Acquisition and Inversion of Passive Seismic and Magnetotelluric Data for Monitoring Reservoir Processes at the Geysers Geothermal Field	S4.3	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	S4.3.2	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,661,032	\$1,661,032	5/13/2020	6/1/2020	3/29/2024	Active
EPC-19-020	1	BHER Minerals, LLC	Salton Sea Geothermal Lithium Recovery Demonstration Project	S4.3	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	S4.3.2	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$6,000,000	\$6,000,000	5/13/2020	6/1/2020	3/31/2024	Active

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EPC-19-021	1	General Engineering & Research, L.L.C.	High Efficiency Magnetic Refrigeration for Industrial Cryogenic Applications	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.1	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,699,066	\$1,699,066	5/13/2020	6/15/2020	3/31/2024	Active
EPC-19-022	1	The Regents of the University of California, Merced	Stirling cycle heat pumps for industrial heat recovery	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.1	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$656,630	\$656,630	5/13/2020	6/15/2020	12/31/2024	Active
EPC-19-023	1	Institute of Gas Technology dba GTI Energy	Booster Ejector Enhancement of Compressor Refrigeration Facilities Utilizing Industrial Process Waste Heat	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.1	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,621,556	\$1,621,556	5/13/2020	6/15/2020	12/31/2025	Active
EPC-19-024	1	Electric Power Research Institute, Inc.	Development of an Advanced High Temperature Heat Pump for the Efficient Recovery of Low-Grade Industrial Waste Heat	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.1	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,483	\$1,999,483	5/13/2020	6/15/2020	3/31/2024	Active
EPC-19-025	1	Nelumbo Inc.	Advanced Heat Exchanger Coatings to Improve Energy Efficiency of Industrial Refrigeration System	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.1	1.7.1 Optimize Refrigeration Compressor Efficiency and Test and Evaluate Alternative Refrigerants	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,997,411	\$1,997,411	5/13/2020	6/15/2020	11/29/2024	Active
EPC-19-026	1	Center for Sustainable Energy	Developing Lessons Learned, Best Practices, Training Materials, and Guidebooks for Customer Side of the Meter Energy Storage	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	5/13/2020	6/1/2020	3/31/2027	Active
EPC-19-029	1	Hell's Kitchen Geothermal LLC	Improved Silica Removal for Enhanced Geothermal Plant Performance	S4.3	4.3 Increase the Strategic Value of Flexible CSP and Geothermal to the Electricity System	S4.3.2	4.3.2 Geothermal Energy Advancement for a Reliable Renewable Electricity System	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,999,599	\$2,999,599	6/10/2020	6/1/2020	6/30/2025	Active

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EPC-19-030	1	Association for Energy Affordability	Large Capacity CO2 Central Heat Pump Water Heating Technology Evaluation and Demonstration	S1.3	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	S1.3.1	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,800,193	\$2,800,193	6/10/2020	6/17/2020	9/30/2025	Active
EPC-19-031	1	Antora Energy, Inc.	Solid-state Long Duration Energy Storage for Industrial Applications	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,787	\$1,999,787	6/10/2020	6/30/2020	3/31/2027	Active
EPC-19-032	1	Association for Energy Affordability	Low-GWP Mechanical Modules for Rapid Deployment Project (LG-MM)	S1.3	1.3 Meeting the Demand for Efficient and Environmentally Friendly Heating, Ventilation and Air Conditioning and Refrigeration Systems	S1.3.1	1.3.1 Develop and Test California Climate Appropriate Advanced HVAC Systems and Water Heaters	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,499,926	\$1,499,926	6/10/2020	6/30/2020	3/31/2025	Active
EPC-19-033	1	Lawrence Berkeley National Laboratory	Demonstrating Benefits of Highly Insulating Thin-Triple Window Retrofits in California	S1.2	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	S1.2.1	1.2.1 Deploy Next Generation Window and Building Envelope Systems in Existing Residential and Commercial Buildings	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,850,000	\$1,850,000	6/10/2020	6/30/2020	3/31/2026	Active
EPC-19-034	1	e-Zinc Inc	Commercialization of Lowest-Cost, Long Duration Energy Storage Systems	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,286,777	\$1,286,777	6/10/2020	6/30/2020	3/31/2027	Active
EPC-19-035	1	Electric Power Research Institute, Inc.	Advancing Energy Efficiency in Manufactured Homes Through High Performance Envelope	S1.2	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	S1.2.3	1.2.3 Multifamily Factory Built Homes Competition for Highly Efficient Building Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,999,982	\$1,999,982	6/10/2020	6/30/2020	6/30/2025	Active
EPC-19-036	1	Rocky Mountain Institute	Varieties of Prefabricated Envelope Solutions for CA Low-Rise Buildings	S1.2	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	S1.2.2	1.2.2 Builder Competition for Best Residential Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,917,967	\$1,917,967	6/10/2020	6/30/2020	3/31/2024	Active

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EPC-19-037	1	Dash2energy LLC	Demand Based Renewable Hydrogen Power-to-Power Project	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,275,475	\$1,275,475	6/10/2020	6/30/2020	3/31/2026	Active
EPC-19-038	1	Smartville, Inc.	Low-Cost and Easy-to-Integrate Second-Life Battery HUB	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,035,787	\$2,035,787	6/10/2020	6/30/2020	3/31/2025	Active
EPC-19-039	1	RePurpose Energy, Inc.	Reuse of Electric Vehicle Batteries for Solar Energy Storage	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	6/10/2020	6/30/2020	6/30/2025	Active
EPC-19-040	1	Salient Energy Inc.	California Zinc-ion Energy Storage Development and Validation Project	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,583,125	\$1,583,125	6/10/2020	6/30/2020	3/31/2025	Active
EPC-19-041	1	Form Energy, Inc.	Demonstrating an Aqueous Air-Breathing Energy Storage System for Multi-Day Resiliency	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,998,215	\$1,998,215	6/10/2020	6/30/2020	12/31/2025	Active
EPC-19-042	1	Zelos Energy LTD	Anzode: Zinc Batteries for California Electrical Customer Power Backup	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,747,721	\$1,747,721	6/10/2020	6/30/2020	3/31/2025	Active
EPC-19-043	1	Institute of Gas Technology dba GTI Energy	Advanced Energy-efficient and Fire-resistant Envelope Systems Utilizing Vacuum Insulation for Manufactured Homes	S1.2	1.2 Showcase Benefits of Advanced Window and Building Envelope Systems	S1.2.3	1.2.3 Multifamily Factory Built Homes Competition for Highly Efficient Building Envelopes	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	6/10/2020	6/30/2020	3/31/2024	Active

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EPC-19-044	1	T2M Global LLC	Ultra-high Efficiency, Lower-Cost, Green Electrolytic H2 for Microgrids in California	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$995,250	\$995,250	6/10/2020	6/30/2020	3/29/2024	Active
EPC-19-045	1	GRID Alternatives	Critical Resilience for Fire and Emergency Facilities with the Soboba Band of Luiseño	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,710,494	\$1,710,494	7/8/2020	6/30/2020	3/31/2026	Active
EPC-19-046	1	Indian Energy LLC	Demonstrating a Long-duration Flywheel Energy Storage System	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,218,374	\$1,218,374	7/8/2020	6/30/2020	12/31/2026	Active
EPC-19-047	1	BoxPower Inc.	CATAPULT: "California Title 24 Advanced Power Utilization Technology"	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,099	\$999,099	7/8/2020	6/30/2020	3/31/2026	Active
EPC-19-050	1	Rincon Band of Luiseño Indians	Rincon Long Duration Energy Storage Solar Microgrid	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$7,282,496	\$6,618,744	7/8/2020	6/30/2020	3/31/2027	Active
EPC-19-050	1	Rincon Band of Luiseño Indians	Rincon Long Duration Energy Storage Solar Microgrid	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	-\$663,752	\$0	7/8/2020	6/30/2020	3/31/2027	Active
EPC-19-051	1	Indian Energy LLC	Hybrid Modular Storage System (HMSS) as a long-duration energy storage technology Demonstration	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$5,002,334	\$5,002,334	7/8/2020	6/30/2020	3/31/2026	Active

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EPC-19-053	1	San Diego State University Foundation	Cost-Effective Integration of Second-life EV Batteries with Solar PV Systems for Commercial Buildings	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,837,672	\$2,837,672	7/8/2020	6/30/2020	3/31/2026	Active
EPC-19-054	1	Electric Power Research Institute, Inc.	Demonstrating Code-compliant Energy Storage Systems and Their Capabilities for Grid Harmonization	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,841	\$999,841	7/8/2020	6/30/2020	3/31/2026	Active
EPC-19-055	1	ReJoule Incorporated	Enabling EV Battery Circular Economy	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,970,774	\$2,970,774	7/8/2020	6/30/2020	5/30/2025	Active
EPC-19-056	1	Energy & Environmental Economics, Inc.	Assessing Long-duration Energy Storage Deployment Scenarios to Meet California's Energy Goals	S3.4	3.4 Define and Demonstrating the Locational Benefit and Best Configuration of Grid-Level Energy Storage as the California Grid Transitions to More Distributed Energy	S3.4.1	3.4.1 Assessment and Simulation Study of California Grid with Optimized Grid-Level Energy Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	7/8/2020	8/17/2020	3/31/2024	Active
EPC-19-058	1	Antelope Valley Water Storage, LLC	Long Duration 50 kW Energy Storage with Aquifer Pumped Hydro	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,000,000	\$2,000,000	7/8/2020	6/30/2020	3/31/2024	Active
EPC-19-059	1	The Regents of the University of California on behalf of the Riverside campus	Residential Solar+Storage Control Unit for Providing Grid Services and Demand Side Management	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$939,232	\$939,232	7/8/2020	7/1/2020	3/29/2024	Active

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EPC-19-060	1	The Regents of the University of California, Merced	Modeling of Long-Duration Storage for Decarbonization of California Energy System	S3.4	3.4 Define and Demonstrating the Locational Benefit and Best Configuration of Grid-Level Energy Storage as the California Grid Transitions to More Distributed Energy	S3.4.1	3.4.1 Assessment and Simulation Study of California Grid with Optimized Grid-Level Energy Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,254,955	\$1,254,955	7/8/2020	6/30/2020	3/31/2024	Active
EPC-20-001	1	Lawrence Berkeley National Laboratory	Energy-Water Desalination Hub	S6.1	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	S6.1.1 S6.1.2 S6.1.3	6.1.1 Develop and Test Novel Energy Efficient Treatment Methods for Conventional and Non-Conventional Sources of Water Supply ; 6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations ; 6.1.3 Develop and Demonstrate Advanced Energy Efficiency Improvements to Allow for On-Site Wastewater Treatment and Reuse for Industrial Facilities and Water Intensive Industries	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	8/12/2020	8/30/2020	3/31/2025	Active
EPC-20-002	1	Charge Bliss, Inc.	Essential Power Support for the Kaiser Permanente Ontario Medical Center using Long Duration Batteries within a Renewable Energy Microgrid	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$8,351,000	\$8,351,000	9/9/2020	6/30/2020	3/29/2024	Active

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EPC-20-003	1	The Pechanga Band of Luiseño Indians	Pechanga Tribal Microgrid Long Duration Storage Project	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,998,101	\$1,998,101	10/14/2020	11/15/2020	3/31/2024	Pending Final Approval
EPC-20-004	1	Redwood Energy, LLC	Central Heat Pump Water Heater Load Flexibility	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response	S3.1.2	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,043,755	\$2,043,755	1/25/2021	1/3/2021	3/31/2025	Active
EPC-20-005	1	Technology & Investment Solutions, LLC	Hy2green - Electrolytic Hydrogen Energy Storage Using Novel Metal Hydrides	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,766,775	\$1,766,775	4/14/2021	5/1/2021	3/31/2025	Active
EPC-20-006	1	The Regents of California, San Diego	Development of Climate Projections for California and Identification of Priority Projections	S7.2	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	S7.2.1 ; S7.2.3	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,500,000	\$1,500,000	1/25/2021	1/30/2021	3/31/2026	Active
EPC-20-007	1	Eagle Rock Analytics, Inc.	A Co-Produced Climate Data and Analytics Platform to Support California's Electricity Resilience Investments	S7.2	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	S7.2.1 ; S7.2.3	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,500,000	\$3,500,000	1/25/2021	1/13/2021	3/31/2026	Active
EPC-20-008	1	Antelope Valley Water Storage, LLC	Long Duration 200 kW Energy Storage with Aquifer Pumped Hydro	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$6,406,950	\$6,406,950	3/17/2021	2/15/2021	6/28/2026	Active

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EPC-20-009	1	The Regents of the University of California, on behalf of the San Diego campus	Smart Plug Load Controls Integrated with Building Energy Management Systems	S1.5	1.5 Increase Plug Loads and Consumer Electronics Efficiency	S1.5.3	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,028,125	\$1,028,125	2/10/2021	3/1/2021	1/31/2025	Active
EPC-20-010	1	California Energy Alliance	Energy and Appliance Standards for Plug Loads: Assessing Current Needs and Future Opportunities	S1.1	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	S1.1.2	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$996,974	\$996,974	2/10/2021	3/1/2021	9/30/2024	Active
EPC-20-011	1	Packetized Energy	Increasing Access to Smart and Affordable Energy for Customers and Resource Adequacy for the California Grid	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,000,000	\$2,000,000	3/17/2021	4/16/2021	3/1/2025	Active
EPC-20-012	1	All Power Labs, Inc.	Development and Demonstration of Distributed Biomass CHP Microgrid Systems	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,287,890	\$3,287,890	4/14/2021	4/19/2021	3/31/2025	Active
EPC-20-013	1	Noon Energy Inc.	Pilot Demo of Ultra Low Cost, Long-Duration Energy Storage Coupled to Solar Power	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,166,000	\$2,166,000	3/17/2021	4/15/2021	9/30/2026	Active
EPC-20-014	1	Next Energy Technologies	Rapid Innovation Development of Energy Generating Windows for Zero- and Negative-Carbon Emission Buildings	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	3/17/2021	4/16/2021	3/31/2025	Active
EPC-20-015	1	Sepon Technologies, Inc.	Hybrid Lithium-Metal Batteries for Low-Cost and Long-Range Electric Vehicles	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,400,000	\$1,400,000	3/17/2021	4/1/2021	3/31/2024	Active
EPC-20-016	1	South 8 Technologies	Advanced Li-ion Chemistry for Safer and Greener Electric Vehicle and Energy Storage Systems	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,010,227	\$1,010,227	3/17/2021	4/1/2021	8/1/2024	Active

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EPC-20-017	1	Treau, Inc.	Increasing the Thermal Range and Efficiency of Affordable User-Installable Room Heat Pumps	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,761,606	\$2,761,606	3/17/2021	4/1/2021	3/31/2025	Active
EPC-20-018	1	Skyven Technologies, Inc.	Transforming the techno-economics of decarbonization in California's bespoke industrial sector with a scalable front-end engineering AI	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,110,500	\$1,110,500	3/17/2021	4/1/2021	10/30/2024	Active
EPC-20-019	1	Polaris Energy Services Inc.	Accelerated Deployment of Irrigation Pumping Demand Flexibility	S6.2	6.2 Increase the Energy and Water Efficiency of California's Food and Agricultural Sector	S6.2.1	6.2.1 Demonstrate Advanced Water and/or Energy Efficiency Technologies to Reduce Carbon Intensity of Agriculture	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,884,912	\$2,884,912	4/14/2021	3/31/2021	3/31/2025	Active
EPC-20-020	1	Feasible, Inc.	Machine Learning Enhanced Acoustic Inspection to Improve Battery Manufacturing	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	3/17/2021	3/24/2021	6/30/2025	Active
EPC-20-021	1	The Regents of California, San Diego	LEED: A Lightwave Energy-Efficient Datacenter Phase 2	S1.7	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	S1.7.3	1.7.3 Develop Strategies and Tools For Maximizing Cost Effective Energy Efficiency Strategies For Decarbonization of the Industrial	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$425,000	\$425,000	3/17/2021	3/1/2021	3/29/2024	Active
EPC-20-022	1	FreeWire Technologies, Inc.	FreeWire Boost 2.0 Development and Demonstration Project	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,468,490	\$3,468,490	4/14/2021	4/21/2021	9/30/2025	Active
EPC-20-023	1	Rocky Mountain Institute	Scaling Industrialized Zero Emissions Retrofits in California and Beyond	S2.1	2.1 Achieve Cost-Effective and Sustainable Retrofits to Highly Energy Efficient Buildings and Communities	S2.1.1	2.1.1 Develop Community Renovation for High Efficiency and Grid Resources	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$687,500	\$1,312,500	4/14/2021	4/15/2021	4/30/2027	Active
EPC-20-023	1	Rocky Mountain Institute	Scaling Industrialized Zero Emissions Retrofits in California and Beyond	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.2	4.2 Building Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$625,000	\$0	4/14/2021	4/15/2021	4/30/2027	Active

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EPC-20-025	1	Lawrence Berkeley National Laboratory	Achieving Integrated and Equitable Decarbonized Loads with CalFlexHub	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	S3.1.1 ; S3.1.3	3.1.1 Pilot Test for the Next-Generation Demand Response Landscape; 3.1.3 Assess iDERs and Load Management Capabilities	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$7,000,000	\$16,000,000	4/14/2021	5/1/2021	9/30/2026	Active
EPC-20-025	1	Lawrence Berkeley National Laboratory	Achieving Integrated and Equitable Decarbonized Loads with CalFlexHub	S2.1	2.1 Achieve Cost-Effective and Sustainable Retrofits to Highly Energy Efficient Buildings and Communities	S2.1.1	2.1.1 Develop Community Renovation for High Efficiency and Grid Resources	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$9,000,000	\$0	4/14/2021	5/1/2021	9/30/2026	Active
EPC-20-026	1	Caban Systems, Inc.	Advanced Energy Storage for California's Critical Infrastructure Project	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,095,264	\$1,095,264	4/14/2021	4/14/2021	3/31/2029	Active
EPC-20-027	1	Cuberg, Inc.	High-Performance Battery Systems to Power the Rise of Electric Mobility	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,499,525	\$3,499,525	4/14/2021	5/1/2021	3/30/2024	Active
EPC-20-028	1	Nextech Batteries, Inc.	Bringing Lithium Sulfur Technology to Market	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,996,782	\$2,996,782	4/14/2021	5/1/2021	3/31/2025	Active
EPC-20-029	1	Antora Energy, Inc.	Manufacturing Scale-up of Record-Breaking Solid-State Heat Engine for Deep Decarbonization in California	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,999,695	\$2,999,695	4/14/2021	5/1/2021	3/31/2025	Active
EPC-20-030	1	Electric Power Research Institute, Inc.	Smart, Hybrid, Grid-Connected Exterior Lighting Systems.	S1.1	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	S1.1.2	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$500,000	\$3,308,595	4/14/2021	6/1/2021	3/31/2025	Active
EPC-20-030	1	Electric Power Research Institute, Inc.	Smart, Hybrid, Grid-Connected Exterior Lighting Systems.	S1.5	1.5 Increase Plug Loads and Consumer Electronics Efficiency	S1.5.3	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,808,595	\$0	4/14/2021	6/1/2021	3/31/2025	Active

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EPC-20-031	1	Regents of the University of California, Davis	Renewable Energy & Advanced Lighting Systems for Exterior Applications	S1.1	1.1 Accelerate Product Development and Market Acceptance of Solid-state Lighting Technologies and Designs	S1.1.2	1.1.2 Test Novel Luminaire Systems Architecture And Form Factors That Leverage The Unique Properties Of LEDs	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,026	\$4,166,306	4/14/2021	6/1/2021	3/31/2025	Active
EPC-20-031	1	Regents of the University of California, Davis	Renewable Energy & Advanced Lighting Systems for Exterior Applications	S1.5	1.5 Increase Plug Loads and Consumer Electronics Efficiency	S1.5.3	1.5.3 Large-Scale Demonstrations of Low Energy Consuming Plug-In Devices with the High Potential for Market Adoption and Penetration	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,163,280	\$0	4/14/2021	6/1/2021	3/31/2025	Active
EPC-20-032	1	Ubiquitous Energy, Inc.	Productizing Transparent Solar Windows: Enabling Production of Transparent Renewable Energy Generating Windows	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,997,343	\$2,997,343	4/14/2021	5/14/2021	3/31/2025	Active
EPC-20-033	1	Halo Industries, Inc.	Production Scale-Up of Conductive Silicon Carbide Wafer Technology for Electric Vehicle and Charging Infrastructure Power Electronics Cost Reduction	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	4/14/2021	5/1/2021	3/31/2025	Active
EPC-20-034	1	OhmConnect, Inc.	Building Resiliency from Within	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	S3.1.2	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,000,000	\$3,000,000	4/14/2021	6/1/2021	6/30/2024	Active
EPC-20-035	1	Opus 12 Incorporated	Low rate production pilot line for CO2 electroreduction Membrane Electrode Assembly fabrication	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	4/14/2021	4/14/2021	3/31/2025	Active

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EPC-20-036	1	AgMonitor Inc.	Load Shifting During Critical Summer Hours via Programmable Irrigation	S3.1	3.1 Accelerate Broad Adoption of Automated Demand Response Capabilities that Provide the Grid Flexible Response Capabilities	S3.1.2	3.1.2 Assess Performance of Load Control Systems	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$349,972	\$349,972	5/12/2021	5/15/2021	6/30/2023	Ended
EPC-20-037	1	Stasis Energy Group LLC	Stasis Energy Group Thermal Energy Storage System (TESS) for Packaged HVAC Systems	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,634,740	\$1,634,740	5/12/2021	6/1/2021	3/31/2025	Active
EPC-20-038	1	MOEV Inc.	Artificial Intelligence Based Heavy-Duty Fleet Charging to enable Distributed Energy Resource Integration	S3.2	3.2 Enable Electronic Vehicle-based Grid Services	S3.2.1	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$3,319,387	\$3,319,387	5/12/2021	6/1/2021	11/30/2024	Active
EPC-20-039	1	EPC Power Corp.	Solid-State DC-DC Power Electronics for Grid-Scale Lithium EV Battery Pack Integration	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,499,532	\$3,499,532	5/12/2021	1/12/2022	3/31/2026	Active
EPC-20-040	1	Lawrence Berkeley National Laboratory	Innovative School Bus Charging for Resilient Communities	S3.2	3.2 Enable Electronic Vehicle-based Grid Services	S3.2.1	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	5/12/2021	6/1/2021	3/31/2027	Active
EPC-20-042	1	TA Operating LLC	TAKing Charge: TravelCenters of America Ultra-Fast En-Route Charging	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	6/9/2021	7/26/2021	3/31/2025	Active
EPC-20-043	1	Regents of the University of California, Davis	Optimized Controls for Cooling California Dairy Cows	S1.7	1.7 Enable Cost-Effective Decarbonization of California's Industrial Sector	S1.7.2	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,529,705	\$1,529,705	6/9/2021	6/30/2021	3/31/2025	Active

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EPC-20-044	1	Caliskaner Water Technologies, Inc.	Demonstration of Advanced Primary and Secondary Treatment Technologies for Energy and Performance Benefits to Wastewater Treatment	S6.1	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	S6.1.2	6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	6/9/2021	6/21/2021	3/31/2025	Active
EPC-20-045	1	Empowered Solutions, LLC	Artificial Intelligence for Energy Efficiency Optimization in California Dairy Operations	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.2 ; S1.7.4	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency; 1.7.4 Large Scale Deployment of Pre-Commercial Technologies with Demonstrated	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,638,868	\$1,638,868	6/9/2021	6/30/2021	3/31/2025	Active
EPC-20-046	1	Sysco Riverside, Inc.	Distributed Resources for Diversified Renewable Energy Project	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	6/9/2021	7/1/2021	3/31/2027	Active
EPC-20-047	1	Zira Group Inc (DBA Lightapp)	Leveraging Artificial Intelligence and Machine Learning to Increase Energy Efficiency in California Dairies	S1.7	1.7 Enable Cost-Effective De-carbonization of California's Industrial Sector	S1.7.2 ; S1.7.4	1.7.2 Develop and Deploy Sensors and Software to Optimize Compressed Air and Other Related Systems to Minimize Energy Losses and Maximize Efficiency; 1.7.4 Large Scale Deployment of Pre-Commercial Technologies with Demonstrated	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,227,648	\$4,227,648	6/9/2021	7/1/2021	3/31/2025	Active

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EPC-20-048	1	Gate 5 Energy Partners, Inc	Demonstration of Advanced Primary and Secondary Wastewater Treatment Technology	S6.1	6.1 Reduce the Energy Intensity Required to Supply and Treat Water	S6.1.2	6.1.2 Develop and Demonstrate Tools and Strategies to Help Water and Wastewater Agencies Lower Energy Use, Increase Efficiency and Reduce the Carbon Intensity of its Operations	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,603,779	\$1,603,779	6/9/2021	6/30/2021	6/30/2025	Active
EPC-21-001	1	GRID Alternatives	Enabling California's Resilient Tribal Communities with Mobile Renewable Power	S3.3	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	S3.3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,000,000	\$1,000,000	7/15/2021	7/15/2021	3/31/2025	Active
EPC-21-002	1	One-Cycle Control, Inc.	Demonstration of 15 kW Silicon-Carbide enabled OCC-MORBUGS	S3.3	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	S3.3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,971,467	\$1,971,467	7/15/2021	9/30/2021	3/31/2025	Active
EPC-21-003	1	Electric Power Research Institute, Inc.	Mobile Hydrogen Fuel Cell Generation System	S3.3	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	S3.3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,999,953	\$1,999,953	7/15/2021	7/16/2021	3/31/2025	Active
EPC-21-004	1	Uprise Energy, LLC	Demonstrating Mobile Renewable Back-up generation with Uprise Energy's Mobile Power Station	S3.3	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	S3.3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,589,012	\$1,589,012	7/15/2021	8/1/2021	3/30/2026	Active
EPC-21-006	1	WattEV, Inc.	21st Century Truck Stop: 1st MD/HD eTruckStop in California	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	9/8/2021	6/1/2021	3/31/2025	Active

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EPC-21-007	1	eIQ Mobility	Building a Scalable and Repeatable School Bus Electrification Business (BuSy Buses)	S3.2	3.2 Enable Electronic Vehicle-based Grid Services	S3.2.1	3.2.1 Grid-Friendly PEV Mobility	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,192,175	\$2,192,175	10/13/2021	10/22/2021	3/31/2025	Active
EPC-21-008	1	The Regents of California, San Diego	Development of Efficient and Scalable Direct Recycling Technology for Lithium-Ion Batteries	S3.2	3.2 Enable Electronic Vehicle-based Grid Services	S3.2.2	3.2.2 Battery Second Use	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,684,308	\$1,684,308	8/11/2021	8/30/2021	3/31/2025	Active
EPC-21-009	1	OnTo Technology LLC	Cathode-Healing for Recycling and Manufacturing of Lithium-ion Batteries	S3.2	3.2 Enable Electronic Vehicle-based Grid Services	S3.2.2	3.2.2 Battery Second Use	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,001,807	\$1,001,807	8/11/2021	8/30/2021	3/31/2026	Active
EPC-21-010	1	Electric Power Research Institute, Inc.	Electric Truck Research and Utilization Center (eTRUC) for RHETTA	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$4,999,155	\$12,999,155	10/13/2021	11/1/2021	3/31/2026	Active
EPC-21-010	1	Electric Power Research Institute, Inc.	Electric Truck Research and Utilization Center (eTRUC) for RHETTA	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$8,000,000	\$0	10/13/2021	11/1/2021	3/31/2026	Active
EPC-21-012	1	Swift Solar Inc.	High Efficiency Perovskite Tandems for Solar Electric Vehicles	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,995,200	\$2,995,200	1/26/2022	1/26/2022	6/30/2026	Active
EPC-21-013	1	Yotta Energy, Inc.	Demonstrating Distributed Solar Plus Storage with Battery Backup Capability for Grid Resilience and Reliability	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,229,174	\$1,229,174	2/16/2022	2/1/2022	1/26/2026	Active
EPC-21-014	1	Intertie Incorporated	Advanced Power Electronics to Enable Fast Charging While Avoiding Grid Upgrades	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,000,000	\$2,000,000	1/26/2022	1/30/2022	3/31/2027	Active
EPC-21-015	1	GreenFire Energy, Inc.	Steam Dominated GreenLoop: Proof of Concept at The Geysers, California	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,705,228	\$2,705,228	2/16/2022	1/26/2022	3/31/2027	Active

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EPC-21-016	1	Icarus RT, Inc.	R3A08: Icarus Hybrid Photovoltaic/Thermal Solar Plus Storage Cogeneration System	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,087,588	\$1,087,588	1/26/2022	2/4/2022	3/31/2026	Active
EPC-21-017	1	Carnot Compression Inc.	R3A05: Carnot Compressor Field Testing	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$2,028,350	\$2,028,350	1/26/2022	1/26/2022	3/31/2027	Active
EPC-21-018	1	RockeTruck, Inc.	Development and Demonstration of a Mobile Fuel Cell Generator (MFCG)	S7.2	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	S7.2.1	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	2/16/2022	2/16/2022	3/31/2026	Active
EPC-21-019	1	Porifera, Inc.	Manufacturing of Large Format Osmotic Membrane Module	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,980,226	\$2,980,226	3/9/2022	4/8/2022	3/31/2026	Active
EPC-21-020	1	SPARKZ, Inc.	Ultra-High Energy Lithium Metal Battery System Based on Solid Electrolyte and Cobalt Free Cathode	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$2,676,670	\$2,676,670	3/9/2022	3/10/2022	3/31/2026	Active
EPC-21-021	1	ConSol	Reimagining Affordable Mixed-Use Development in a Carbon-Constrained Future	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,936	\$999,936	4/26/2022	5/15/2022	6/30/2024	Active
EPC-21-022	1	Innovative Housing Opportunities, Inc.	Santa Ana Environmental Justice Innovation Zone	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$998,630	\$998,630	4/26/2022	5/16/2022	3/29/2024	Active
EPC-21-023	1	National Community Renaissance	Zero Emission Affordable Housing Design: Palm City Village	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	4/26/2022	5/15/2022	6/30/2024	Active
EPC-21-024	1	Communities for Global Sustainability LLC (C4GS-ZEDlife - DBA)	The Zero Energy Live/Learn Residential Ecovillage	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	4/26/2022	4/27/2022	6/30/2024	Active

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EPC-21-025	1	Family Health Centers of San Diego, Inc.	The Newton Avenue Project	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$18,199	\$18,199	4/26/2022	5/2/2022	6/30/2024	Terminated
EPC-21-026	1	Jamboree Housing Corporation	Paseo Adelanto: City Hall and Zero-Emission Affordable Housing Design	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	4/26/2022	5/15/2022	3/31/2024	Active
EPC-21-027	1	Mutual Housing California	Mutual Housing at Fairview Terrace	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	4/26/2022	5/15/2022	6/30/2024	Active
EPC-21-028	1	Electric Power Research Institute, Inc.	Net Positive Resilient All-Electric Affordable Housing at the Corona Station Residence in Petaluma	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	4/26/2022	5/16/2022	6/30/2024	Active
EPC-21-029	1	Northern California Land Trust, Inc.	Berkeley Efficient & Resilient Mixed-Use Showcase (BERMUS)	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,595	\$999,595	4/26/2022	5/16/2022	6/30/2024	Active
EPC-21-030	1	Association for Energy Affordability	Harmonized Resilience at Roosevelt Village: A zero-emissions model for supportive housing	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$999,315	\$999,315	5/11/2022	5/15/2022	6/30/2025	Active
EPC-21-031	1	Self-Help Enterprises	Colegio ZNE Village	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	5/11/2022	6/1/2022	6/30/2024	Active
EPC-21-032	1	SoLa Impact Opportunity Zone Fund, LP	Making Green Accessible	S2.4	2.4 Incentivize DER Adoption through Innovative Strategies at the Local Level	S2.4.1	2.4.1 EPIC Challenge	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$1,000,000	\$1,000,000	5/11/2022	6/13/2022	6/30/2024	Active
EPC-21-033	1	Lawrence Berkeley National Laboratory	The Cooking Electrification and Ventilation Improvements for Children's Asthma (CEVICA)	S7.3	7.3 Evaluate Strategies to Mitigate the Impacts of the Electricity System on the Environment and Public Health and Safety	S7.3.2	7.3.2 Enhance Human Health and Safety Associated with the Electricity Sector	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$4,000,000	\$4,000,000	5/11/2022	5/30/2022	3/31/2026	Active

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EPC-21-034	1	Enzinc Inc.	A Safe, High-Performance, Rechargeable, Recyclable Zinc-Based Battery for Stationary Energy Storage Applications	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,807,600	\$1,807,600	6/8/2022	6/29/2022	3/31/2025	Active
EPC-21-035	1	Lookin, Inc.	In-Line Quality Control of Lithium-Ion Battery Electrodes through Terahertz Scanning	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$999,947	\$999,947	6/8/2022	6/29/2022	3/31/2025	Active
EPC-21-036	1	Element 16 Technologies, Inc	Electrification of Industrial Processes with Sulfur Electric Thermal Storage	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,000,000	\$1,000,000	6/8/2022	7/1/2022	3/31/2025	Active
EPC-21-037	1	Eagle Rock Analytics, Inc.	Climate-Informed Generation Capacity Modeling to Support a Climate Resilient Transition to a Clean Electricity System	S7.2	7.2 Increase the Resiliency of the Electricity System to Climate Change and Extreme Weather Events	S7.2.1 ; S7.2.2 ; S7.2.3	7.2.1 Improved Understanding of Climate- and Weather-Related Risks and Resilience Options; 7.2.2 Clarify Interactions between Renewable Electricity Systems and Climate Change to Ensure an Effective, Resilient Transition to Low-Carbon Energy in California; 7.2.3 Integrate Climate Readiness into Electricity System Operations, Tools, and Models	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$900,000	\$900,000	6/8/2022	6/15/2022	3/31/2026	Active
EPC-21-038	1	Eagle Rock Analytics, Inc.	Climate-Informed Energy Sector Adaptation Planning Web Application via Cal-Adapt	S7.1	7.1 Identify Pathways for Achieving California's Energy and Climate Goals	S7.1.1	7.1.1 Integrated Pathways for Energy Futures: Tools and Science-Based Research for Holistic Energy Decision Making	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$750,000	\$750,000	6/8/2022	6/30/2022	3/31/2025	Active
EPC-21-039	1	Solid Energies Inc.	High Safety, Wide-operation-temperature, Low-cost All Solid-state Li-ion Battery Energy Storage Systems	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$3,000,000	\$3,000,000	6/8/2022	7/15/2022	3/31/2026	Active

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EPC-21-040	1	Pyro-E, Inc.	Residential Water Bill Reduction with Self-powered Diagnostics & Services	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.1	5.2.1 Bringing Rapid Innovation Development to Green Energy (BRIDGE)	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$1,548,602	\$1,548,602	6/8/2022	6/30/2022	6/30/2027	Active
EPC-21-041	1	Energy & Environmental Economics, Inc.	Climate-Informed Load Forecasting & Electric Grid Modeling to Support a Climate Resilient Transition to Zero-Carbon	S7.1	7.1 Identify Pathways for Achieving California's Energy and Climate Goals	S7.1.1	7.1.1 Integrated Pathways for Energy Futures: Tools and Science-Based Research for Holistic Energy Decision Making	2018-2020 EPIC Program 3rd Investment Plan	Applied Research and Development	\$1,950,000	\$1,950,000	6/8/2022	6/15/2022	3/31/2026	Active
EPC-22-001	1	Lumen Energy Strategy, LLC	Advancing California's Electricity Resource Planning Tools to Assess and Improve Climate Resilience	S2	2 Resilience and Reliability	S2.6	2.6 R&R: Valuation of Investments in Electricity Sector Resilience	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,950,000	\$1,950,000	7/13/2022	7/14/2022	3/31/2026	Active
EPC-22-002	1	Regents of the University of California, Davis	Heavy-Duty Vehicle Electrification and its Potential as a Clean Energy Alternative for Critical Operations	S1	1 Decarbonization	S1.7	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$3,000,362	\$3,000,362	8/10/2022	8/30/2022	3/31/2026	Active
EPC-22-003	1	Smartville, Inc.	Accelerate Development of Smartville Second-Life Battery Repurposing Platform	S2.3	2.3 Define and Improve the Customer's Business Proposition of Integrated Distributed Storage	S2.3.1	2.3.1 Development of Customer's Business Proposition to Accelerate Integrated Distributed Storage Market	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$769,559	\$2,000,000	8/10/2022	9/9/2022	3/31/2026	Active
EPC-22-003	1	Smartville, Inc.	Accelerate Development of Smartville Second-Life Battery Repurposing Platform	S3	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	S3.2	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$1,230,441	\$0	8/10/2022	9/9/2022	3/31/2026	Active
EPC-22-004	1	Gridtractor, Inc.	Electric Farm Vehicles as Reliable Grid Assets	S1	1 Decarbonization	S1.7	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,999,567	\$2,999,567	8/10/2022	8/31/2022	3/31/2026	Active
EPC-22-005	1	Gridscape Solutions, Inc.	Scalable, Resilient V2B Multi-Vehicle DC Platform (MVP DC) Demonstration at Public Buildings in California	S1	1 Decarbonization	S1.7	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$4,000,000	\$4,000,000	8/10/2022	8/15/2022	1/31/2026	Active

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EPC-22-006	1	Center for Transportation and the Environment, Inc.	"V2B Oakland"	S1	1 Decarbonization	S1.7	1.7 Decarb: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$3,199,969	\$3,199,969	9/14/2022	9/30/2022	6/30/2025	Active
EPC-22-007	1	Andromeda Power, LLC	Integrated Powertrain System - MotorTransformer	S2	2 Resilience and Reliability	S2.7	2.7 R&R: Vehicle-to-Building for Resilient Back-up Power	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,675,637	\$3,675,637	9/14/2022	10/14/2022	3/31/2026	Active
EPC-22-008	1	The Latino Equity Advocacy & Policy Institute, The LEAP Institute	LEAP MORBUG	S3.3	3.3 Increase the Value of Distributed Energy Resources and Renewables to the Transmission and Distribution System	S3.3.3	3.3.3 Provide Visibility into Load and DER Responses to Weather and Other Variables and into the Effects of DER on Gross Load	2018-2020 EPIC Program 3rd Investment Plan	Technology Demonstration and Deployment	\$675,103	\$675,103	10/12/2022	10/14/2022	3/31/2026	Active
EPC-22-009	1	National Offshore Wind Research and Development Consortium	National Offshore Wind Research and Development Consortium - CEC-NOWRDC Offshore Wind Block Grant Program	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,000,000	\$5,000,000	3/6/2023	3/23/2023	9/30/2027	Active
EPC-22-009	1	National Offshore Wind Research and Development Consortium	National Offshore Wind Research and Development Consortium - CEC-NOWRDC Offshore Wind Block Grant Program	S1	1 Accelerate Advancements in Renewable Generation Technologies	S1.2	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$4,000,000	\$0	3/6/2023	3/23/2023	9/30/2027	Active
EPC-22-010	1	Liminal Insights Inc	Scaling up Production of Ultrasound-based Battery Inspection System	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,750,000	\$2,750,000	4/12/2023	4/13/2023	12/31/2026	Active
EPC-22-011	1	Next Energy Technologies	Accelerating the Manufacturing of Energy Generating Windows for Zero-Emission Buildings Leveraging Pilot Scale Innovations	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,997,395	\$2,997,395	4/12/2023	5/1/2023	3/31/2027	Active
EPC-22-012	1	Skyven Technologies, Inc.	Electrification of Industrial Heat with High-Temperature Steam-Generating Heat Pumps	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$72,845	\$2,971,730	4/12/2023	6/15/2023	3/31/2027	Active
EPC-22-012	1	Skyven Technologies, Inc.	Electrification of Industrial Heat with High-Temperature Steam-Generating Heat Pumps	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$2,898,885	\$0	4/12/2023	6/15/2023	3/31/2027	Active

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EPC-22-013	1	TS Conductor Corp	FutureWire Manufacturing Facility	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$3,000,000	\$3,000,000	4/12/2023	4/17/2023	8/31/2026	Active
EPC-22-014	1	American Lithium Energy Corp.	Advanced High Silicone Anode Prismatic Battery Production in California	S5.1	5.1 Close the Innovation Gap from Idea to Investment	S5.1.2	5.1.2 Expand Entrepreneurial Services from Innovation Clusters	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,927,155	\$2,997,617	5/10/2023	4/24/2023	3/31/2028	Active
EPC-22-014	1	American Lithium Energy Corp.	Advanced High Silicone Anode Prismatic Battery Production in California	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$70,462	\$0	5/10/2023	4/24/2023	3/31/2028	Active
EPC-22-015	1	ElectricFish Energy Inc.	Low Rate of Initial Production of a modular EV charger with extreme-fast vehicle charging capability	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$1,690,103	\$1,690,103	5/10/2023	5/10/2023	3/31/2028	Active
EPC-22-016	1	LICAP Technologies Inc.	California-made Sustainable and Cost-effective Activated Dry Electrode (CASCADE)	S5.2	5.2 Accelerate the Most Promising Energy Technologies from Prototype to Market Entry	S5.2.2	5.2.2 Connect Clean Energy Companies with Local California Manufacturing	2018-2020 EPIC Program 3rd Investment Plan	Market Facilitation	\$2,791,222	\$2,927,155	6/16/2023	6/16/2023	3/31/2027	Active
EPC-22-016	1	LICAP Technologies Inc.	California-made Sustainable and Cost-effective Activated Dry Electrode (CASCADE)	S3	3 Entrepreneurship	S3.1	3.1 Entrepreneurial Ecosystem	2021-2025 EPIC Program 4th Interim Investment Plan	Market Facilitation	\$135,933	\$0	6/16/2023	6/16/2023	3/31/2027	Active
EPC-23-001	1	Integral Consulting Inc.	Integrated, Real-Time, Multi-Scale System for Monitoring Seabird Interactions with Floating Offshore Wind Technologies	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,400,868	\$3,400,868	7/26/2023	8/1/2023	3/31/2027	Active
EPC-23-002	1	Lawrence Berkeley National Laboratory	Integrated Monitoring of Cetacean and Ocean Environmental Impacts from Floating Offshore Wind Development on the Pacific Coast	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,500,000	\$3,500,000	7/26/2023	8/1/2023	3/31/2027	Active
EPC-23-003	1	RCAM Technologies, Inc.	Low-Cost, Environmentally-Friendly, Concrete Anchors Made In California	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,699,424	\$3,699,424	7/26/2023	8/1/2023	3/31/2027	Active

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EPC-23-004	1	RAND Corporation	Assessing the Role of Hydrogen in California's Decarbonizing Electric System	S1	1 Decarbonization	S1.5	1.5 Decarb: The Role of Green Hydrogen in a Decarbonized California—A Roadmap and Strategic Plan	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$798,348	\$798,348	7/26/2023	8/1/2023	7/31/2025	Active
EPC-23-005	1	University of Maine System acting through the University of Maine	Design, Validation, and Certification of a Synthetic Mooring Line System for a 15+ MW Floating Wind Turbine in the Humboldt Bay	S1	1 Accelerate Advancements in Renewable Generation Technologies	S1.2	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,162,676	\$2,162,676	7/26/2023	8/1/2023	3/31/2027	Active
EPC-23-006	1	Cal Poly Humboldt Sponsored Programs Foundation	Integrated Monitoring Approach to Reduce Entanglement Hazards for Floating Offshore Wind	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$773,495	\$2,000,000	7/26/2023	8/1/2023	3/31/2027	Active
EPC-23-006	1	Cal Poly Humboldt Sponsored Programs Foundation	Integrated Monitoring Approach to Reduce Entanglement Hazards for Floating Offshore Wind	S1	1 Accelerate Advancements in Renewable Generation Technologies	S1.2	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$1,226,505	\$0	7/26/2023	8/1/2023	3/31/2027	Active
EPC-23-007	1	Triton Anchor LLC	Advanced Anchoring System for California Floating Offshore Wind	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$3,447,131	\$3,447,131	8/9/2023	8/1/2023	3/31/2027	Pending Final Approval
EPC-23-008	1	Alliance for Sustainable Energy, LLC	Comprehensive Shared-Mooring Solutions to Minimize the Cost, Risk, and Footprint of GW-Scale Floating Wind Farms	S1	1 Decarbonization	S1.8	1.8 Decarb: Offshore Wind Energy Technologies	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$553,445	\$2,560,000	7/26/2023	8/1/2023	3/31/2027	Pending Final Approval
EPC-23-008	1	Alliance for Sustainable Energy, LLC	Comprehensive Shared-Mooring Solutions to Minimize the Cost, Risk, and Footprint of GW-Scale Floating Wind Farms	S1	1 Accelerate Advancements in Renewable Generation Technologies	S1.2	1.2 Variable Renewable Energy	2021-2025 EPIC Program 4th Investment Plan	Applied Research and Development	\$2,006,555	\$0	7/26/2023	8/1/2023	3/31/2027	Pending Final Approval

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EPC-23-009	1	Energy and Environmental Economics, Inc.	Techno-economic Assessment of Hydrogen as a Decarbonization Measure for California's Electric System	S1	1 Decarbonization	S1.5	1.5 Decarb: The Role of Green Hydrogen in a Decarbonized California—A Roadmap and Strategic Plan	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$798,805	\$798,805	7/26/2023	8/15/2023	12/15/2025	Active
EPC-23-010	1	Antora Energy, Inc.	Manufacturability of Low-Cost InGaAs Thermophotovoltaic Devices	S5	5 Enable Successful Clean Energy Entrepreneurship Across California	S5.1	5.1 Entrepreneurial Support	2021-2025 EPIC Program 4th Investment Plan	Market Facilitation	\$2,999,695	\$2,999,695	8/9/2023	8/23/2023	7/31/2026	Active
EPC-23-011	1	Porifera, Inc.	Low-Energy, High Recovery Treatment of Pulp and Paper Wastewater	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.1	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$4,998,521	\$4,998,521	9/13/2023	8/16/2023	3/31/2028	Active
EPC-23-012	1	Element 16 Technologies, Inc	Demonstration of Sulfur Electric Thermal Storage for Industrial Electrification and Decarbonization	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.1	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$3,000,000	\$3,000,000	9/13/2023	9/30/2023	3/31/2028	Active
EPC-23-013	1	Caliskaner Water Technologies, Inc.	Demonstration of Advanced Sludge Separation Treatment Technologies for Decarbonization of Wastewater Treatment Plants	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.1	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$7,190,593	\$7,190,593	9/13/2023	9/30/2023	3/31/2028	Active
EPC-23-014	1	Capture6 Corp	Project Monarch	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.1	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$8,153,623	\$8,153,623	9/13/2023	9/14/2023	3/31/2028	Active
EPC-23-015	1	Twelve Benefit Corporation	Long Duration CO2 Storage via CO2-derived Cement Additives	S4	4 Improve the Customer Value Proposition of End-Use Efficiency and Electrification Technologies	S4.1	4.1 Industrial Decarbonization	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$2,792,088	\$2,792,088	10/18/2023	11/1/2023	3/31/2028	Active
EPC-23-016	1	Smartville, Inc.	Low-Cost and Scalable Second Use Battery Demonstration in Central California for Equitable United States Based Manufacturing and	S3	3 Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid	S3.2	3.2 Transportation Electrification	2021-2025 EPIC Program 4th Investment Plan	Technology Demonstration and Deployment	\$1,499,995	\$1,499,995	11/8/2023	11/15/2023	11/16/2026	Active

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EPC-23-017	1	Lawrence Berkeley National Laboratory	Estimating the Economic, Health, and Safety Benefits of Avoiding Long-duration Power Disruptions in Disadvantaged Communities	S2	2 Resilience and Reliability	S2.6	2.6 R&R: Valuation of Investments in Electricity Sector Resilience	2021-2025 EPIC Program 4th Interim Investment Plan	Applied Research and Development	\$1,200,000	\$1,200,000	10/18/2023	3/14/2024	12/31/2026	Pending Final Approval
EPC-23-018	1	Institute of Gas Technology dba GTI Energy	Energy-efficient and Grid-interactive Zero Carbon Manufactured Homes	S1	1 Decarbonization	S1.1	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,775,570	\$2,775,570	11/8/2023	12/25/2023	4/28/2028	Pending Final Approval
EPC-23-019	1	Lawrence Berkeley National Laboratory	UPscaling Grid-friendly, Resilient, Affordable, and Efficient modular housing	S1	1 Decarbonization	S1.1	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$5,000,000	\$5,000,000	11/8/2023	12/25/2023	4/28/2028	Pending Final Approval
EPC-23-020	1	ReMo Homes Inc.	ReMo Habitats	S1	1 Decarbonization	S1.1	1.1 Decarb: Advanced Prefabricated Zero-Carbon Homes	2021-2025 EPIC Program 4th Interim Investment Plan	Technology Demonstration and Deployment	\$2,967,608	\$2,967,608	11/8/2023	11/15/2023	4/28/2028	Active

Total Number of Agreements	Total Number of Projects by Initiative	Total Project Amount
237	272	\$751,594,597

¹ Agreement Number may be repeated if it includes funding from multiple investment plans/program areas and/or strategic objectives/initiatives. Agreement Number will be counted only once.

² Number of Projects: Represents the number of projects that fund activities for each strategic objective/initiative. Several agreements fund multiple strategic objectives/initiatives across multiple investment plans.

³ Project Status:

Active: Executed Agreement end date is open as of 2023.

Ended: Executed Agreement end date expired in 2023.

Completed: Executed Agreement end date expired and closing activities completed in 2023.

Terminated: Executed agreement terminated in 2023.

Pending Final Approval: Agreement has been approved at an Energy Commission Business Meeting, but did not receive final approval (executed) in 2023.