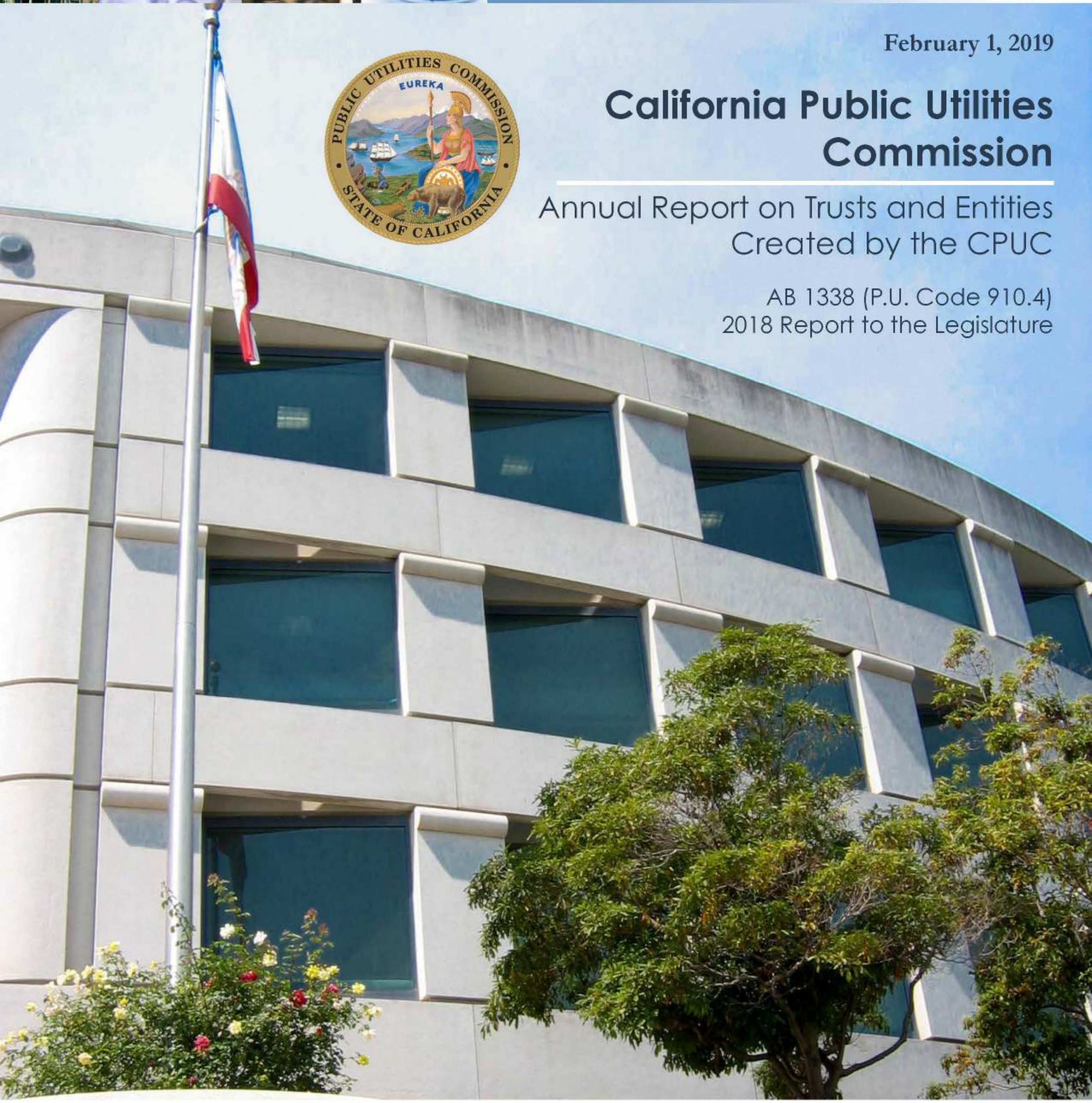
February 1, 2019

California Public Utilities Commission

Annual Report on Trusts and Entities Created by the CPUC

AB 1338 (P.U. Code 910.4)
2018 Report to the Legislature



CETF
CALIFORNIA EMERGING TECHNOLOGY FUND

CALIFORNIA HUB FOR ENERGY EFFICIENCY FINANCING

California Clean Energy Fund

DCISC
DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

Stewardship Council

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ASSEMBLY BILL 1338 (Huffman, 2008)

This legislative report is submitted by the California Public Utilities Commission (CPUC) to the Legislature pursuant to AB 1338 passed in September 2008. This law requires the CPUC to report to the Legislature certain information concerning entities or programs created by order of the CPUC. On January 1, 2016, Section 326.5 of the Public Utilities Code was amended and renumbered to P.U. Code 910.4.[1]

910.4.
By February 1 of each year, the Commission shall report to the Joint Legislative Budget Committee and appropriate fiscal and policy committees of the Legislature on all sources and amounts of funding and actual and proposed expenditures, both in the two prior fiscal years and for the proposed fiscal year, including any costs to ratepayers, related to both of the following:

(a) Entities or programs established by the commission by order, decision, motion, settlement, or other action, including, but not limited to, the California Clean Energy Fund, the California Emerging Technology Fund, and the Pacific Forest and Watershed Lands Stewardship Council. The report shall contain descriptions of relevant issues, including, but not limited to, all of the following:

(1) Any governance structure established for an entity or program.
(2) Any staff or employees hired by or for the entity or program and their salaries and expenses.
(3) Any staff or employees transferred or loaned internally or interdepartmentally for the entity or program and their salaries and expenses.
(4) Any contracts entered into by the entity or program, the funding sources for those contracts, and the legislative authority under which the Commission entered into the contract.
(5) The public process and oversight governing the entity or program's activities.

(b) Entities or programs established by the Commission, other than those expressly authorized by statute, under the following sections:

(1) Section 379.6.
(2) Section 399.8.
(3) Section 739.1.
(4) Section 2790.
(5) Section 2851.

[1] SB 697 (Hertzberg, 2015); SB 1222 (Hertzberg, 2016).

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ENTITIES OR PROGRAMS ESTABLISHED BY THE CALIFORNIA PUBLIC UTILITIES COMMISSION

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A. THE PACIFIC FOREST AND WATERSHED LANDS STEWARDSHIP COUNCIL

BACKGROUND

The Pacific Forest and Watershed Lands Stewardship Council ("Stewardship Council") was formed as a result of the CPUC Decision 03-12-035 dated December 18, 2003: *"Opinion Modifying the Proposed Settlement Agreement of Pacific Gas & Electric Company, PG&E Corporation and the Commission Staff, and Approving the Modified Settlement Agreement"*. Paragraph 6 of Section VI, Subsection C specified that a total of $100 million would be provided to the Stewardship Council for The Land Conservation Commitment and the Environmental Opportunity for Urban Youth. Paragraph 6 further stipulated that funding would be paid over 10 years, to be recovered in retail rates. The Stewardship Council does not receive any additional sources of funding at this time.

The Stewardship Council's mission is to protect and enhance watershed lands and uses and to invest in efforts to improve the lives of young Californians through connections with the outdoors. The Stewardship Council has two goals: (1) to ensure that over 140,000 acres of California's pristine watershed lands are conserved for the public good through the Land Conservation Program, and (2) to invest in outdoor programs that serve young people residing in the PG&E service area through the Youth Investment Program.

The Stewardship Council Board of Directors is comprised of appointees from state and federal agencies, including the CPUC, water districts, tribal and rural interests, forest and farm industry groups, conservation organizations, and PG&E. All decisions of the Board of Directors are made by consensus.

The Stewardship Council is currently led by Heidi Krolick as Executive Director. Heidi replaced Allene Zanger who retired in the summer of 2017.

PARTIAL LIST OF LAND CONSERVATION PROGRAM ACCOMPLISHMENTS

- Following a comprehensive public outreach effort, the Stewardship Council Board of Directors adopted Volumes I and II of the Land Conservation Plan ("LCP") on December 28, 2007. The LCP is a comprehensive framework to guide the Stewardship Council's conservation work.
- The Stewardship Council Board of Directors has selected 14 entities as recipients of fee title donations of PG&E Watershed Lands. Fee title conveyance transactions are moving forward on approximately 37,000 acres. The future landowners are federal, state, and local public agencies, nonprofit conservation organizations, and Native American entities. To date, the Board of Directors has selected 13 qualified organizations to hold conservation easements that will protect the Beneficial Public Values ("BPV's") of PG&E's Watershed Lands.
- As of October 31, 2018, the Board has approved Land Conservation and Conveyance Plans ("LCCPs") for 69 fee donations and/or conservation easement or conservation covenant transactions. These plans describe how the proposed transactions satisfy the requirements of the Settlement Agreement and Stipulation. After the Board approves a LCCP, PG&E then seeks regulatory approval of the transaction from the CPUC and from the Federal Energy Regulatory Commission, as applicable. The Board has approved LCCP's for approximately 27,000 acres that

have been recommended for donation and for approximately 43,000 acres that are being retained by PG&E. Approximately 25 additional LCCP's are in the process of being developed or will be developed prior to April 2020.

- As of October 31, 2018, a total of 36 conservation easement and fee title donation transactions have closed. Twelve transactions, or about 43% of total closings to date, were completed in 2017, which shows an upward trend in completion of transactional work. So far in 2018, we have closed eight transactions with an additional four transactions that are anticipated to close by the end of 2018, for a total of 12. By the end of the first quarter 2019, five more transactions are projected to close as well, which will include Cow Creek and Eel River. The year 2019 should show an increase in closings over 2018 as further transactions are pending and predicted to be released from regulatory review.
- Following regulatory approvals, 24 conservation easements were recorded on approximately 21,195 acres being retained by PG&E at the following planning units: Doyle Springs, Iron Canyon, Kern River, Lower Bear Area, Middle Fork Stanislaus River, Fordyce Lake, Narrows, Merced River, Lower Drum, Kilarc Reservoir, Wishon Reservoir, Lake Spaulding, McArthur Swamp, Blue Lakes, Chili Bar, Lake McCloud, Mountain Meadows Reservoir, Kerckhoff Lake, and Willow Creek.
- To date, fee title has been conveyed for approximately 8,067 acres. Twelve land donations with conservation easements or conservation covenants have been completed. PG&E has closed fee title conveyance of lands to the University of California, Tuolumne County, Placer County, the Auburn Area Recreation and Park District, and the Fall River Resource Conservation District with conservation easements recorded concurrently with the land transfer. Lands have also been conveyed to the U.S. Forest Service at the Deer Creek, Wishon Reservoir, North Fork Mokelumne River, Lower Bear Area, Blue Lakes, and Fordyce (White Rock) Lake planning units with the conservation covenant recorded concurrently.
- In September 2017, the Stewardship Council initiated an enhancement program, which will grant an additional $2 million in grants being awarded to projects that enhance the BPVs of the Watershed Lands and promote partnerships between the landowner, the conservation easement holder, local communities, youth, and other stakeholders. To date, several grants have been awarded for planning and feasibility studies, biological surveys, and resource protection projects. The following enhancement projects were approved and awarded in early 2018 to the Fall River RCD and the Fall River Valley Community Services District ("Fall River Valley CSD"), both are located in Shasta County:
    - McArthur Swamp was allocated $1,017,750 to be administered by the Fall River RCD. These funds will be used for land management, cultural resource protection, fencing improvements, noxious weed abatement, bridge infrastructure and safety improvements all to benefit the beneficial public values on the property. Following this allocation of funds, an additional $149,500 grant was awarded specifically to fund a portion of a Range Manager position to help ensure these management and restoration goals are met. The Board also designated funding up to $600,000 for possible future

enhancement projects on the land.
The Fall River Valley CSD also received a $56,115 enhancement grant for the development of a community park at the Fall River Mills planning unit. This will transfer to the Fall River Valley CSD in the latter part of 2018. This supplements an existing state grant for the development of this park. The new park will provide excellent access for the public to view both the Pit and Fall Rivers.

NATIVE AMERICAN PARTNERS – FEE TITLE OWNERSHIP

The Stewardship Council and PG&E staff continue to work closely with our Native American partners that have been recommended to receive fee title: the Potter Valley Tribe, the Pit River Tribe and the Maidu Summit Consortium. Together with the CPUC, we reached significant milestones in the process of completing fee title donation of lands to these three Native American entities.

Potter Valley Tribe

The Potter Valley Tribe ("PVT") is a federally recognized tribe of the Pomo people based in Mendocino County. Two fee title donation recommendations have been made to the PVT for a total of 898 acres; 673 acres at the Eel River (Trout Creek) planning unit and 219 acres at the Eel River (Alder Creek) planning unit. These LCCP actions were approved by the Board in 2016 and are now in the process of being evaluated by the CPUC for final approval before escrow closing. Mendocino Land Trust will hold the conservation easement on both the Trout Creek and Alder Creek properties.

Pit River Tribe

The Pit River Tribe ("PRT") is comprised of eleven autonomous bands: Ajumawi, Atsugewi, Atwamsini, Ilmawi, Astatawi, Hammawi, Hewisedawi, Itsatawi, Aporige, Kosalektawi and Madesi that reside in parts of Shasta, Siskiyou, Modoc and Lassen Counties in California. The Board has recommended that PRT receive 850 acres in fee at the Hat Creek planning unit. The Hat Creek LCCP will likely come before the Board for consideration by the first part of 2019. Also, PRT completed work on the Hat Creek restoration project within the Hat Creek planning unit in partnership with Cal Trout, the Lomakatsi Restoration Project and the US Fish and Wildlife Service.

Maidu Summit Consortium

The Maidu Summit Consortium ("MSC") is a non-profit 501(c)(3) organization comprised of nine Mountain Maidu groups, tribes, non-profit and grass-roots organizations located in Plumas and Lassen Counties. MSC was recommended to receive fee title donation of approximately 3,000 acres at the Lake Almanor and Humbug Valley planning units. Three of the five LCCP's for the properties being donated to MSC have been approved by the Board. The first LCCP's to be approved include the Maidu Cemetery and Maidu Forest at the Lake Almanor planning unit. The Maidu Cemetery transaction will place an important ancestral cemetery under MSC ownership and will allow it to manage cultural resources in that area. The Maidu Forest transaction will provide MSC with new forest management opportunities and the ability to house a visitor center and cultural museum on the property. The Board also recently approved the Humbug Valley (Tasmam Kojom) transaction. The California Department of Fish and Wildlife and the Feather River Land Trust will co-hold the conservation easement at Humbug Valley and will work closely with MSC on the implementation of the land management plan after the transaction closes. The vision at Tasmam Kojom is to have the property serve as the first Tribal National Park. The two Lake Almanor and the Humbug Valley transactions are likely to close in the spring of 2019.

YOUTH INVESTMENT PROGRAM ACCOMPLISHMENTS

As of June 2018, using Stewardship Council and other funding, Youth Outside ("YO") awarded multi-year grants to 35 organizations in the current year totaling $797,500. These grants serve youth in several regions of PG&E's service area, providing transformational outdoor education and open space experiences to over 11,900 youth.

- A Youth Outside award to Brothers on the Rise allowed them to successfully launch their five-week summer program with full participation and an additional 20 eager youth on their waitlist. Their summer program brought youth from different neighborhoods of Oakland to focus on manhood development, fitness, outdoor education, media and recreation.
- A Youth Outside grant to Rooted in Resilience allowed them to continue to co-host the Climate Justice Youth Leadership Academy. Youth from the academy spent six weeks in externships where they spent four hours each week at 11 environmental justice organizations building skills in advocacy and policymaking for climate justice.
- Youth Outside is continuing to diversify in revenue stream to build a sustainable organization beyond the Stewardship Council's lifespan. They maintain a grant-making partnership with Kaiser Permanente and is exploring additional partnerships that will help YO expand across California. Kaiser Permanente renewed its support for an additional two years, 2018 and 2019, to support Youth Outside's full grantee slate across both years. The funds will also support Youth Outside's Grantee Cohort Series affirming the value to the capacity building that grantees receive through this program.

In 2017 and again in 2018, with a portion of the remaining Youth Investment Program funds, the Stewardship Council provided a grant to the California Council of Land Trusts (CCLT) to capitalize a Land Trust Training and Apprenticeship Program for young adults ages 18 to 26. This unique intern program helps to attract, recruit and prepare future land trust and conservation leaders who reflect the diversity of landscapes land trusts protect, as well as the changing demographics of the state of California. CCLT's is leveraging the Stewardship Council's funding to attract additional investment from other partners such as Golden 1 Credit Union and the land trusts themselves. This program is making a difference in enhancing opportunities for young professionals seeking conservation-focused internships as well as engaging and empowering the next generation of conservationists.

ANNUAL AUDIT REPORT

The Stewardship Council has established an independent Audit Committee which oversees a full financial audit of the organization's financial statements and internal controls processes. This annual audit is available to the public via the Stewardship Council's website, as is the organization's IRS form 990: Return of Private Foundation. These reports can be found at:

http://www.stewardshipcouncil.org/public_information/financial_statements.htm

In addition to supplying the most recently available audit report and tax return, this report outlines the additional information required by the Public Utilities Code Section 910.4.

(1) Any governance structure established for an entity or program.

a. Articles of Incorporation

http://www.stewardshipcouncil.org/documents/background%20documents/Articles%20of%20Incorporation_Amended%204.30.14.pdf

b. Bylaws

http://www.stewardshipcouncil.org/documents/background%20documents/Corporate%20Bylaws_Amended%204.30.14.pdf

c. Settlement Agreement

http://www.stewardshipcouncil.org/documents/background%20documents/Settlement%20Agreement.pdf

d. Stipulation Agreement

http://www.stewardshipcouncil.org/documents/background%20documents/Stipulation%20Signed.pdf

e. Policies and Procedures

Supplied as a separate document as Addendum 1a (available on CD by request).

(2) Any staff or employees hired by or for the entity or program and their salaries and expenses.

a. Schedule of Employees and Compensation:

A summary of staff salaries and benefits are provided in Table 1, a more detailed breakdown of salaries and benefits for the top five highest paid employees is given in Appendix 1.1.

Table 1 – General breakdown of active staff costs for 11 years to December 31, 2017

Year	Gross Pay	Benefits	401k	Total
2008	$1,104,093	$197,132	$28,382	$1,329,607
2009	$1,341,280	$250,658	$39,568	$1,631,506
2010	$1,657,798	$314,535	$48,442	$2,020,775
2011	$1,590,718	$304,839	$47,210	$1,942,767
2012	$1,535,781	$310,901	$46,193	$1,892,875
2013	$1,171,951	$231,036	$42,868	$1,445,855
2014	$1,114,727	$220,195	$41,682	$1,376,604
2015	$1,057,086	$205,453	$39,244	$1,301,783
2016	$ 904,614	$191,757	$36,688	$1,127,910
2017	$ 706,614	$181,693	$19,354	$907,660
2018 as of 10/31	$ 713,398	$178,337	$21,105	$912,841

(3) Any staff or employees transferred or loaned internally or interdepartmentally for the entity or program and their salaries and expenses.

No State staff is currently or ever has been loaned to this organization.

(4) Any contracts entered into by the entity or program, the funding sources for those contracts, and the legislative authority under which the commission entered into the contract.

a. Under the Settlement Agreement, Section 17(c), PG&E is obligated to fund the Stewardship Council annually over a ten-year period and is authorized by the Commission to recover these payments in rates. PG&E made its tenth and final installment payment to the Stewardship Council in January 2013. However, the Commission is not a party to any of the contracts entered into by the Stewardship Council, except that it is a third-party beneficiary to the Major Grant Agreement that the Stewardship Council entered into with the Foundation for Youth Investment in August 2013. When the Stewardship Council dissolves after it finishes its land conservation program work, the CPUC will have the right to succeed to the Stewardship Council's rights, but not its obligations, under the Major Grant Agreement.

b. Schedule of professional fees

See Appendix 1.2.

(5) The public process and oversight governing the entity or program's activities.

a. The Stipulation Agreement provides that:

1. "The meetings of the Governing Board [of the Stewardship Council], including meeting minutes, will be public… The Stewardship Council will publish notice of its meetings in newspapers of general circulation in the counties where affected parcels are located and will maintain a public web site… Before making decisions regarding the disposition of any individual parcel, the Stewardship Council will provide notice to the Board of Supervisors of the affected county, each affected city, town, and water supply entity, each affected Tribe and/or co-

licensee, and each landowner located within one mile of the exterior boundary of the parcel, by mail or other effective manner." (Section 11(c))

2. "The Governing Board will make each decision by consensus" (Section 11(a) "Each member of the Governing Board will report to, and back from, the entity he or she represents before the Governing Board takes any programmatic action . . . in order to ensure that consensus represents the views of that entity." (Section 11(b))

3. "The Stewardship Council will provide semi-annual progress reports to the Commission… Each such report will state (1) actual expenditures and progress achieved towards the stated purpose of the Land Conservation Commitment; (2) unresolved disputes within the Governing Board; and (3) anticipated expenditures and actions during the next reporting period." (Section 14)

b. The Stewardship Council's corporate bylaws provide as follows:

Section 11. Public Notice of Meetings.

1. All meetings of the Board, including meeting minutes, shall be public; provided, however, that the Board shall have the authority to undertake a closed meeting in appropriate circumstances. The Board shall publish notice of its meetings in newspapers of general circulation in the affected counties within a reasonable time prior to any meeting and shall maintain a public web site that provides notices of its meetings and copies of all meeting minutes. Upon request, all information available on the web site shall be made available in hard copy to members of the public at cost.

2. Before the Board makes any decision regarding any individual parcel of land, the Board shall provide notice to the Board of Supervisors of the affected county, each affected city, town and water supply entity, each affected tribe and/or co-licensee and each landowner located within one mile of the exterior boundary of the parcel, by mail or other effective manner within a reasonable time prior to the meeting at which the Board will make the decision regarding that land.

c. The board-adopted Policies and Procedures include the following:

PUBLIC NOTICING

The Stewardship Council is required to "publish notice of its meetings in newspapers of general circulation in the counties where affected parcels are located..." It is also required by its Bylaws to "publish notice of its meetings in newspapers of general circulation in the affected counties within a reasonable time prior to any meeting…" Staff will be responsible for meeting the letter and spirit of these requirements through an inclusive and comprehensive public outreach effort.

STEWARDSHIP COUNCIL 2017-18 PUBLIC OUTREACH ACTIVITIES, TARGETED MEDIA OUTREACH AND NOTICING

1. The Stewardship Council sends e-mails to the stakeholders in its database regarding Land Conservation program updates and information, and announcements for public Stewardship

Council board meetings. As of October 1, 2018, the Stewardship Council database included 13,339 individuals and 5,169 organizations (federal, state and local agencies, nonprofits, schools, tribal entities, foundations and for-profit businesses).

2. The Stewardship Council mails notifications to neighboring property owners, the Board of Supervisors of the affected county, each affected city, town and water supply entity, and each affected tribe regarding draft Land Conversation and Conveyance Plans (LCCPs) for subject parcels of PG&E Watershed Lands. The notification explains how stakeholders can submit public comments on the draft LCCP. The Stewardship Council also disseminates e-mail notices to stakeholders in its database requesting public comment on the draft LCCPs.
3. The Stewardship Council sends news releases announcing public board meetings to a media database, which includes approximately 1,000 media outlet representatives.
4. The Stewardship Council pays for legal notices to be printed in local papers, noticing all public board meetings. Notices are printed in newspapers serving populations that are located (a) near the place of each board meeting, and (b) in the geographical areas corresponding to the Watershed Lands that are the subject of a recommendation for the selection of a fee donee or conservation easement holder or a proposed action approving a Land Conservation and Conveyance Plan.
5. Logs are maintained for telephone inquiries regarding noticing. If a written correspondence is received, an electronic copy is made and saved. E-mail communication is also saved electronically.
6. The Stewardship Council's 2017 annual report is posted to the Council's website, and its availability announced via an email to all stakeholders in our database.

B. THE CALIFORNIA CLEAN ENERGY FUND

BACKGROUND

The California Clean Energy Fund (CalCEF) is an independent 501(c)(4) non-profit corporation, doing business as CalCEF Ventures, that was established via the bankruptcy settlement between PG&E and the CPUC with CPUC Decision 03-12-035 in Investigation 02-04-026. The $30 million granted to CalCEF was distributed by PG&E over five years and derived from shareholders per the terms of the settlement agreement.

CalCEF has over the years expanded into a family of entrepreneurial nonprofit organizations focused on the rapid commercialization, deployment and scaling up of low-carbon energy technologies. The CalCEF tripartite framework – CalCEF Ventures, CalCEF Innovations and CalCEF Catalyst – identifies market barriers, develops and launches innovative financing solutions to overcome those barriers, and invests in the deployment of those solutions. CalCEF is forging a new model of market, policy and financial innovation to bridge multiple gaps in the development cycle of clean-energy technologies.

Selected highlights of CalCEF's accomplishments since 2005 are:

- Collaborated with industry leaders to bring new financing solutions to the energy efficiency marketplace;
- Founded the nation's first university center on energy efficiency, at UC Davis;
- Created the first venture capital impact fund;
- Helped form the industry's first multi-investor platform for tax equity investment;
- Launched the industry's first fund to focus on early-stage financing;
- Collaborated with Lawrence Berkeley National Laboratory to launch CalCharge, aimed at developing and deploying new energy-storage technologies; and,
- Entered into a contract with the California Energy Commission to administer and run the California Sustainable Energy Entrepreneur Development (CalSEED) initiative, which awarded 46 grants to early stage clean energy enterprises within its first two years of programming.
- Implemented Free Electrons, a global advanced accelerator program for clean energy solutions, as the lead program manager.
- Launched the New Energy Nexus, a global network of clean-energy incubators and accelerators that now has very active network nodes in Indonesia, China and Thailand, in addition to a California presence.

As of 2017, all the settlement funds provided have been spent down and remaining investment returns are not expected to provide a reliable funding stream for the organization's future work or provide any significant windfalls. Other funding sources are now sustaining the organization financially.

ANNUAL REPORT

(1) Any governance structure established for an entity or program.

CalCEF Ventures is governed by a board of between 3-15 directors under its Incorporation Charter and Bylaws filed in 2004 and the 2013 amended and restated Bylaws. CalCEF Ventures appoints the board of directors of CalCEF Innovations (a 501(c)(3) non-profit corporation, and CalCEF Catalyst, a 501(c)(6) non-profit corporation.

a. *Articles of Incorporation:* Articles of Incorporation, 2004.

b. *Bylaws:* Restated Bylaws, 2013.

c. *Settlement Agreement:* http://docs.cpuc.ca.gov/Published/Final_decision/32687.htm

d. *Stipulation Agreement:* No stipulation agreement found.

e. *Policies and Procedures:* Conflict of Interest Policy, 2009.

(2) Any staff or employees hired by or for the entity or program and their salaries and expenses.

CalCEF Ventures employees 11 headcount / 9.4 full-time equivalent staff as of October 2018. A summary of staff salaries and benefits supported by the original settlement funds, by year, are provided in Table 2. 2017 year-end figures have been corrected. Settlement funds were fully spent down as of the end of 2017; thus, figures reported going forward will be 0 as funding for CalCEF activities is being provided through other funding mechanisms.

Table 2 – Summary of staff salaries and benefits

Year	Gross Pay	Benefits	Total
2005	$175,000	$1,848	$176,848
2006	$145,833	$3,707	$149,540
2007	$210,000	$5,234	$215,234
2008	$166,083	$6,347	$172,430
2009	$175,481	$11,324	$186,805
2010	$205,270	$16,364	$221,634
2011	$225,167	$17,115	$242,302
2012	$245,257	$13,989	$259,246
2013	$376,505	$16,985	$393,490
2014	$117,467	$6,573	$124,040
2015	$110,451	$6,298	$116,749
2016	$206,971	$30,438	$237,409
2017	$242,894	$51,324	$294,218

(3) Any staff or employees transferred or loaned internally or interdepartmentally for the entity or program and their salaries and expenses.

Staff are shared across the CalCEF family of organizations but accrued for each organization separately. The amount listed above only pertains to the activities of CalCEF Ventures, and only to activities supported by the original settlement funds and their investment returns. No state staff is currently or has ever been loaned to this organization. No staff from other organizations is on loan.

(4) Any contracts entered into by the entity or program, the funding sources for those contracts, and the legislative authority under which the commission entered into the contract.

CalCEF Ventures' initial funding of $30 million comes from PG&E shareholders. The funding extended over a five-year period as follows: $2 million in 2004, $4 million in 2005, $6 million in 2006, $8 million in 2007, and $10 million in 2008. Minor donations from other entities were made and are detailed on Exhibit 2.1. PG&E's role in CalCEF Ventures was limited to providing the $30 million in funding and in appointing three of the initial board members. Authority for this funding was given in CPUC Decision 03-12-035, upon settlement of PG&E's bankruptcy.

CalCEF Ventures invested in new technologies by entering into partnering contracts with certain for-profit venture capital partners, of which CalCEF continues to maintain a position in one of those, namely the CalCEF Clean Energy Angel Fund. CalCEF also holds a direct investment in Thetus, a former portfolio company of one of the venture capital funds – the fund has since been dissolved and ownership interest was transferred to CalCEF Ventures. (A detailed list of investments is provided in Exhibit 2.2).

In 2006 CalCEF Ventures made a grant of $500,000 to UC Davis for the development of the Energy Efficiency Center, and in 2007 made a second grant for the same amount per the terms of the grant agreement. In 2008 the sister organization CalCEF Innovation was set up with $500,000 to address important gaps in public policy regarding motivation of clean- energy technology and business solutions, and to pursue needed policy making and public benefit goals. In 2011 and 2012 CalCEF Ventures co-established two new investment vehicles with operating partners: in 2011 Clean Energy Advantage Partners; and, in 2012 Renewable Energy Trust. CalCEF Ventures maintains ownership interest in Clean Energy Advantage Partners. The ownership interest in Renewable Energy Trust was first diluted during the years after the original investment, as expected, through follow-on funding rounds since the seeding stage and exited in late 2016. In 2012 CalCEF Ventures continued its support of the UC Davis Energy Efficiency Center and provided an additional to $200,000 grant over the subsequent three years. The investment distribution of funding among the partners and grantees is shown in Table 3 on the next page.

In September 2016, CalCEF Ventures entered into a contract with the California Energy Commission to administer and operate the California Sustainable Energy Entrepreneur Development (CalSEED) initiative. The program is funded through the Electric Program Investment Charge (EPIC). More details on the program goals can be found inside the Request For Proposal documents for this funding opportunity GFO-15-305 available at: http://www.energy.ca.gov/contracts/RFP-15-305/

The initial funding for CalCEF Ventures has been spent down. The organization has transitioned to a sustainably financed operating model through a combination of grants, mission-aligned cost reimbursable contracts and certain mission-centric earned income streams.

Table 3 – Investment distribution of funding among the partners and grantees

Year of Investment	Investment Partner	Objective	Total Investment/Grant
2005	DFJ Element Clean Energy Fund, LLP	Support companies solving resource constraint problems	$8 million
2005	Nth Power Clean Energy Fund, LLP	Build relationships that speed the growth of new energy technologies	$8.5 million
2006	Vantage Point Venture Partners	New Clean Energy Technology Investment	$8 million
2006	UC Davis	Energy Efficiency Center	$1 million
2007	CalCEF CleanAngel Fund	Start-up/seed stage investment fund in the clean energy and related technologies markets.	$1 million
2008	CalCEF Innovations	Provide funding for public policy and market strategy development.	$0.5 million
2009	Cleantech Open	Provide funding for entrepreneurship and problem-solving around energy and environmental challenges	$0.05 million
2010	UC Davis	Energy Efficiency Center	$0.05 million
2010	Cleantech Open	Provide funding for entrepreneurship and problem-solving around energy and environmental challenges	$0.05 million
2011	CalCEF Innovations	Provide funding for public policy and market strategy development.	$0.3 million
2011	Clean EnergyAdvantage Partners	Tax equity investment fund that deploys capital for renewable energy projects	$0.4 million
2011	Cleantech Open	Provide funding for entrepreneurship and problem-solving around energy and environmental challenges	$0.05 million
2011	UC Davis	Energy Efficiency Center	$0.05 million
2012	CalCEF Innovations	Provide funding for public policy and market strategy development.	$0.3 million
2012	UC Davis	Energy Efficiency Center	$0.2 million
2012	Renewable EnergyTrust	Solar PV investment fund that deploys capital for renewable energy projects.	$0.65 million
2013	CalCEF Innovations	Provide funding for public policy and market strategy development.	$0.3 million

(5) The public process and oversight governing the entity or program's activities.

CalCEF Ventures is a non-profit 501(c)(4) corporation not funded through taxation. Starting in September 2016, CalCEF has been a contractor to the California Energy Commission on an Electric Program Investment Charge (EPIC) funded program. EPIC funds originate with utility ratepayers of California Investor Owned Utilities (IOUs).

CalCEF Ventures has a Board of Directors that provides oversight.

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C. THE CALIFORNIA EMERGING TECHNOLOGY FUND

BACKGROUND

The California Emerging Technology Fund (CETF) was established as a non-profit corporation pursuant to orders from the CPUC in approving the mergers of SBC-AT&T and Verizon-MCI in 2005. As a condition of approval of the mergers, AT&T and Verizon were required to contribute to CETF a total of $60 million over five years "for the purpose of achieving ubiquitous access to broadband and advanced services in California, particularly in underserved communities, through the use of emerging technologies by 2010." The funds were transferred by both companies by 2010. These funds have been spent as June 2017.

Additional funds were provided to the California Emerging Technology Fund through Memorandum of Understanding (MOU) demonstrating public benefit as a result of the mergers of Frontier Communications and Verizon Wireline and Charter Communications Inc. and Time Warner Cable Inc. and Bright House Networks. Frontier entered an agreement with CETF on July 1, 2016 to pursue a number of activities aimed at helping to close the Digital Divide, including the pass through of $3,050,000 to re-grant to non-profits throughout its territory in California. CETF does not retain any of the Frontier funds for its organizational use. Charter in its MOU with CETF agreed to provide $6,500,000 each year for five years for a total of $32.5 million to support CETF activities in Charter territories. Both companies agreed that the work of CETF would remain vendor neutral. As of this Report, all funds discussed going forward will be from these two transactions.

The CPUC in establishing CETF stated it should pursue the goals of expanding adoption and usage of broadband technology in addition to promoting ubiquitous access: "We understand that without computers and computer literacy neither availability nor access will ensure use. It is low use that is at the heart of the digital divide. CETF should consider the possibility of public/private partnerships to develop community broadband access points that provide both."[2]

ANNUAL REPORT

(1) Any governance structure established for an entity or program.

The CPUC orders specified the initial composition and process for constituting the 12-person CETF Board of Directors: four were to be appointed by the CPUC, four were to be appointed by the companies (three by SBC, of which only one could be an employee, and one by Verizon), and these eight were to appoint the remaining four. Initial appointments were made in April 2006 and the Board was fully constituted by the end of June 2006.

Board membership may be found here: http://cetfund.org/aboutus/board

a. Articles of Incorporation— http://cetfund.org/governance/articles-incorporation

b. Bylaws— http://cetfund.org/governance/bylaws

[2] Decision 05-11-028, November 18, 2005, p. 79, footnote 186.

c. Settlement Agreements—The decisions authorizing the mergers and the creation of CETF are Decision (D.) 05-11-028 and D.05-11-029. The decisions funding the work of CETF going forward are D.15-03-005, D.15-07-009.

   The CPUC's documents related to the SBC-AT&T merger is here:

   https://apps.cpuc.ca.gov/apex/f?p=401:57:0::NO

   The Decision authorizing the acquisition of MCI by Verizon is here:

   https://apps.cpuc.ca.gov/apex/f?p=401:59:0::NO:RP,59,RIR:P5_PROCEEDING_SELECT:A0504020

   CETF negotiated Memorandums of Understanding (MOUs) with Frontier and Charter during each company's merger application process at the CPUC. These MOUs were incorporated into the final decisions by the CPUC in both proceedings.

   The decision approving Frontier's application to acquire Verizon subject to conditions Frontier Communications of America, Inc., Verizon California is here:
   https://apps.cpuc.ca.gov/apex/f?p=401:59:0::NO:RP,59,RIR:P5_PROCEEDING_SELECT:A1503005

   The decision approving Charter's application to acquire subject to conditions Charter Fiberlink CA CCO, LLC; Time Warner Cable Inc.; Time Warner Cable Information Services (California), LLC; Advance/Newhouse Partnership; Bright House Networks, LLC; and Bright House Networks Information Services (California), LLC is here:

   http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=162004567.

d. Stipulation Agreement—No Stipulation agreement is given for this entity.

e. Policies and Procedures—See Attachment A.

(2) Any staff or employees hired by or for the entity or program and their salaries and expenses.

Table 4 – Schedule of employees with salaries and expenses

Year	Gross Pay	Benefits	Total*
July 2008-June 2009	$ 977,577	$153,427	$1,131,004
July 2009-June 2010	$1,126,019	$241,568	$1,367,587
July 2010-June 2011	$1,247,106	$267,799	$1,514,905
July 2011-June 2012	$1,320,427	$286,904	$1,607,331
July 2012-June 2013	$1,429,589	$322,854	$1,752,443
July 2013-June 2014	$1,426,660	$301,852	$1,728,512
July 2014-June 2015	$1,415,026	$276,202	$1,691,228
July 2015-June 2016	$1,167,255	$224,465	$1,391,720
July 2016-June 2017	$1,328,200	$230,176	$1,558,376
July 2017-June 2018	$1,189,300	$231,024	$1,420,324

*These numbers reflect audited financials. Benefits include employer retirement contribution.

(3) Any staff or employees transferred or loaned internally or interdepartmentally for the entity or program and their salaries and expenses.

None. There are no state employees at CETF, nor have there ever been any loaned or transferred state employees.

(4) Any contracts entered into by the entity or program, the funding sources for those contracts, and the legislative authority under which the commission entered into the contract.

a. Schedule of contracts. There are professional contracts and agreements with grantees. The contracts are listed below. For the grantees, Attachment B contains a list of the completed and current grants. CETF 1.0, 2.0 and 3.0 grants are completed. These numbers are for the contracts in fiscal year July 2017 – June 2018. Please note there has been a revision in Budget Line Items to assure greater transparency and accountability for the source of funds; hence, some items no longer exist or are combined.

Table 5 – Schedule of professional contracts and agreements with grantees

Contract Type	Total Fiscal year July 2017-2018
Accounting	$72,750
Consortia for Adoption	Deleted
Consortia for Deployment	Deleted
IT Tech Support	$43,369
Legal Counsel	$11,078
Plan Administrators	$6,318
Printing	$17,138
Broadband and Adoption Program (was Public Awareness and Education)	$1,154,923
School2Home	$1,386,939
Website Support/Online Grant Services	See IT Support

b. Schedule of contracts and source of funding for contracts. Under the mergers of AT&T/SBC and Verizon/MCI approved by the CPUC, both companies are obligated to fund CETF annually over a five-year period for a total of $60 million. This funding is from the shareholders of each company and not from ratepayers. Both companies have completed their payments. During the 2010 fiscal year CETF was awarded two federal grants from the National Telecommunications Information Agency (NTIA) for a total of $14.2 million which were completed in FY 2012-2013. The entire $60 million in seed capital has been spent as of June 2017.

During the year ended 2017, CETF entered into MOUs with both Frontier Communications, Inc. and Charter Communications, Inc. to implement public benefits as a result of corporate consolidations. CETF is managing charitable funds from Frontier to achieve new broadband adoptions by low-income households in their service areas. And, CETF will receive $3,050,000 from Frontier Communications and $32.5 million from Charter through 2021 to continue organizational operations and support School2Home and other digital inclusion programs in their service areas.

(5) The public process and oversight governing the entity or program's activities.

CETF is incorporated as a California 501(c)3 non-profit corporation as a public benefit corporation. It has a Board of Directors that provides oversight. CETF was established with shareholder funds from AT&T and Verizon. There were no ratepayer funds in the seed capital or subsequent funding CETF received.

The California Broadband Council (CBC) which was established to marshal the state's resources to further the policy of increasing broadband network deployment, and eliminating the Digital Divide by expanding broadband accessibility, literacy, adoption, and usage. While CETF President and CEO Sunne McPeak, is a member of the CBC, CETF has made presentations on policy issues and grant programs to this group.

CETF publishes an annual report describing the grants to date, the metrics, and outcomes of the investments, and detailed financial information. In addition to mailing printed copies CETF distributes an electronic copy to everyone who signed up on the CETF website. All the annual reports are posted on the organization's website at: http://www.cetfund.org/annualreports. The Decade Report 2007-2017 was attached as Attachment E in the 2016-2017 AB 1338 Report and presented in a public meeting to the CPUC on November 30, 2017. Going forward, CETF will produce reports every two years and continue sending them to the CPUC.

The IRS 990s for the past three years are in Attachment C.

CETF hosts a wide range of public forums during the year, including meetings with its Expert Advisors, Regional Consortia, and grantees all designed to provide and solicit information about the grants and future directions.

CETF is required by California law to comply with the Non-Profit Integrity Act of 2004. CETF has established an independent Audit Committee which oversees a full audit of the financial statements. The audits are on the CETF website at: http://www.cetfund.org/aboutus/finances/audit.

(6) All sources and amounts of funding and actual and proposed expenditures, both in the two prior fiscal years, and for the proposed fiscal year, including any costs to ratepayers.

a. Sources and amounts of funding. Under the mergers of AT&T/SBC and Verizon/MCI approved by the California Public Utilities Commission (CPUC), both companies were obligated to fund CETF annually over a five-year period for a total of $60 million. This funding is from each company's shareholders and not the ratepayers and is paid in full and expended by June 30, 2017. During the FY 2010 CETF was awarded two federal grants from the NTIA for a total of $14.2 million, which were completed in FY 2012-2013.

   Based on the MOUs with Frontier and Charter, there are no funds from Frontier to CETF operations. All funds from Frontier, $1,025,000 thus far, are provided to cover grants for non-profits organizations and grantee expenses. Grants totaling $698,150 were paid, leaving cash held for future grants of $303,339. CETF has future commitments to grants totaling $2,308,930 as of June 30, 2018 which are subject to MOU compliance by Frontier. CETF has filed a petition with the CPUC seeking assistance in securing Frontier's compliance with the public benefits obligations in the MOU. The CPUC has accepted the petition and the matter will be addressed through a regulatory proceeding.

   Charter is obligated to provide $6,500,000 each year over five years from 2017-2022. As of November 30, 2018, Charter has provided $13 million for two fiscal years.

b. Actual and proposed expenditures. The audit financial statements are available at http://www.cetfund.org/aboutus/finances/audit for the past 3 fiscal years.

   The 5-Year Strategic Plan and Work Plan are part of Attachment D for transparency and explaining the new approach for FY2017 - 2018 through FY2021 - 2022 compared to the past which is summarized in the Decade Report and was delivered to the CPUC on November 30, 2017. The budget (projected expenses) for the current fiscal year is also in Attachment D.

c. Costs to ratepayers. None of the costs are charged to ratepayers.

QUICK FACTS

1. Led and managed implementation of School2Home in 35 schools in 12 districts with 600 teachers for 14,000 students and their parents in high-poverty communities.
2. The Decade Report delivered to the CPUC on November 30, 2017 as part of the public record. Successfully implemented the Strategic Action Plan 2001 - 2017 to achieve 97.5% deployment and 84% adoption.

MAJOR HIGHLIGHTS AND ACCOMPLISHMENTS FROM 2017 – 2018

1. Wrote, published and distributed the Decade Report and Decade Videos. Completed decade with clean audits each year.
2. Secured bi-partisan enactment of the Internet for All Now Act of 2017 (AB1665), adding $330 million to the California Advanced Services Fund.
3. Participated effectively in CPUC Rulemaking for AB 1665: developed Policy Points and mobilized partners.
4. Organized and convened the Regional Consortia Summit with all stakeholders (CPUC, CBC, ISPs).
5. Managed Frontier Partnership: achieved 12% adoptions; worked to secure compliance with MOU.
6. Launched Charter Partnership: organized and conducted 4 Roundtables with Charter and other providers.
7. Developed and established process for Access Broadband Connect (ABC) Grants: 4 grants for $870,000.
8. Promoted affordable offers: developed ad program with an aggressive approach in Los Angeles and established statewide telephone number: 844-841-INFO (4636).
9. Reorganized School2Home focused in Southern California: 24 schools, more than 11,000 students and more than 400 teachers.
10. Advanced Neighborhood Transformation: West Contra Costa; Long Beach; Bell; Central LA; and Sacramento.

Please feel free to contact Sunne Wright McPeak or Susan E. Walters at 415-744-2383 if you have questions or need additional information.

D. THE CALIFORNIA HUB FOR ENERGY EFFICIENCY FINANCING

BACKGROUND

The California Hub for Energy Efficiency Financing (CHEEF) was established through California Public Utilities Commission (CPUC) Decision (D.) 13-09-044 (the Decision) dated September 20, 2013. The Decision authorizes energy efficiency (EE) financing pilots that leverage ratepayer funds to attract a greater amount of private capital to the energy efficiency retrofit market by reducing risk to lenders.

CPUC entered into a Memorandum of Agreement (MOA) with California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA), a state agency associated with the California State Treasurer's Office on July 18, 2014, which is currently extended to June 30, 2020, to administer the CHEEF duties. CPUC and CAEATFA have a relationship through which the CPUC reviews CAEATFA's funding and work as described in the Decision and the MOA between the two. The Decision notes that CPUC oversight is "critical to protecting the integrity of ratepayer funds allocated to support [energy efficiency] financing programs." Both the Decision and MOA also direct the CPUC and CAEATFA to coordinate and execute education and outreach for the energy efficiency financing pilot programs.

The Decision included a draft implementation plan for the CHEEF with the following tasks:[3]

1. Issue competitive solicitations for a Master Servicer (MS), and other technical assistance as needed such as for information technology, data management etc. (The role of the MS is to manage the flow of ratepayer funds and data between the IOUs, CHEEF, and financial institutions (FIs)).
2. Create an Information Technology (IT)-driven platform to support the core processes and functions that make on [utility] bill repayment possible and facilitate data collection.
3. Develop procedures for various CHEEF responsibilities such as: approval of forms and protocols for data, transfer between utilities and FIs, and development of lender service agreements.
4. Develop standards for evaluating FI qualifications and approving FIs for pilot participation.
5. Implement Commission-approved protocols for collection of energy and financial data, data sharing, and third-party access to aggregated, anonymous data.
6. Develop framework for type and frequency of reporting to CHEEF by IOUs and FIs Ensure quarterly information reports on pilots' progress by CHEEF to the Commission as requested by the Energy Division.
7. Coordinate with existing customer and contractor facing tools such as Energy Upgrade California.

[3] A full-length Program Implementation Plan for the financing pilots is available through the EEstats website at:http://eestats.cpuc.ca.gov/EEGA2010Files/SCG/PIP/2013/Clean/8%20SCG%20SW%20Finance%20PIP_Clean%20Supplemental%20Filing%20Draft_4.23.pdf.

8. Provide a mechanism to make minor, mid-course modifications to the pilot programs as needed to better meet the individual objectives of a particular program.

The Decision authorized a total of up to $75,244,931 (that includes $9,344,931 of CHEEF Pilot Reserve) of Investors Owned Utilities (IOUs) funds for the pilots for a two-year period. Acknowledging that the CHEEF may need to be supported by a master servicer, a trustee bank, a contractor manager, a data manager, and a technical advisor, the decision allocated $5 million of the budget to cover CHEEF administrative costs and $2 million for CHEEF training and outreach for contractors and financial institutions.[4]

The Decision also selected the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA), a state agency associated with the California State Treasurer's Office, to administer the functions of the CHEEF. Because CAEATFA is a state agency, the Decision recognized that it would be necessary for CAEATFA to obtain legislative budget authority to perform this function. On July 1, 2014, CAEATFA was granted legislative budget authority to act as the CHEEF through December 2015. Later, the authority was granted for CAEATFA to carry out the services of the CHEEF through June 30, 2018. Finally, CAEATFA prepared a Budget Change Proposal (BCP) to extend legislative budgetary reimbursement and expenditure authority beyond fiscal year 2017-18. The 2018 Budget Act extended CAEATFA's reimbursement and expenditure authority into Fiscal Year 2020-21.

Inadequate initial staffing levels to address the complexity and scope of work, coupled with high turnover and frequent vacancies due to the limited-term nature of the existing positions, left insufficient resources to effectively meet the desired anticipated timelines for the pilots. Subsequently, CAEATFA requested approval from the CPUC for an additional $8.36 million of the existing $9.3 million contingency fund for administrative support to address the delayed timetable and complexity of the work, and to right-size the number and level of staff resources, through fiscal year 2019-20. The CPUC approved CAEATFA's funding request and released $8.36 million of CHEEF reserve funds.[5]

[4] See Appendix 3.1 for Finance Pilot budget with CAEATFA Expenditures (September 2014 through June 30, 2017).

[5] Decision 17-03-026 affirmed the CPUC Rulemaking (R.) 13-11-005: Joint Ruling of Assigned Commissioner and Administrative Law Judge on Financing Pilots and Associated Marketing, Education, and Outreach Activities issued November 22, 2016.

STATUS AND ACCOMPLISHMENTS FROM CHEEF QUARTERLY REPORT AND PROGRAM STATUS SUMMARY (MARCH 31, 2018)[6] AND CAEATFA'S EXECUTIVE DIRECTOR REPORT TO THE ENERGY DIVISION STAFF DATED NOVEMBER 11, 2018[7]

CAEATFA launched the first pilot, Residential Energy Efficiency Loan Assistance Program (REEL), enrolling its first loan in July 2016. REEL's initial two-year pilot term was completed on July 15, 2018. However, to continue the momentum of the pilot, a hard stop of program operation after two years would not occur, and the pilot will continue issuing loans until the Commission makes a determination about whether a pilot program should be continued, taken to full-scale implementation, or terminated.[8]

As of June 30, 2018, CAEATFA had expended approximately $5.77 million[9] of the $15.36 million allocated for CHEEF administration, direct implementation, education, outreach, and training for lenders and contractors. This funding covers CAEATFA's expenditures from September 12, 2014 through June 30, 2018. Further, $432,546 was encumbered for credit enhancement funds reserved for REEL's enrolled loans.[10]

ROLES

Master Servicer

The Master Servicer plays a key role in the daily administration of the pilots, accepting lender and loan enrollment applications, and processing bill repayment transactions. CAEATFA selected Concord Servicing Corporation (Concord) as the Master Servicer, through a competitive solicitation, and entered into a contract on April 23, 2015. Concord subsequently began the mapping and development of the REEL infrastructure process, while concurrently working with the IOUs to define the various business requirements required of the IOU billing systems to enable the flow of funds and data for On-Bill Repayment (OBR). On January 1, 2018, Concord Servicing Corporation began providing services under its new two-year contract with the option for an additional one-year extension, which was approved in December 27, 2017.

Trustee Bank

The trustee holds the ratepayer funds provided by the IOUs to serve as credit enhancements under the various pilot programs. The Department of General Services (DGS) approved a contract with US Bank on March 11, 2015 to act as the trustee bank. US Bank has worked with CAEATFA to establish holding accounts and reservation accounts for each IOUs. As of September 30, 2015, all the IOUs have transferred credit enhancement funds into their Holding Accounts. On January 8, 2018, US Bank began providing services under its new two-year contract with the option for an additional one-year extension.

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[6] http://www.treasurer.ca.gov/caeatfa/cheef/resources.asp

[7] CAEATFA's Executive Director report to the Energy Division staff on November 11, 2018

[8] D.17-03-026, OP 23.

[9] CAEATFA reports $5.27 as of March 31, 2018 in its published Quarterly Report and Program Status Summary January 1, 2018 – March 31, 2018. For details see: https://www.treasurer.ca.gov/caeatfa/cheef/quarterly/2018/20180331.pdf

[10] CAEATFA's Executive Director report to the Energy Division staff on November 11, 2018.

Data Manager

The data manager will receive pilot data from the MS and other energy efficiency finance program administrators to prepare it for public presentation and use. It will also receive project energy usage from the IOUs. The data will be aggregated and anonymized according to the combined standards and regulatory requirements of the IOUs and capital providers. Concurrently, CAEATFA and its agents will continue to collect the appropriate data to ultimately be transmitted to the data manager when it is under contract.

Contractor Manager

The contractor manager will enroll and manage participating contractors in the REEL Program, coordinate with the Statewide Financing Marketing, Education, and Outreach Implementer on outreach, and conduct quality control oversight of projects not participating in an IOU rebate/incentive program. On October 24, 2017, Frontier Energy began providing services under its two-year contract.

Technical Advisor

Technical Advisors provide expertise to CAEATFA in its development and implementation of the CHEEF pilot programs. CAEATFA contracted with Energy Futures Group (EFG) for technical assistance to continue research and development, and implementation assistance for the commercial pilots effective March 29, 2017. Under its implementation agreement with the IOUs, CAEATFA continues to rely on the ongoing technical support of Harcourt Brown & Carey (HB&C) and anticipates additional assistance from HB&C regarding on-bill infrastructure implementation. HB&C's expertise and project management assistance has been helpful in providing continuity under the pilots.

ACCOMPLISHMENTS

CAEATFA launched Residential Energy Efficiency Loan Assistant Program prior to developing the remaining pilots (small business/commercial, affordable multifamily, on-bill repayment functionality, and public buildings).

Residential Energy Efficiency Loan Assistance Program

The Residential Energy Efficiency Loan (REEL) Assistance Program has been the first of the Energy Efficiency Financing Pilots. REEL enrolled its first loan in July 2016. The REEL initial pilot term ended on July 15, 2018 but the pilot will continue through the pilot evaluation period. In March of 2017, the CPUC issued Decision 17-03-026 granting CAEATFA the authority to make several of its requested modifications to make the pilots more responsive to the evolving energy efficiency marketplace. CAEATFA staff has begun exploring several ways to implement these modifications into the REEL pilot, specifically:

- Simplifying measure eligibility for the program and moving toward a statewide list of eligible energy efficiency measures.
- Adopting a single, statewide Customer Information Service Release form.
- Consolidating lenders' separate loan loss reserve accounts by IOU into a single loan loss reserve account for lenders.

As of March 31, 2018, the REEL pilot program had 149 enrolled loans for the total of $2,620,275.83 comparing to eleven enrolled loans for the total of $159,577 by the end of the first quarter of 2017.

On-Bill Repayment Programs

Several of the Pilot Programs will include OBR as a key feature. CAEATFA staff is working with the IOUs and the MS to develop OBR infrastructure.

CAEATFA continued to research and develop OBR, while concurrently launching off-bill versions of each pilot.

- One key component of the OBR infrastructure is the Data Exchange Protocol (DEP), which outlines the process for secure transmission of payments and repayment data between the IOUs, MS and lenders. After analyzing multiple complex residential and commercial customer data scenarios, the MS and the IOUs agreed upon the DEP and adopted the IOU-MS functionality testing plan. Through testing, the MS and IOUs identified several components of the DEP that required clarification. The MS has been working to issue an updated version of the DEP.
- The development of the lender/master servicer communications was an area of focused work for CAEATFA for much of 2017 and continued through 2018. The lender/MS data exchange is the core operational and communications platform governing processes and interactions between the MS and lenders through the full life cycle of OBR loans.

Beginning in January 2018, Concord experienced a staffing vacancy and complexities in its organizational structure that slowed progress toward developing OBR. Concord brought on a new resource in early 2018 to address the staffing gap, who has begun on-boarding. CAEATFA is working with its Master Servicer to establish an accurate timetable to develop the on-bill repayment functionality.

Commercial and Other CHEEF Pilot Development

The Small Business pilot will launch next sequentially. This program provides credit enhancements to help financing entities mitigate risk and will allow an option for on-bill or off-bill repayment. Subsequently, CAEATFA will launch the Non-Residential pilot in which larger non-residential entities (including governmental agencies) will repay financing through their utility bills. This approach allows for a diverse group of entities of all sizes to pursue energy efficiency financing through the program.

CAEATFA staff, along with Energy Futures Group, a technical advisor, continued the research and development of the CHEEF Commercial Pilots, which will support various financial products including loans, leases, and energy service agreements.

Concurrently, CAEATFA staff met with the MS IT development team to begin development of a User Interface (UI) that is being developed for the small business/commercial pilots. This platform will allow finance companies and contractors to have a simple, easy means to submit project information to the program. CAEATFA worked with Concord to establish needs and requirements for the UI build, developed a process flow to illustrate the program’s logic and functionality, and drafted a plan describing roles and responsibilities in both organizations.

The small business commercial pilot presented to the public for comment(s) in Q2 of 2018, with draft regulations for a workshop in Q3/Q4 of 2018.

- Q2 2018 – Commercial Workshop- Refreshed program structure, reflecting flexibility provided by most recent CPUC Decision
- Q3/Q4 2018 – Commercial Regulatory Workshop- Solicitation of Comment on Draft Regulatory Text

Affordable Multifamily Pilot Development

CAEATFA has also been concurrently working to research and develop the Affordable Multifamily pilot, which will target properties in which at least 50% of the units are restricted to low and moderate income-eligible households (60% AMI). The Affordable Multifamily pilot features a credit enhancement to help financing entities mitigate risk, and will support loans, leases and energy service agreements. The Affordable Multifamily pilot is the smallest pilot under the CHEEF, CAEATFA staff has been grappling with whether this pilot could be fast-tracked or should leverage the infrastructure of the small business pilot. To gain efficiency in program design and streamline the experience for lenders under the program (who may participate in multiple pilots), it has been determined that the Affordable Multifamily pilot will launch after the Small Business pilot, leveraging elements of that pilot's structure. The Affordable Multifamily pilot will be designed to leverage and complement existing efforts to finance affordable multifamily housing and energy efficiency retrofits, and to encourage growth in private market lending. CAEATFA held a public workshop with affordable housing developers and lenders in Q4 2017, and CAEATFA has continued its program research and design with the intent to provide proposed regulations for public input in Q1 2019.

More information on the CHEEF Pilot Programs, including proposed program guidelines for public comment, is available on CAEATFA's website at: https://www.treasurer.ca.gov/caeatfa/cheef/ and at: https://gogreenfinancing.com.

(1) Any governance structure established for an entity or program

A specific governance structure was not created for the CHEEF; however, the Decision clarifies that CAEATFA is required to follow public procurement and rulemaking procedures when contracting for CHEEF-managed services and finalizing rules for programs identified in this decision. Specifically, CAEATFA is bound by Chapter 2 (commencing with section 10290) of Part 2 of Division 2 of the Public Contracts Code, and Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

CAEATFA must submit a budget revision request to the Department of Finance and Joint Legislative Budget Committee to secure their approval for staff positions to administer the pilots and to be authorized to expend ratepayer funds to cover administrative costs. CAEATFA received budget authority most recently on July 1, 2017, to carry out the services of the CHEEF through June 30, 2018. Additionally, the Memorandum of Agreement between CAEATFA and the CPUC was extended to June 30, 2020.

(2) Any staff or employees hired by or for the entity or program and their salaries and expenses authorized for FY 2018-19

Table 6 – Salaries and expenses authorized for FY 2018-19

State Personnel Classification	**State Salary + Benefit** (monthly midrange assumption; includes average benefit)
Staff Services Manager II (Supervisor)	$10,663
Program Manager	
Staff Services Manager I (Supervisor) *D&I*	$9,813
Staff Services Manager I (Specialist) *Compliance*	$9,813
Staff Services Manager I (Specialist) *D&I*	$9,813
Staff Services Manager I (Specialist) *D&I*	$9,813
Staff Services Manager I (Specialist) *Marketing*	$9,813
Support Staff	
Associate Governmental Program Analyst (AGPA) D&I	$9,813
Associate Governmental Program Analyst (AGPA) *D&I*	$8,462
Associate Governmental Program Analyst (AGPA) *Marketing*	$8,462
Associate Governmental Program Analyst (AGPA) *Compliance*	$8,462
Office Technician	$5,609
Office Technician	$5,609

(3) Any staff or employees transferred or loaned internally or interdepartmentally for the entity or program and their salaries and expenses

Other CAEATFA staff may assist with intermittent workload. This assistance is not significant and is not quantifiable at this time.

(4) Any contracts entered into by the entity or program, the funding sources for those contracts, and the legislative authority under which the commission entered into the contract

Table 7 – Contracts, funding, and authority

Contract	Amount	Amount Paid (for services through 6/30/2018)	Current Contract Term	Funding Source
Memorandum of Agreement between the CPUC & CAEATFA	$0	NA	Through June 30, 2020	None
Receivables Contract between the four Investor-Owned Utilities and CAEATFA	$15,360,000 (reimbursement only)	NA	9/01/2014 –6/30/2020	Ratepayer Funds
CAEATFA Contract with Master Servicer (Concord Servicing Corporation)	$1,500,000 $1,500,000	$1,278,294 $172,126	4/23/2015 – 12/31/2017 1/01/2018 – 12/31/2019	Ratepayer Funds
CAEATFA Contract with Trustee Bank (US Bank)	$180,000 $285,000	$160,000 $50,000	1/24/2015 – 12/31/2017 1/01/2018 – 12/31/2019	Ratepayer Funds
CAEATFA Contract with Contractor Manager (Frontier Energy Corp.)	$1,500,000	$402,618	10/24/2017 – 8/31/2019	Ratepayer Funds
CAEATFA Contract (CMAS Service Order) for Technical Assistance (Energy Futures Group)	$49,963 $249,995	$49,904 $128,846	5/25/2016 – 12/15/2016 3/29/2017 – 2/14/2019	Ratepayer Funds

(5) The public process and oversight governing the entity or program's activities

CAEATFA is developing the pilots under state laws regarding public processes and procurement. Regulations are established under the oversight of the Office of Administrative Law, which include establishing the appropriate channels for public input and access. In addition, all contracts are publicly noticed and competitively bid under the oversight of the Department of General Services.

Regulations for each pilot program are established under California's Administrative Procedures Act:

- Residential Energy Efficiency Loan Assistance Program regulations can be found in Title 4, Division 13, Article 5, Section 10091.1 through Section 10091.15 of the California Code of Regulations.
- The Commercial Pilot regulations will be found at Title 4, Division 13, Article 6, Section 10092.1 through Section 10092.14 of the California Code of Regulations (anticipated to be approved by OAL in December 2018)

CAEATFA's budget and position authority is overseen by the Department of Finance and the Legislature on an annual basis.

CAEATFA provides the following reports:

- Quarterly Reports to the CPUC (as required under the Decision and Contract).
- Annual Reports to the State Legislature (Public Resources Code Section 26017).

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E. 21st CENTURY ENERGY SYSTEMS – RESEARCH AND DEVELOPMENT AGREEMENT

BACKGROUND

On December 20, 2012, the CPUC authorized the "21st Century Energy Systems" (CES-21) in Decision (D.) 12-12-031. The Decision authorized development of a five-year Cooperative Research and Development Agreement between PG&E, Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively known as the Joint Utilities) and the Lawrence Livermore National Laboratories (LLNL). The program was subsequently modified by 2013's Budget Trailer Bill, SB 96.

In 2014, the CPUC approved D.14-03-029, which modifies D.12-12-031 to comply with SB 96. Changes included reducing funding from $152.19 million to $35 million over the five-year research period, narrowing the scope of the program to focus only on cybersecurity and grid integration, minimizing the governance structure, and enhancing CPUC and Legislative oversight of the program.

On April 25, 2014 the Joint Utilities filed a joint advice letter containing their proposed cybersecurity and grid integration research and development (R&D) projects, revised under the new program requirements. The CPUC conducted a thorough and collaborative review of the proposals, convening a consensus-building session among the parties to discuss the issues raised, and approved Resolution E-4677 on October 2, 2014. Resolution E-4677 approved, with modifications and additional oversight requirements, the Joint Utilities' proposed cybersecurity and grid integration projects.

On January 17, 2018 the Joint Utilities each filed an advice letter requesting the public release license rights to four cybersecurity software applications developed under the CES-21 program. This request was approved in Resolution E-4943 without modification.

PROGRAM OVERVIEW AND 2018 PROGRESS

The Joint Utilities began implementation in 2015, securing multiple subcontractors to conduct the work in addition to LLNL.

The cybersecurity project, titled Machine-to-Machine Automated Threat Response, has $33 million in funding and seeks to develop automated response capabilities to protect critical California infrastructure against cyber-attacks. The project is underway and making progress towards its goals. The project attempts to develop and deploy the first automated system for cyber-attack detection and response. If this capability can effectively coordinate physical infrastructure responses to prevent harm in an attack (e.g., by shutting down a substation before it can be harmed or hacked), it would provide extensive benefits to ratepayers. This project expects potential breakthroughs in standards for threats, responses, infrastructure, and processes; a secure approach to management, command, and control of the defenses; a standard, open architecture for distributed threat detection and automatic, localized response that provides a basis for commercially viable prototypes; modeling and simulation tools for cyber defense; and recommended responses to threats and threat categories.

In 2016, the project moved into the physical demonstration and case testing phase, and completed two cycles of development, including the modeling of the destruction of a transformer using 32 malware masked Supervisory Control and Data Acquisition communications, and the quantification of the impact of a Denial of Service attack sent from different locations.

In 2017, the project completed both the third and fourth of five planned cycles of development. Cycle 3 involved modeling and simulation of grid islanding. Cycle 4 modeled and simulated threat scenarios for grid islanding. Cycle 5 was initiated in 2018 and will focus on modeling and simulation of the malware and tactics, techniques, and procedures (TTPs) present in the Ukraine attack of 2016. Energy Division staff was briefed on the project's progress in September and November 2018 and will continue to monitor the work.

The grid integration project, titled Flexibility Metrics and Standards, studied planning metrics and standards that explicitly considered operational flexibility. The project had $2 million in funding and sought to improve flexibility metrics and thereby improve long term resource planning for California's grid. In particular, this research project targeted potential breakthroughs to assess the electric grid's operational flexibility requirements, operating limits of the existing or planned grid to integrate additional amounts of intermittent renewable generation, and additional resources and costs to integrate additional renewable generation. The Flexibility Metrics project was officially completed in November 2017.[11]

For more information contact Amy Mesrobian (amy.mesrobian@cpuc.ca.gov or 415-703-3175), or Jonathan Lakey (jonathan.lakey@cpuc.ca.gov or 916-327-6786).

[11] The final report on the Flexibility Metrics project, titled *Role of Operating Flexibility in Planning Studies*, was published by Lawrence Livermore National Laboratory on April 26, 2018 and can be accessed at https://e-reports-ext.llnl.gov/pdf/895870.pdf.

F. THE DIABLO CANYON INDEPENDENT SAFETY COMMITTEE

BACKGROUND

The Diablo Canyon Independent Safety Committee ("DCISC") was established as a part of a settlement agreement entered into in June 1988 between the Division of Ratepayer Advocates (now, Public Advocate's Office) of the CPUC, the Attorney General for the State of California, and PG&E concerning the operation of the two units of PG&E's Diablo Canyon Nuclear Power Plant ("Diablo Canyon"). The agreement provided that:

> "An Independent Safety Committee shall be established consisting of three members, one each appointed by the Governor of the State of California, the Attorney General, and the Chairperson of the California Energy Commission, respectively, serving staggered three-year terms. The Committee shall review Diablo Canyon operations for the purpose of assessing the safety of operations and suggesting any recommendations for safe operations. Neither the Committee nor its members shall have any responsibility or authority for plant operations, and they shall have no authority to direct PG&E personnel. The Committee shall conform in all respects to applicable federal laws, regulations and Nuclear Regulatory Commission ('NRC') policies."

The committee acts as an advisory body and has no independent budget.

On January 25, 2007, the CPUC approved a modified charter for the DCISC in Decision 07-01-028. Section 1.B of the new charter concerns appointments of Committee members. It states that candidates for the Committee membership shall be selected from those applicants responding to an open request for application and requires the CPUC to provide for public comment on the applicants' qualifications and potential conflicts of interest. Under the modified charter, the President of the CPUC is required to review the applicants' qualifications, experience, and background, including any conflict of interest, together with any public comments, and propose candidates to the appointing authority with knowledge, background, and experience in the field of nuclear power plants and nuclear safety issues. The CPUC Energy Division is required to prepare and circulate for public comment, and place on the CPUC public agenda a resolution ratifying the CPUC President's selection of candidates.

CURRENT STATUS

This year, the Chair of the California Energy Commission reappointed Dr. Peter Lam for the position which has a term of July 1, 2018 through June 30, 2021. In 2017, the Governor reappointed Dr. Per Peterson for the position beginning July 1, 2017 and ending June 30, 2020. In 2016, the California Attorney General reappointed Dr. Robert Budnitz for the position which has a term of July 1, 2016 through June 30, 2019.

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G. NUCLEAR DECOMMISSIONING TRUSTS

BACKGROUND

In Order Instituting Investigation (OII) 86, the CPUC conducted an investigation into managing the decommissioning trust funds for California's nuclear power plants. As a result, in Decision (D.) 87-05-062, the CPUC adopted externally managed trusts as the vehicles for accruing decommissioning funds. Two types of funds were established.

1. The *Qualified Trust* funds are contributions that qualify for an income tax deduction under Section 468A of the Internal Revenue Service (IRS) Code.

2. The *Non-Qualified Trust* funds are those contributions that do not qualify for an income tax deduction.

Each utility has a Committee made up of five members who are responsible for directing and managing their nuclear decommissioning trusts. Two of the Committee members are utility affiliated. The three that are not affiliated with the utility are the CPUC-approved members who serve five-year terms. The Committees appoint trustees and investment managers. On November 25, 1987, Resolutions E-3060, E-3048, and E-3057 approved, respectively, San Diego Gas & Electric's (SDG&E), Pacific Gas and Electric's (PG&E), and Southern California Edison's (SCE) Master Trust Agreements.

The utilities employ a stable of investment managers and advisors for their decommissioning trusts.

<u>**Investment Managers**</u>

SDG&E:

- Payden Rygel [Qualified/Fixed income]
- Lazard [Qualified/Fixed income]
- Pimco [Qualified/Fixed income]
- State Street Global Advisors [Qualified/U.S. Equity and International] and [Nonqualified/U.S. Equity]
    - TCW [Qualified/Fixed Income]
    - Northern Trust [Qualified Fixed income and Non-qualified Fixed income]
    - Western Asset [Qualified Fixed Income]
    - Acadian [Qualified/U.S. Equity]
    - Black Rock [Qualified/Fixed income]
    - Loomis Sayles [Qualified Fixed income]
    - Earnest Partners [Qualified/U.S. Equity]

PG&E:

- Black Rock Financial Management [Qualified trust fixed income]
- NISA Investment Advisors [Qualified trust fixed income]
- State Street Global Advisors [Qualified trust fixed income]
- PanAgora Asset Management [Qualified trust Non-US equities]
- Rhumbline Advisers [Qualified trust U.S. equity]
- Earnest Partners [Qualified trust fixed income]
- Mellon Capital [Qualified trust US equity]

SCE:

- Schroders [Qualified trust fixed income]
- Black Rock Financial Management [Qualified trust fixed income]
- Alliance Bernstein [Qualified trust fixed income]
- Pan Agora Asset Management [Qualified trust international equity assets]
- Rhumbline Advisers [Qualified trust US equity assets]
- State Street Global Advisors [Qualified/ US equity assets]
- PIMCO [Qualified/non-qualified fixed income assets]

Table 8 – The Trust Fund balances as of December 31, 2017

Utility	Nuclear Plant	Fund Balance
PG&E	HBPP 3	$150 million
PG&E	DCPP 1	$1,374 million
PG&E	DCPP 2	$1,798 million
SCE	SONGS 1	$304 million
SCE	SONGS 2	$1,180 million
SCE	SONGS 3	$1,371 million
SDG&E	SONGS 1	$150 million
SDG&E	SONGS 2	$375 million
SDG&E	SONGS 3	$431 million
SCE	Palo Verde 1	$383 million
SCE	Palo Verde 2	$393 million
SCE	Palo Verde 3	$405 million

Trustee

Mellon Bank N.A. acts as the trustee for the SDG&E, PG&E, and SCE Decommissioning Trusts by providing custody, record keeping, accounting, taxation, and reporting services on behalf of the trusts.

The Nuclear Regulatory Commission (NRC) has some basic regulations that must be followed regarding decommissioning. These are:

1. Licensees are required to have sufficient funds to decommission the plant [10 CFR 50.75]. The utilities with nuclear plants file a report every two years with the NRC showing estimated decommissioning costs according to the NRC methodology, and how much money has been set aside for that purpose. The NRC definition of decommissioning is related only to the 'nuclear' portion of the plant. In California, decommissioning also includes restoring the site to its original condition, which includes additional activities, and which requires accumulation of more funds.

2. After permanent plant shutdown, certain activities may not be performed that would prevent completion of decommissioning [10 CFR 50.82(6)].

In the 2009 Nuclear Decommissioning Cost Triennial Proceeding (NDCTP), the Commission undertook a comprehensive review of the management and administration of these externally managed nuclear decommissioning trust funds for each of the three major investor-owned electric utilities.

In January 2013, the CPUC issued D.13-01-039, which allows for greater flexibility in trust fund management by allowing for increases in the amount of equity investments and lower- rated higher-yield domestic and foreign bonds to increase the overall yield of the decommissioning trust funds. In the course of the NDCTP, the CPUC reviews the trust fund levels and any potential adjustments to amounts paid by ratepayers into the trust funds.

The 2012 NDCTP was approved by the CPUC in D.14-12-082 on December 18, 2014.

The 2015 NDCTP for Diablo Canyon 1 and 2 and Humboldt Bay 3 was approved in D.17-05-020 on May 25, 2017.

The 2015 NDCTP (A.16-03-004) for San Onofre 1, 2, and 3 and Palo Verde began in early 2017 and was separated into three phases: phase 1 addressed the reasonableness of decommissioning costs for SONGS 1 from 2009-2015 and was approved in D.18-10-010 on October 11, 2018; phases 2 and 3 address the decommissioning cost estimates for SONGS 1 and Palo Verde, major project/milestone framework for SONGS, reasonableness review of 2014 and 2015 SONGS 2 & 3 decommissioning costs, and compliance with prior CPUC decisions. The Commission approved a final decision for phases 2 and 3 on December 7, 2018, in D.18-11-034.

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H. ELECTRIC PROGRAM INVESTMENT CHARGE (EPIC)

BACKGROUND

The Electric Program Investment Charge (EPIC) is an energy innovation funding program established under the authority of the CPUC for the benefit of electricity ratepayers. Organized around three program areas-- Applied Research and Development (R&D), Technology Demonstration and Deployment (TD&D), and Market Facilitation—EPIC seeks to drive efficient, coordinated investment in new and emerging energy solutions.

Applied R&D and TD&D projects are meant to bring clean energy technologies from earlier stages of development towards commercialization. These project areas are highly diverse, including projects ranging from the development of new forms of biodigesters to the development, patenting, and demonstration of algorithms to help identify downed wires. Market Facilitation projects are also quite diverse and aim to remove non-price barriers to the adoption of these new technologies. These projects have included programs to understand energy use patterns in multifamily homes before and after energy upgrades as well as projects to establish regional innovation clusters, among many others.

EPIC investments are funded under the authorization of the CPUC as established in Decision (D.) 11-12-035 (the Phase 1 EPIC Decision). D.12-05-037 (the Phase 2 EPIC Decision) requires the CPUC to conduct a public proceeding every three years to consider EPIC investment plans for coordinated public interest investment in clean energy technologies and approaches. D.12-05-037 directed the California Energy Commission (CEC), SDG&E, PG&E, and SCE, as administrators of the program, to present their investment plans for the triennial program periods for consideration by the Commission. The EPIC program allocates 80% of the EPIC program budget to the CEC to conduct applied R&D, TD&D, and Market Facilitation. The IOU administrators, PG&E, SCE, and SDG&E (collectively, IOU administrators), administer the remaining 20% of the EPIC budget for TD&D.

PROGRAM UPDATES: 2012-2014 (EPIC 1), 2015-2017 (EPIC 2), AND 2018-2020 (EPIC 3) INVESTMENT PLANS

In 2018, all four administrators continued active implementation of their 2012-2014 and 2015-2017 projects, which had been approved in D.13-11-025 and D.15-04-020, respectively.

Pursuant to D.12-05-037, the Administrators filed their investment plans for 2018-2020 EPIC funds in 2017. The CPUC approved these investment plans in D.18-01-008 and D.18-10-052. All EPIC applications were approved, with some additional modifications and implementation requirements. The four EPIC administrators are currently implementing the wide range of research, development, demonstration, deployment, and market facilitation activities from both EPIC cycles and plans are underway for EPIC 3 projects. A total program budget of $555,000,000 was approved for the 2018-2020 investment cycle with the allocation shown in Table 9.[12]

[12] PG&E, SCE, and SDG&E are not allowed to encumber or otherwise commit to spend one-third of their 2018-2020 EPIC funding allocation until they are authorized to do so by a later decision addressing the joint Research Administration Plan application that they are directed to file in ordering paragraph 6 of D.18-10-052.

Table 9 – Authorized funding for EPIC 3

CEC	PG&E	SCE	SDG&E	Total
$444,000,000	$55,611,000	$45,621,000	$9,768,000	$555,000,000

The CEC's 2018-2020 EPIC Investment contains eight strategic objectives: 1) Advance technology solutions for continued energy savings in buildings and facilities; 2) Accelerate widespread customer adoption of distributed energy resources; 3) Increase grid system flexibility and stability from low-carbon resources; 4) Increase cost-competitiveness of renewable generation; 5) Create a statewide ecosystem for incubating new energy innovations; 6) Maximize synergies in the Water-Energy-Food nexus; 7) Develop tools and analysis to inform energy policy and planning decisions; and 8) Catalyze clean energy investment in California's disadvantaged communities. Across these areas, the CEC will continue to invest in a wide range of activities related to energy efficiency, demand response, renewable and advanced generation, electric vehicles, smart grid, and energy-related environmental research, development, demonstration, and non-technical market facilitation.

The three utilities also administer a range of projects in TD&D. These TD&D projects fall into the following four investment areas: (1) Renewables and distributed energy resource integration; (2) Grid[39] modernization and optimization; (3) Customer service and enablement; and (4) Cross-cutting/foundational strategies and technologies.

As of January 1, 2018, 298 EPIC projects were active, 25 were on hold, 14 were canceled, and 44 were completed. Of those completed, 7 were CEC's, 17 were PG&E's, 10 were SCE's, and 10 were SDG&E's. In the same time frame, the CEC had spent over $134 million on EPIC projects, including $67 million on Applied Research and Development, almost $57 million on Technology Deployment and Demonstration, and $10 million on Market Facilitation. The IOUs collectively spent almost $141 million on Technology Deployment and Demonstration, with SDG&E spending more than $13 million, SCE spending almost $61 million, and PG&E spending almost $67 million.

PROGRAM COORDINATION

The administrators coordinate closely with each other and stakeholders, under the close oversight of the CPUC. Administrators have continued to participate in regular review meetings, conduct joint webinars and workshops, and regularly collaborate on EPIC-related matters through bi-weekly phone calls.

In 2018, the Administrators held eight EPIC-related workshops with input and coordination from Energy Division staff. The topics of these workshops ranged from seeking stakeholder input into specific proposed 2018-2020 EPIC Investment Portfolio projects at the Joint EPIC Fall Workshop to implementation of AB 523. Additionally, the administrators also put on the annual EPIC Symposium that spotlighted progress in EPIC and connected with key stakeholders, including the CPUC. Energy Division staff has continued to work with the CEC and IOUs to identify areas for knowledge transfer between EPIC research projects and current energy policy proceedings.

OVERSIGHT AND REPORTING

Each EPIC administrator submits an annual report to the CPUC in February. The CEC also submits its annual EPIC report directly to the Legislature by March 31. Annual reports provide updates on the status of the investment plans, projects, funding levels, results, intellectual property development, and technological breakthroughs. In the 2017 annual reports, each EPIC administrator provided updates on project status, administrator coordination, public engagement, and budget.

PROJECTS BETWEEN EPIC TRIENNIAL INVESTMENT PLAN CYCLES

CPUC Decision (D.) 15-04-020 authorized the use of a Tier 3 advice letter (AL) process to request approval of new EPIC investments not included in the administrators' previously approved plans between triennial EPIC application cycles. D.15-04-020 found that a Tier 3 AL process afforded adequate due process rights while providing an avenue for the CPUC to review projects that arise between EPIC's triennial application periods.

On February 7, 2017, PG&E filed AL 5015-E seeking CPUC approval of the addition of six new EPIC projects to its 2015-2017 EPIC portfolio. PG&E ultimately withdrew one project prior to the CPUC's resolution of the AL. Through Resolution E-4863, the CPUC approved two projects, one relating to grid modernization and optimization, and another relating to customer service and enablement. Resolution E-4863 rejected three projects based on findings that the proposed project either failed to meet the requisite showings for new projects that arise between EPIC triennial reviews, or that it failed to map to the electricity system. AL 5015-E was the first instance an EPIC administrator proposed the addition of new projects between EPIC triennial cycles.

EPIC INDEPENDENT EVALUATION

In 2016, the CPUC initiated a public competitive Request for Proposals (RFP) for an independent evaluation of the EPIC program, pursuant to D.12-05-037. The RFP process resulted in the execution of an evaluation contract, which began in September 2016 and concluded in September 2017. The evaluation comprehensively reviewed the EPIC program, its results, and its processes and recommended improvements for future implementation. The evaluation focused on evaluating the program's alignment with legislative and CPUC intent, identifying best practices in research administrations, and assessing the program's satisfaction of key objectives such as ratepayer benefits, advancement of energy innovation, and support of key energy goals. Through the course of the evaluation, Energy Division staff consulted with and directed the evaluator to ensure that the evaluation met its intended purpose.

The final evaluation report, published September 8, 2017, established findings and recommendations across seven different categories: program administration; investment planning process; project selection process; project assessment process; project impacts and policy alignment; overarching coordination and collaboration; on-going program evaluation. In D.18-10-052, which addressed the 2018-2020 EPIC investment plans, the CPUC, with input from stakeholders, determined that the CPUC will be responsible for the selection process for the Policy + Innovation Coordination Group (PICG)

Project Coordinator with the final bid awarded by Commission decision. Additionally, Pacific Gas and Electric will serve as fiscal manager of the contract with PICG Project Coordinator.

For more information contact Amy Mesrobian (amy.mesrobian@cpuc.ca.gov or 415-703-3175), or Jonathan Lakey (jonathan.lakey@cpuc.ca.gov or 916-327-6786).

APPENDICES and EXHIBITS

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APPENDIX 1.1 PACIFIC FOREST AND WATERSHED LANDS STEWARDSHIP COUNCIL

2018 YTD Schedule of Employee Compensation through October 31, 2018 for Active Employees as of October 31, 2018.

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	106,400	13,416	4,256	124,072
Director of Land Conservation	103,362	26,222	3,840	133,425
Deputy Director of Land Conservation	79,855	16,712	3,194	99,761
Director of Finance	99,663	33,560	-	133,223
Senior Project Manager	80,236	18,588	3,209	102,033
Other Staff (5)	243,882	69,839	6,605	320,326
Grand Total (10 positions)	713,398	178,337	21,105	912,840

2017 Schedule of Employee Compensation through December 31, 2017 for Active Employees as of December 31, 2017.

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	177,625	29,484	6,678	214,087
Director of Land Conservation	114,051	28,448	4,346	146,845
Deputy Director of Land Conservation	51,865	11,107	600	63,572
Director of Finance	97,757	34,521	-	132,277
Senior Project Manager	92,374	28,010	3,695	124,079
Other Staff (5)	172,942	50,122	3,735	226,799
Grand Total (10 positions)	706,614	181,692	19,354	907,660

2016 Schedule of Employee Compensation through December 31, 2016 for Active Employees as of December 31, 2016.

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	177,625	29,484	6,978	214,087
Director of Land Conservation	102,891	13,707	4,116	120,714
Deputy Executive Director	68,349	17,531	1,120	87,000
Director of Finance and Operations	134,929	23,663	4,941	163,533
Senior Project Manager	91,021	31,322	3,641	125,984
Other Staff (6)	329,799	76,050	15,892	416,592
Grand Total (11 positions)	904,614	191,757	36,688	1,127,910

2015 Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2015

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	178,125	28,645	7,078	213,848
Director of Land Conservation	176,000	17,700	7,040	200,740
Director of Finance	130,144	22,988	4,939	158,071
Director of Operations	118,200	32,968	4,728	155,896
Other Staff (9 positions)	454,617	103,152	15,459	573,228
Grand Total (13 positions)	1,057,086	205,453	39,244	1,301,783

2014 Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2014

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	177,820	27,627	7,105	212,592
Director of Land Conservation	178,000	17,349	7,100	202,449
Director of Finance	124,200	22,291	4,731	151,222
Operations and HR Manager	119,325	28,550	4,773	155,737
Senior Project Manager	88,476	29,881	3,539	121,896
Other Staff (9 positions)	426,906	94,497	14,434	532,708
Grand Total (14 positions)	1,114,727	220,195	41,682	1,376,604

2013 Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2013

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	177,820	26,756	7,104	211,680
Director of Land Conservation	175,662	17,219	6,945	199,826
Director of Finance	119,280	21,783	3,205	144,268
Director of Special Projects	118,118	26,123	4,634	148,875
Operations and HR Manager	112,986	28,550	4,519	146,055
Other Staff (9 positions)	468,085	110,605	16,461	595,151
Grand Total (14 positions)	1,171,951	231,036	42,868	1,445,855

2012 Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2012

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	177,498	25,797	7,044	210,339
Director of Land Conservation	164,619	16,973	6,581	188,173
Director of Youth Investment	128,500	26,739	5,120	160,359
Director of Finance (partial year)	9,792	2,436	0	12,227
Director of Special Projects	113,850	22,032	4,554	140,706
Other Staff (17 positions)	941,822	216,654	22,895	1,315,137
Grand Total (22 positions)	1,535,781	310,901	46,193	1,892,875

2011 Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2011

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	175,000	25,032	6,996	207,028
Director of Land Conservation	158,964	16,866	6,355	182,185
General Counsel	153,600	22,556	3,072	179,228
Director of Youth Investment	127,946	24,723	5,093	157,762
Deputy Director of Land Conservation	108,754	18,111	4,348	131,213
Other Staff (16 positions)	866,454	197,552	21,345	1,085,351
Grand Total (21 positions)	1,590,718	304,839	47,210	1,942,767

2010
Schedule of Employee Compensation for Active Employees
Active Employees as of 12/31/2010

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	175,000	22,671	7,000	204,671
Director of Land Conservation	153,513	21,727	3,070	178,310
General Counsel	153,801	17,560	6,152	177,512
Director of Youth Investment	125,033	23,093	5,001	153,127
Director of Finance	100,000	17,557	3,667	121,224
Other Staff (16 positions)	950,451	211,928	23,552	1,185,931
Grand Total (21 positions)	1,657,798	314,535	48,442	2,020,775

2009 Schedule of Employee Compensation for Active Employees as of 12/31/2009

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	153,125	20,795	3,500	177,420
Director of Land Conservation	146,000	20,834	7,790	174,624
General Counsel	147,700	21,180	2,708	171,588
Director of Youth Investment	120,492	20,066	5,373	145,931
Director of Finance	89,216	18,593	3,569	111,377
Other Staff (15 positions)	684,747	149,190	16,629	850,566
Grand Total (20 positions)	1,341,280	250,658	39,568	1,631,506

2008 Schedule of Employee Compensation for Active Employees as of 12/31/2008

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	181,111	23,302	7,244	211,657
Director of Land Conservation	139,833	18,923	3,553	162,310
General Counsel	139,941	21,410	0	161,351
Director of Youth Investment	113,328	19,055	4,533	136,916
Finance Manager	84,276	16,231	3,208	103,715
Other Staff (10 positions)	446,494	98,211	9,843	554,548
Grand Total (15 positions)	1,104,983	197,132	28,382	1,330,496

2007 Schedule of Employee Compensation for Active Employees as of 12/31/2007

Title	Gross Pay	Medical & Fringe	401k	Total
Executive Director	172,323	22,242	6,893	201,457
Director of Youth Investment	96,688	17,378	3,868	117,933
Finance Manager	80,732	15,632	3,229	99,593
Other Staff (8 positions)	266,674	60,585	3,961	331,218
Grand Total (11 positions)	616,416	115,837	17,951	750,202

APPENDIX 1.2 PACIFIC FOREST AND WATERSHED LANDS STEWARDSHIP COUNCIL

Schedule of professional fees YTD as of 10/31/2018 by General Ledger (G/L) category

General Ledger Category	Total Paid
Legal Fees	$59,292
Accounting Fees	$42,848
Graphics & Media Fees	$3,556
Investment Management Fees	$17,500
Professional Services Fees	$2,909
Boundary Surveys	$210,378
Baseline Documentation	$84,717
Land Planning Fees	$21,598
Land Transfer Costs	$40,549
Total Consultant Expense	**$483,347**

EXHIBIT 2.1 CALIFORNIA CLEAN ENERGY FUND (CALCEF VENTURES)

Donors

Year	Donor	Donation
2004	PG&E	$2,000,000
2005	Dewey Ballantine LLP	$20,000
2005	Cooley Goward	$10,000
2005	PG&E	$4,050,000
2006	Dewey Ballantine LLP	$20,000
2006	PG&E	$6,000,000
2007	Dewey Ballantine LLP	$20,000
2007	Nth Power Clean Energy Fund LP	$20,000
2007	DFJ Alta Terra Clean Energy Fund	$20,000
2007	PG&E	$8,000,000
2008	PG&E	$10,000,000

EXHIBIT 2.2 CALIFORNIA CLEAN ENERGY FUND (CALCEF VENTURES)

CalCEF Ventures investment positions through four venture capital partners.

Status	Investment	Entity
No longer holds position	2005	CoalTek Inc.
No longer holds position	2005	Imperium Renewables
No longer holds position	2005	SpectraSensors Inc.
No longer holds position	2005	SuperProtonic Inc.
No longer holds position	2006	Angstrom Power
No longer holds position	2006	Arxx Corporation
No longer holds position	2006	Blue Egg Inc.
No longer holds position	2006	Bright Source Energy Inc.
No longer holds position	2006	Chemrec AB
No longer holds position	2006	Cobalt Technologies Inc.
No longer holds position	2006	Deeya Energy Inc.
No longer holds position	2006	Fat Spaniel Tech. Inc.
No longer holds position	2006	Imara Corporation
No longer holds position	2006	Mascoma Corp.
No longer holds position	2006	Miartech Inc.
No longer holds position	2006	Microposite Inc.
No longer holds position	2006	Microposite Inc.
No longer holds position	2006	PPT Research Inc.
No longer holds position	2006	Solar Century
No longer holds position	2006	Soliant Energy Inc.
No longer holds position	2006	Synapsense Corp.
No longer holds position	2006	Tesla Motors Inc.
Now holds direct interest	2006	Thetus Corp.
No longer holds position	2007	BioFuelBox Corporation
No longer holds position	2007	BridgeLux
No longer holds position	2007	DynaPump Inc.
No longer holds position	2007	Earthanol Inc.
No longer holds position	2007	Energex
No longer holds position	2007	LumaSense LLC.
No longer holds position	2007	Petra Solar Inc.
No longer holds position	2007	Premium Power Corp.
No longer holds position	2007	TerraPass Inc.
No longer holds position	2007	Think Global AS
No longer holds position	2007	Tioga Energy Inc.
No longer holds position	2007	Wasatch Wind Inc.
No longer holds position	2007	Xerocoat
No longer holds position	2007	Ze-gen
No longer holds position	2008	EdenIQ
No longer holds position	2008	Senergen
No longer holds position	2009	Allopartis Biotechnologies
No longer holds position	2009	Lumetric Lighting, Inc.
No longer holds position	2010	REEL Solar
No longer holds position	2011	Alphabet Energy
No longer holds position	2012	Boulder Ionics
No longer holds position	2012	Novatorque, Inc.

APPENDIX 3.1 FINANCE PILOT BUDGET WITH CAEATFA EXPENDITURES (SEPTEMBER 2014 THROUGH JUNE 30, 2017)[1]

Item	Allocated	Expended/ Encumbered [2]	Balance
CHEEF Administration			
Includes Start-Up costs, CHEEF administrative, direct implementation, and contracting costs [3]	$13,360,000	$2,740,334	$10,619,666
Subtotal CHEEF Start-Up Costs	**$13,360,000**	**$2,740,334**	**$10,619,666**
Marketing, Education, Outreach (MEO)			
Statewide MEO plan	$8,000,000	(TBD)	$8,000,000
CAEATFA outreach and training to financial institutions and Contractors	$2,000,000	$320,979	$1,679,021
Subtotal Marketing, Education, and Outreach	**$10,000,000**	**$320,979**	**$9,679,021**[4]
Residential pilots			
Residential Energy Efficiency Loan Credit Enhancement Funds	$25,000,000	$56,404	$24,943,596
Energy Financing Line Item Charge (Funding to PG&E)	$1,000,000	(TBD)	$1,000,000
Multi-Family	$2,900,000	$-	$2,900,000
Subtotal Residential Pilots	**$28,900,000**	**$56,404**	**$28,843,596**
Non-Residential Pilots			
Small business sector OBR with credit enhancement	$14,000,000	$-	$14,000,000
Other Non-Credit Enhancement funds	$-	$-	$-
Subtotal Non-Residential Pilots	**$14,000,000**	**$-**	**$14,000,000**
Information Technology (IT)			
IT Funding to IOUs [5]	$8,000,000	*(TBD)*	*$8,000,000*
Subtotal IT Funding to IOUs	**$8,000,000**	***(TBD)***	***$8,000,000***
CHEEF Pilot Reserve			
CHEEF Pilot Reserve [6]	$984,931	$-	$984,931
Subtotal CHEEF Pilot Reserve	**$984,931**	**$-**	**$984,931**
GRAND TOTAL	**$75,244,931**	**$3,117,717**	**$64,927,214**

* Note: Quarterly expenditures are based on good faith estimates due to a lag in invoice submittals.

1. This table is not a comprehensive representation of the budget. It does not reflect CSE's expenditures related to ME&O, the IOUs expenditures and additional allocation for IT and administration, or other non-CHEEF costs.
2. Encumbered refers to the credit enhancement funds for enrolled loans under the Residential Energy Efficiency Loan (REEL) Loan Loss Reserve (LLR).
3. Amount of funds allocated to this section includes the additional $8.36 million that was approved by CPUC Rulemaking 13-11-005: Joint Ruling of Assigned Commissioner and Administrative Law Judge on Financing Pilots and Associated Marketing, Education, and Outreach Activities issued November 22, 2016.
4. This amount does not include CSE's expenditures.
5. IT funding to IOUs reports only the initial allocation and does not reflect current IOU expenditures.
6. This amount reflects the remaining balance after the release of funds that was approved by CPUC Rulemaking 13-11-005: Joint Ruling of Assigned Commissioner and Administrative Law Judge on Financing Pilots and Associated Marketing, Education, and Outreach activities issued November 22, 2016.