



Redwood Coast Energy Authority

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BOARD OF DIRECTORS MEETING AGENDA

Humboldt Bay Municipal Water District Office
828 7th Street, Eureka, CA 95501

October 15, 2018
Monday, 3:15 p.m.

In compliance with the Americans with Disabilities Act, if you need assistance to participate in this meeting, please contact the Clerk of the Board at the phone number, email or physical address listed above at least 72 hours in advance.

Pursuant to Government Code section 54957.5, all writings or documents relating to any item on this agenda which have been provided to a majority of the Board of Directors, including those received less than 72 hours prior to the RCEA Board meeting, will be made available to the public in the agenda binder located in the RCEA lobby during normal business hours, and at www.redwoodenergy.org.

PLEASE NOTE: Speakers wishing to distribute materials to the Board at the meeting are asked to provide 12 copies to the Clerk of the Board.

OPEN SESSION Call to Order

1. REPORTS FROM MEMBER ENTITIES

2. ORAL COMMUNICATIONS

This time is provided for people to address the Board or submit written communications on matters not on the agenda. At the conclusion of all oral and written communications, the Board may respond to statements. Any request that requires Board action will be set by the Board for a future agenda or referred to staff.

3. CONSENT CALENDAR

All matters on the Consent Calendar are considered to be routine by the Board and are enacted on one motion. There is no separate discussion of any of these items. If discussion is required, that item is removed from the Consent Calendar and considered separately. At the end of the reading of the Consent Calendar, Board members or members of the public can request that an item be removed for separate discussion.

3.1 Approve Minutes of September 17, 2018, Board Meeting.

3.2 Approve Disbursements Report.

3.3 Accept Financial Reports.

4. REMOVED FROM CONSENT CALENDAR ITEMS

Items removed from the Consent Calendar will be heard under this section.

5. OLD BUSINESS

5.1 HSU Special Projects Fund Subcontract

Approve Humboldt State University Sponsored Programs Foundation Research Subaward Agreement and authorize the Executive Director to execute all associated documents.

6. NEW BUSINESS

6.1 PG&E Energy Watch Contract

Approve PG&E Energy Watch Contract Master Service Agreement General Conditions and authorize Executive Director to execute any associated documents contingent on final review and approval of any revisions by RCEA legal counsel.

COMMUNITY CHOICE ENERGY (CCE) BUSINESS (Confirm CCE Quorum) Items under this section of the agenda relate to CCE-specific business matters that fall under RCEA's CCE voting provisions, with only CCE-participating jurisdictions voting on these matters with weighted voting as established in the RCEA joint powers agreement.

7. OLD CCE BUSINESS – None.

8. NEW CCE BUSINESS

8.1 Energy Risk Management Quarterly Report

Accept Energy Risk Management quarterly report.

8.2 Local Renewable Power Solicitation

Provide comments on staff's proposal to develop and issue a renewable power solicitation.

Authorize staff to develop all solicitation materials and bring these back to the Board for review and approval.

8.3 Feed-In Tariff Concept Presentation

Provide staff with feedback on the proposed feed-in tariff design.

Direct staff to draft materials for project implementation and bring them back for Board approval.

END OF COMMUNITY CHOICE ENERGY (CCE) BUSINESS

9. STAFF REPORTS

9.1 Report by Executive Director Matthew Marshall

- Offshore Wind Project Update
- Potter Valley Project Update
- October, Energy Action Month

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

NEXT REGULAR MEETING

Monday, November 19, 2018, 3:15 p.m.
Humboldt Bay Municipal Water District Office
828 7th Street, Eureka, CA 95501



Redwood Coast Energy Authority

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DRAFT BOARD OF DIRECTORS MEETING MINUTES

Humboldt Bay Municipal Water District Office
828 7th Street, Eureka, CA 95501

September 17, 2018
Monday, 3:15 p.m.

A regular meeting of the Board of Directors of the Redwood Coast Energy Authority was held on the above date at 3:14 p.m. with Chair Pro Tem Michael Sweeney presiding. Notice of this meeting was posted on September 13, 2018. Present: Austin Allison, Alternate Director Barbara Hecathorn, Dwight Miller (arrived at 4 p.m.), Alternate Director Paul Pitino, Bobbi Ricca, Chair Pro Tem Michael Sweeney. Absent: Estelle Fennell, Dean Glaser, Frank Wilson, Michael Winkler, Sheri Woo. Staff Present: Operations Director Dana Boudreau, Acting Executive Director Richard Engel, Clerk of the Board Lori Taketa.

The meeting was called to order at 3:14 p.m. by Acting Executive Director Richard Engel.

ELECT CHAIR PRO TEM

As both Chair Sheri Woo and Vice Chair Michael Winkler were absent to attend the Bureau of Ocean Energy Management California Intergovernmental Task Force meeting in Sacramento, Acting Executive Director Engel called for nominations for a Chair Pro Tem. Alternate Director Hecathorn nominated Director Sweeney.

Acting Executive Director Engel invited public comment. No one came forward to speak. Acting Executive Director Engel closed public comment.

M/S: Hecathorn, Ricca: Elect Michael Sweeney Chair Pro Tem to preside over this meeting. Ayes: Allison, Hecathorn, Pitino, Ricca, Sweeney. Noes: None. Absent: Fennell, Glaser, Wilson. Abstentions: None.

REPORTS FROM MEMBER ENTITIES

Director Ricca announced that her service on RCEA's Board was ending and introduced Blue Lake Council Member Summer Daugherty, who will begin serving on the RCEA Board at the next meeting.

ORAL COMMUNICATIONS

Chair Pro Tem Sweeney invited public comment. No one came forward to speak. Chair Pro Tem Sweeney closed public comment.

CONSENT CALENDAR

- 5.1 Approve Minutes of August 20, 2018, Board Meeting.**
- 5.2 Approve Disbursements Report.**
- 5.3 Accept Financial Reports.**

Acting Executive Director Engel called the Directors' attention to a discrepancy in the financial reports. He stated that Finance staff were made aware of the error and would correct the report for approval at the Board's October meeting.

Chair Pro Tem Sweeney invited public comment. No one came forward to speak. Chair Pro Tem Sweeney closed public comment.

M/S: Hecathorn, Ricca: Approve consent calendar items, including item 5.3 as provided. Ayes: Allison, Hecathorn, Pitino, Ricca, Sweeney. Noes: None. Absent: Fennell, Glaser, Wilson. Abstentions: None.

NEW BUSINESS - Presentation by Terra-Gen on the Humboldt Wind Project at Monument Ridge. (Information only)

Terra-Gen's Vice President of Origination and Development Don Vawter and Senior Director of Wind Development Nathan Vajdos presented information about Terra-Gen and the Humboldt Wind Project on Monument Ridge. Mr. Vawter stated that Terra-Gen is a 10-year-old company known for wind development in California, is owned by Energy Capital Partners private equity fund and focuses on development, construction and operation of renewable energy power generation facilities.

Chair Pro Tem Sweeney invited public comment.

Mr. Vawter described wind development in California, stating that most prime wind spots have been developed, and noting the desirability of wind's relatively flat energy generation profile to assist with daily energy supply fluctuation. In response to questions from the Board and member of the public Beverly Chang, Mr. Vawter discussed the replacement and upgrading of older turbines and typical wind power contracts.

Mr. Vajdos described the Humboldt Wind Project's location on Russ Ranch and Humboldt Redwood Company land south of Rio Dell, and its size of up to 155 megawatts and 55 turbines. He stated the target date for supplying electricity is the end of 2020, the project will connect to the electrical grid at PG&E's 115 kilovolt Bridgeville substation, that capacity for the expanded supply exists and that as the project proceeds, Terra-Gen would be required to pay for grid upgrades identified by the California Independent System Operator (CAISO) interconnection study. Terra-Gen's representatives stated the project's primary heavy equipment transport will leave Highway 101 at Jordan Creek and continue to the project site on private roads, and that the project is undergoing the County of Humboldt's public scoping process in compliance with the California Environmental Quality Act (CEQA). Mr. Vajdos expects the draft Environmental Impact Report (EIR) to be ready for public inspection in spring 2019.

The project's wind, wildlife and view impact studies were described, as were the reasons for the site's selection.

Director Miller arrived at 4:00 p.m.

In response to questions from member of the public Beverly Chang, Terra-Gen representatives said the maximum turbine blade or tip height may be 590 feet and the tower radius could be up to 25 feet. Final equipment selection has not been made, Mr. Vawter stated, and the company is pursuing permits that allow maximum equipment selection flexibility. CAISO interconnection study results, Mr. Vawter added, are generally proprietary and focus on improvements like upgraded breakers and fencing to ensure secure, stable electric supply.

Upon inquiry by Director Allison, Mr. Vajdos reported that his company supplied RCEA with a confidential term sheet that reflects competitively priced power, that one landowner required a decommissioning bond so timber can be harvested in the future, and that it is possible the company would pursue repermitting for portions of the project area so wind energy production can continue.

The project's expected creation of 15 permanent jobs and County tax revenue resulting from construction and operation were discussed.

Chair Pro Tem Sweeney closed public comment.

STAFF REPORTS - Report by Operations Director Dana Boudreau (Information only)

- Public Agency Fleet Manager Conference Scholarship

Staff Director Boudreau reported that RCEA is funding scholarships to the NorCal Clean Technology Forum and Expo in Sacramento and encouraged Board members to share application materials with fleet managers in their jurisdictions and other public and private sector organizations so they can learn about current innovations in low- and no-emission light, medium and heavy duty vehicles.

Chair Pro Tem Sweeney invited public comment. No one came forward to speak. Chair Pro Tem Sweeney closed public comment.

ADJOURNMENT

Chair Pro Tem Sweeney adjourned the meeting at 4:58 p.m.

Respectfully Submitted,

Lori Taketa
Clerk of the Board

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Redwood Coast Energy Authority
Warrants Report
As of August 31, 2018

Type	Date	Num	Name	Memo	Amount
Check	08/01/2018	8654	CoPower	Premium	-1,135.00
Check	08/10/2018	8657	EUC Assessment:John Steele	EUC Assessment Refund	-500.00
Bill Pmt -Check	08/10/2018	8658	ABC Office Equipment	Copier maintenance	-655.30
Bill Pmt -Check	08/10/2018	8659	Advanced Security	Security monitoring for Aug-Oct.	-118.50
Bill Pmt -Check	08/10/2018	8660	AM Conservation	LED stock	-1,326.78
Bill Pmt -Check	08/10/2018	8661	APP Imprints, LLC	Bamboo twist pens	-623.89
Bill Pmt -Check	08/10/2018	8662	Autocell Electronics, Inc.	LED Reflectors	-260.61
Bill Pmt -Check	08/10/2018	8663	Avcollie, M.	July mileage reimbursement.	-144.43
Bill Pmt -Check	08/10/2018	8664	Baginski, Eli	July mileage reimbursement	-13.63
Bill Pmt -Check	08/10/2018	8665	Best Cleaners	Coverall laundering	-8.50
Bill Pmt -Check	08/10/2018	8666	Bicoastal Media, LLC	Community Outreach Advertising	-495.00
Bill Pmt -Check	08/10/2018	8667	Biondini, L.	July Mileage reimbursement	-86.33
Bill Pmt -Check	08/10/2018	8668	Bishop, M.	July mileage reimbursement	-65.29
Bill Pmt -Check	08/10/2018	8669	Bob White Electric	Audit services	-5,621.64
Bill Pmt -Check	08/10/2018	8670	Braun Blaising Smith Wynne	Legal Services - Regulatory	-736.50
Bill Pmt -Check	08/10/2018	8671	Brenda Pease Bookkeeping	Quickbooks training.	-100.00
Bill Pmt -Check	08/10/2018	8672	CalCCA	Quarterly dues	-92,768.00
Bill Pmt -Check	08/10/2018	8673	Campton Electric	Table rental for Lighting Fair.	-250.00
Bill Pmt -Check	08/10/2018	8674	Chapman, R.	July mileage reimbursement	-111.40
Bill Pmt -Check	08/10/2018	8675	Chargepoint	Chargepoint support services	-8,418.40
Bill Pmt -Check	08/10/2018	8676	City of Eureka-Water	Water service, 06/25/18-07/25/18	-174.20
Bill Pmt -Check	08/10/2018	8677	Engel, R.	Reimbursement for food services	-202.50
Bill Pmt -Check	08/10/2018	8678	Eureka Rubber Stamp	Plaques	-71.45
Bill Pmt -Check	08/10/2018	8679	FedEx	Hydrogen cell demonstrations shipped.	-19.50
Bill Pmt -Check	08/10/2018	8680	Fischer, A.	July travel reimbursements	-147.56
Bill Pmt -Check	08/10/2018	8681	HCOE	Business card printing	-63.00
Bill Pmt -Check	08/10/2018	8682	Hilson, D.	July mileage reimbursement	-73.09
Bill Pmt -Check	08/10/2018	8683	Humboldt Lighting, LLC.	Fortuna Ace self-install rebate/Audit 4535	-10,842.91
Bill Pmt -Check	08/10/2018	8684	Krause Family Foundation	Leading Lights project	-5,717.50
Bill Pmt -Check	08/10/2018	8685	Local Government Commission	CivicSpark dues	-9,272.76
Bill Pmt -Check	08/10/2018	8686	Marshall, M.	Purchase reimbursement - nautical charts.	-81.40
Bill Pmt -Check	08/10/2018	8687	Mission Uniform & Linen	Janitorial services	-57.26
Bill Pmt -Check	08/10/2018	8688	Morehead, M.	Purchase reimbursements	-106.63
Bill Pmt -Check	08/10/2018	8689	North Bay Auto	North Bay Auto self-install rebate/Audit 5316.	-1,638.18
Bill Pmt -Check	08/10/2018	8690	NYLEX.net, Inc.	Conference room phone cabling	-679.52
Bill Pmt -Check	08/10/2018	8691	PG&E Utility Account	June utilities/lighting upgrade financing	-795.22
Bill Pmt -Check	08/10/2018	8692	Picky Picky Picky	Picky Picky Picky self-install rebate/Audit 5302	-1,910.30
Bill Pmt -Check	08/10/2018	8693	Pitney Bowes-Rental	July postage meter rental	-21.69
Bill Pmt -Check	08/10/2018	8694	Platt/Rexel	Bulb purchases	-13,920.56
Bill Pmt -Check	08/10/2018	8695	Ramone's	CalCCA Meeting food	-452.45
Bill Pmt -Check	08/10/2018	8696	Recology	July garbage service	-86.95
Bill Pmt -Check	08/10/2018	8697	Scrappier's Edge	Sandwich board posters	-61.60
Bill Pmt -Check	08/10/2018	8698	Senior News	Print advertising	-211.25
Bill Pmt -Check	08/10/2018	8699	Solomon, J.	Purchase reimbursements	-139.27
Bill Pmt -Check	08/10/2018	8700	Stephenson, Nancy	Purchase reimbursements	-305.54
Bill Pmt -Check	08/10/2018	8701	Terry, P.	July mileage reimbursement	-65.06
Bill Pmt -Check	08/10/2018	8702	Verizon Wireless	July tablet/cell service for field staff/mobile broadba	-228.60
Paychecks	08/10/2018		Payroll	7/16-7/31 Payroll	-55,681.63
Liability Check	08/13/2018	E-pay	EDD	499-0864-3 QB Tracking # 1956961918	-4,147.12
Liability Check	08/13/2018	E-pay	Internal Revenue Service	74-3104616 QB Tracking # 1956979918	-20,832.20

Type	Date	Num	Name	Memo	Amount
Liability Check	08/13/2018	E-pay	EDD	499-0864-3 QB Tracking # 1957001918	-106.41
Checks	08/15/2018		NEM Customers	NEM Account Close Outs	-877.12
Check	08/16/2018	ACH	EDD	Payroll Liabilities - 07/31/18	-581.77
Check	08/16/2018	ACH	EDD	Payroll Liabilities - 06/30/18	-1,213.33
Liability Check	08/20/2018	E-pay	EDD	499-0864-3 QB Tracking # -805391182	-2.13
Liability Check	08/20/2018	E-pay	Internal Revenue Service	74-3104616 QB Tracking # -805367182	-32.62
Liability Check	08/20/2018	E-pay	EDD	499-0864-3 QB Tracking # -805344182	-7.25
Check	08/21/2018	ACH	Umpqua Bank	Service Charge	-131.25
Bill Pmt -Check	08/21/2018	EFT	VISA	July Statement 06/21/18- 07/19/18	-321.60
Liability Check	08/21/2018	E-pay	EDD	499-0864-3 QB Tracking # -755627182	-3,683.38
Liability Check	08/21/2018	E-pay	Internal Revenue Service	74-3104616 QB Tracking # -755612182	-18,986.76
Liability Check	08/21/2018	E-pay	EDD	499-0864-3 QB Tracking # -755604182	-78.36
Bill Pmt -Check	08/24/2018	8744	AM Conservation	LED Stock	-1,098.92
Bill Pmt -Check	08/24/2018	8745	Biondini, L.	CSDA General Manager's Summit: Tahoe.	-231.92
Bill Pmt -Check	08/24/2018	8746	Bithell, M.	Purchase reimbursement	-24.13
Bill Pmt -Check	08/24/2018	8747	Boudreau, D.	Purchase reimbursements	-43.82
Bill Pmt -Check	08/24/2018	8748	Burks, K.	July mileage	-157.29
Bill Pmt -Check	08/24/2018	8749	Central Office	Miscellaneous printing services	-151.90
Bill Pmt -Check	08/24/2018	8750	City of Arcata	Utility User Taxes	-10,199.05
Bill Pmt -Check	08/24/2018	8751	City of Blue Lake	July Utility User Tax	-734.42
Bill Pmt -Check	08/24/2018	8752	Eva Wade	NEM Account Close Out	-57.20
Bill Pmt -Check	08/24/2018	8753	FedEx	Shipping materials	-56.51
Bill Pmt -Check	08/24/2018	8754	Feit Electric	LED Stock - PO#1249	-310.14
Bill Pmt -Check	08/24/2018	8755	Fischer, A.	Travel reimbursement	-97.46
Bill Pmt -Check	08/24/2018	8756	HCOE	Business Card Printing - Generic	-21.00
Bill Pmt -Check	08/24/2018	8757	Headwaters Fund - Interest	RCEA loan August 2018 Interest 3846000 800190	-50,000.00
Bill Pmt -Check	08/24/2018	8758	Home Energy	Subscription Renewal Dec 2018 - Oct 2019	-85.00
Bill Pmt -Check	08/24/2018	8759	Marshall, M.	Purchase reimbursement	-486.60
Bill Pmt -Check	08/24/2018	8760	McMahon, J.	Mileage reimbursement	-153.23
Bill Pmt -Check	08/24/2018	8761	North Coast Cleaning	July Cleaning Service	-402.00
Bill Pmt -Check	08/24/2018	8762	PG&E EV Account	EV stations June	-388.24
Bill Pmt -Check	08/24/2018	8763	Picky Picky Picky	Picky Picky Picky self-install rebate/Audit 5291	-1,090.43
Bill Pmt -Check	08/24/2018	8764	Pierson's Home Ctr	Facility maintenance	-18.49
Bill Pmt -Check	08/24/2018	8765	Ponting, W.	July mileage reimbursement	-14.72
Bill Pmt -Check	08/24/2018	8766	Ramone's	Communications training food	-433.69
Bill Pmt -Check	08/24/2018	8767	Slackerelli, M.	CalCCA travel reimbursement	-25.58
Bill Pmt -Check	08/24/2018	8768	Southern Humboldt Chamber	2019 Annual chamber membership	-325.00
Bill Pmt -Check	08/24/2018	8769	Stephenson, Nancy	Purchase reimbursements	-222.55
Bill Pmt -Check	08/24/2018	8770	Winzler, John	Office Lease - September	-4,350.00
Paychecks	08/24/2018		Payroll	8/1-8/15 Payroll	-53,722.31
Check	08/27/2018	ACH	CalPine Corporation	CalPine July 2018	-72,998.55
Check	08/27/2018	ACH	DG Fairhaven	DGF July 2018 Biomass	-363,745.25
Check	08/27/2018	ACH	Humboldt Redwood Company	HRC July 2018 Biomass	-697,764.97
Liability Check	08/27/2018	E-pay	EDD	499-0864-3 QB Tracking # -600606182	-265.55
Liability Check	08/27/2018	E-pay	Internal Revenue Service	74-3104616 QB Tracking # -600600182	-931.86
Liability Check	08/27/2018	8741	CA State Disbursement Unit	#200000001075867	-127.00
Liability Check	08/27/2018	8742	Umpqua Bank	74-3104616	-558.36
Liability Check	08/27/2018	8743	Calvert	74-3104616	-11,567.19
Bill Pmt -Check	08/30/2018	EFT	Citibank	August Statement 08/25/18	-2,325.78
TOTAL					-1,542,654.19

Redwood Coast Energy Authority

Balance Sheet

As of July 31, 2018

Jul 31, 18

ASSETS

Current Assets

Checking/Savings

1000 · COUNTY TREASURY 3839	5,065.52
1010 · Petty Cash	414.35
1050 · GRANTS & DONATIONS 3840	15,204.58
1060 · Umpqua Checking-9271	224,080.77
1070 · Umpqua Deposit Cntrl Acct 1687	2,415,891.09
1075 · Umpqua Reserve Account 2300	<u>2,500,000.00</u>

Total Checking/Savings	5,160,656.31
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Accounts Receivable

1100 · Accounts Receivable	<u>321,801.51</u>
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Total Accounts Receivable	321,801.51
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Other Current Assets

1101 · Allowance for Doubtful Accounts	-171,323.54
1103 · Accounts Receivable-Other	7,877,215.14
1120 · Inventory Asset	21,715.00
1202 · Prepaid Expenses	-16,236.45
Total 1210 · Retentions Receivable	39,134.18
1499 · Undeposited Funds	<u>37,922.80</u>

Total Other Current Assets	<u>7,788,427.13</u>
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Total Current Assets	<u>13,270,884.95</u>
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Fixed Assets

1500 · Fixed Asset	236,690.39
1600 · Accumulated depreciation	<u>-84,965.00</u>

Total Fixed Assets	151,725.39
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Other Assets

1700 · Retained Deposits	<u>504,100.00</u>
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Total Other Assets	<u>504,100.00</u>
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TOTAL ASSETS	<u><u>13,926,710.34</u></u>
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Redwood Coast Energy Authority**Balance Sheet**

As of July 31, 2018

Jul 31, 18**LIABILITIES & EQUITY****Liabilities****Current Liabilities****Total Accounts Payable** 186,040.24**Total Credit Cards** -3,029.10**Other Current Liabilities****2001 - Accounts Payable-Other** 4,377,106.92**Total 2100 - Payroll Liabilities** 122,693.73**Total 2210 - Retentions Payable** 3,051.78**Total Other Current Liabilities** 4,502,852.43**Total Current Liabilities** 4,685,863.57**Long Term Liabilities****Total 2700 - Long-Term Debt** 371,873.57**2703 - TEA Phase I & II** 187,197.31**Total Long Term Liabilities** 559,070.88**Total Liabilities** 5,244,934.45**Equity****2320 - Investment in Capital Assets** 147,113.19**3200 - LTD - Headwaters Loan** -367,261.38**3203 - LTD - TEA Phase I & II** -187,197.31**3900 - Fund Balance** 9,020,494.88**Net Income** 68,626.51**Total Equity** 8,681,775.89**TOTAL LIABILITIES & EQUITY** **13,926,710.34**

Redwood Coast Energy Authority**Balance Sheet**

As of August 31, 2018

Aug 31, 18**ASSETS****Current Assets****Checking/Savings**

1000 · COUNTY TREASURY 3839	5,065.52
1010 · Petty Cash	414.35
1050 · GRANTS & DONATIONS 3840	15,204.58
1060 · Umpqua Checking-9271	128,432.62
1070 · Umpqua Deposit Cntrl Acct 1687	2,918,939.44
1075 · Umpqua Reserve Account 2300	2,500,000.00

Total Checking/Savings 5,568,056.51**Total Accounts Receivable** 303,444.73**Other Current Assets**

1101 · Allowance for Doubtful Accounts	-183,941.54
1103 · Accounts Receivable-Other	7,487,334.58
1120 · Inventory Asset	21,715.00
1202 · Prepaid Expenses	-17,575.29
Total 1210 · Retentions Receivable	39,134.18
1499 · Undeposited Funds	51,131.60

Total Other Current Assets 7,397,798.53**Total Current Assets** 13,269,299.77**Fixed Assets**

1500 · Fixed Asset	236,690.39
1600 · Accumulated depreciation	-84,965.00

Total Fixed Assets 151,725.39**Other Assets**

1700 · Retained Deposits	504,100.00
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Total Other Assets 504,100.00**TOTAL ASSETS** **13,925,125.16**

Redwood Coast Energy Authority**Balance Sheet**

As of August 31, 2018

Aug 31, 18**LIABILITIES & EQUITY****Liabilities****Current Liabilities**

Total Accounts Payable 72,693.43

Total Credit Cards -5,489.09

Other Current Liabilities

2001 - Accounts Payable-Other 3,559,051.28

Total 2100 - Payroll Liabilities 120,932.52

Total 2210 - Retentions Payable 3,105.82

Total Other Current Liabilities 3,683,089.62

Total Current Liabilities 3,750,293.96

Long Term Liabilities

Total 2700 - Long-Term Debt 371,873.57

2703 - TEA Phase I & II 187,197.31

Total Long Term Liabilities 559,070.88

Total Liabilities 4,309,364.84

Equity

2320 - Investment in Capital Assets 147,113.19

3200 - LTD - Headwaters Loan -367,261.38

3203 - LTD - TEA Phase I & II -187,197.31

3900 - Fund Balance 9,020,494.88

Net Income 1,002,610.94

Total Equity 9,615,760.32

TOTAL LIABILITIES & EQUITY 13,925,125.16



REDWOOD COAST EnergyAuthority

STAFF REPORT Agenda Item # 5.1

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Lori Biondini, Director of Business Development and Planning
SUBJECT:	HSU Sponsored Programs Foundation Research Subaward Agreement

SUMMARY

In September 2017 the Board authorized participating in a grant response to the California Energy Commission which proposed a microgrid project that would serve the California Redwood Coast – Humboldt County Airport and other County of Humboldt facilities, as well as the nearby Coast Guard station and others. The prime applicant, the Schatz Energy Research Center / HSU Sponsored Programs Foundation was awarded grant funding for the project, has a signed agreement with the California Energy Commission accepting the award, and has begun putting their subcontracts in place.

RCEA committed to providing \$5,996,358 for equipment and materials costs towards a total equipment and materials budget of \$8,211,211. This cost share will include ownership of a 2MW solar array and 8MWh battery storage system that will contribute towards fulfilling our goals to develop local solar, as well as State mandates regarding maintaining electricity storage capacity. This subaward will formalize RCEA's contractual and financial commitment to the project.

FINANCIAL IMPACTS

Funding for RCEA's cost share of \$5,996,358 is still anticipated to come from a low-interest USDA Rural Utilities Service loan to be repaid over the life of the system from electricity retail revenue. The loan application is still being prepared and is anticipated to be submitted by the end of October 2018. The Board and counsel will be able to review all the associated loan documents once our application is processed and upon approval, prior to accepting the terms. There are no financial impacts at this time except for staff labor; each of the subsequent equipment and materials purchases will require separate contracting and a separate Board action.

RECOMMENDED ACTION

Approve Humboldt State University Sponsored Programs Foundation Research Subaward Agreement and authorize the Executive Director to execute all associated documents.

ATTACHMENTS

- HSUSPF – Subaward Agreement on Airport Microgrid

RESEARCH SUBAWARD AGREEMENT

Institution/Organization Humboldt State University Sponsored Programs Foundation ("Prime Recipient") 1 Harpst Street Arcata, CA 95521-8222		Institution/Organization Redwood Coast Energy Authority (RCEA) ("Subrecipient") 633 3 rd Street Eureka, CA 95501 <div style="background-color: black; width: 150px; height: 15px; margin: 5px 0;"></div> DUNS No.: 025167472	
Prime Award No. (if applicable):	EPC-17-055	PO #:	
Awarding Agency:	California Energy Commission		
Budget Period:	9/1/2018-12/31/2022	Est. Total:	<div style="display: flex; justify-content: space-between;"> \$2,214,853 Funded This Action: \$2,214,853 </div>
Performance Period:	9/1/2018-12/31/2022	Cost Sharing Amount:	\$5,996,358
PROJECT TITLE: Airport Microgrid (S4031)			
TERMS AND CONDITIONS			
<ol style="list-style-type: none"> 1) HSU-SPF hereby awards a Cost-Reimbursable Subaward, as described above, to SUBRECIPIENT. The statement of work and budget for this subaward are as shown in Attachments 4 and 5. In its performance of subaward work, SUBRECIPIENT shall be an independent entity and not an employee or agent of HSU-SPF. 2) In undertaking the performance of this subaward, SUBRECIPIENT represents that the work or services performed by SUBRECIPIENT under this Subaward will be performed in compliance with such standards as may reasonably be expected. 3) HSU-SPF shall reimburse SUBRECIPIENT not more often than monthly for allowable costs. All invoices shall be itemized by cost category, and at a minimum shall include current and cumulative costs (including cost sharing), Purchase Order (PO) Number, CEC invoice template (to be provided in Excel format) and certification as to truth and accuracy of invoice. <i>Invoices that do not reference HSU-SPF's Purchase Order Number shall be returned to SUBRECIPIENT. Receipts must accompany invoices that include reimbursement for materials, supplies, equipment and/or travel. This is a cost reimbursable award that requires full back up documentation to support your invoice. Full back up supporting documentation includes copies of receipts for all expense items and detailed general ledger report that clearly reconciles to the period invoiced.</i> It is understood that no substantial variations will be made in the budget without prior written approval by the HSU-SPF. Invoices and questions concerning invoice receipt or payments should be directed to the appropriate party's Financial Contact, as shown in Attachment 3. 4) A final statement of cumulative costs incurred, including cost sharing, marked "FINAL," must be submitted to the HSU-SPF Administrative Contact, as shown in Attachment 3 NOT LATER THAN thirty (30) days after subaward end date. The final statement of costs shall constitute SUBRECIPIENT's final financial report. 5) All payments shall be considered provisional and subject to adjustment within the total estimated cost in the event such adjustment is necessary as a result of an adverse audit finding against the SUBRECIPIENT. 6) Matters concerning the technical performance of this subaward should be directed to the appropriate party's Principal Investigator/Project Director, as shown in Attachment 3. Deliverables and reporting requirements are as shown in Attachment 4 Scope of Work. 7) Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this subaward agreement, and any changes requiring prior approval, should be directed to the appropriate party's Administrative Contact, as shown in Attachment 3. Any such changes made to this subaward agreement require the written approval of each party's Authorized Official, as shown in Attachment 3. 8) Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law. 9) Either party may terminate this agreement with thirty (30) days written notice to the appropriate party's Administrative Contact, as shown in Attachment 3. HSU-SPF shall pay SUBRECIPIENT only for costs in connection with accepted work and deliverables. 10) No-cost time extensions require the written approval of the HSU-SPF. Any requests for a no-cost time extension should be addressed to and received by the Administrative Contact, as shown in Attachment 3, not less than thirty (30) days prior to the desired effective date of the requested change. 11) This Subaward is subject to the terms and conditions of the Recipient Agreement No. EPC-17-055 ("Prime Award") between the CEC and HSUSPF as identified in Attachment 6, and other special terms and conditions, as identified in Attachment 2. The terms of Prime Award will prevail if they conflict with this Subaward. 12) This Subaward, including any referenced attachments, appendices and references, constitutes the entire Subaward and supersedes any other written or oral representations, statements negotiations, or agreements. 13) By signing below SUBRECIPIENT accepts all the terms and conditions of this agreement, and makes the certifications and assurances shown in Attachments 1 and 2. 			
By an Authorized Official of HSU-SPF <div style="border-top: 1px solid black; width: 100%; margin-top: 20px;"></div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Name: Kacie Flynn Date </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Title: Executive Director </div>		By an Authorized Official of SUBCONTRACTOR: <div style="border-top: 1px solid black; width: 100%; margin-top: 20px;"></div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Name: Date </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Title: </div>	

ATTACHMENT 1

Certifications and Assurances

By signing the Subaward Agreement, the authorized official of SUBRECIPIENT certifies, to the best of his/her knowledge and belief, that:

CERTIFICATION REGARDING LOBBYING

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the SUBRECIPIENT, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or intending to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the SUBRECIPIENT shall complete and submit Standard Form -LLL, "Disclosure Form to Report Lobbying," to the HSU-SPF.

3) The SUBRECIPIENT shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

SUBRECIPIENT certifies by signing this Subaward Agreement that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency.

TITLE 2 CFR ASSURANCE

SUBRECIPIENT assures the HSU-SPF that it complies with the Code of Federal Regulations Title 2: Grants and Agreements PART 200, and that it will notify the HSU-SPF of completion of required audits and of any adverse findings, which impact this subaward.

DAVIS-BACON AND RELATED ACTS

If applicable, by signing this Subaward Agreement, SUBRECIPIENT certifies that it complies with the Davis-Bacon act and warrants proper wages are applied to federally-funded or assisted construction projects.

ATTACHMENT 2

Prime Award and Special Terms and Conditions

PRIME AWARD

*All references to the Humboldt State University Sponsored Programs Foundation (HSUSPF) and its variants, Awardee, Grantee, Recipient, Subrecipient, etc. in the Prime Award shall mean the Subrecipient. Subrecipient shall be bound by the terms and conditions in the Recipient Agreement No. EPC-17-055 ("Prime Award"). A copy of the Prime Award terms and conditions is attached hereto and incorporated herein as **Attachment 6**. In accordance with the terms and conditions described in Attachment 6, Subrecipient shall pay particular attention to the following Flow-Down Provisions:*

- Standard of Performance (Att. 6 Section 14; Subaward Agreement Terms & Conditions #2)
- Nondiscrimination (Att. 6 Section 24)
- Indemnification (Att. 6 Section 17; Subaward Agreement Special Terms & Conditions #6)
- Pre-Existing and Independently Funded Intellectual Property, and Pre-Existing Data (Att. 6 Section 20)
- Intellectual Property (Att. 6 Section 21; Subaward Agreement Special Terms & Conditions #8)
- Royalty Payments to the Commission (Att. 6 Section 22)
- Travel and Per Diem (Att. 6 Section 13)
- Equipment (Att. 6 Section 11)
- Recordkeeping, Cost Accounting, and Auditing (Att. 6 Section 16; Subaward Agreement Special Terms & Conditions #2)
- Access to Sites and Records (Att. 6 Section 23 and Subaward Agreement Special Terms & Conditions #2)
- Legal Statement on Products (Att. 6 Section 7)

The following sections survive this subaward:

- Recordkeeping, Cost Accounting, and Auditing (Att. 6 Section 16; Subaward Agreement Special Terms & Conditions #2)
- Equipment (Att. 6 Section 11)
- Pre-Existing and Independently Funded Intellectual Property, and Pre-Existing Data (Att. 6 Section 20)
- Intellectual Property (Att. 6 Section 21; Subaward Agreement Special Terms & Conditions #8)
- Royalty Payments to the Commission (Att. 6 Section 22)
- Access to Sites and Records (Att. 6 Section 23 Subaward Agreement Special Terms & Conditions #2)

SPECIAL TERMS AND CONDITIONS

1. Without limiting the parties' indemnification, SUBRECIPIENT warrants that it has and will maintain Workers' compensation insurance coverage as required by the State of California, with Statutory Limits; General Liability insurance of not less than one million dollars (\$1,000,000), and Automobile Liability insurance of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned, and hired vehicles.
2. SUBRECIPIENT agrees to maintain and preserve all records relative to this Subaward, for three (3) years after termination. SUBRECIPIENT agrees to permit the HSU-SPF duly authorized representatives to have access to and to examine and audit, any pertinent books, documents, papers, and records related to this Subaward. Furthermore, all records related to this Subaward shall be reasonably available for inspection by the State of California pursuant to Government Code § 8546.7 which states in pertinent part: "...every contract involving the expenditure of public funds in excess of ten thousand dollars (\$10,000) entered into by any state agency, ... or by any other public entity, including a city, county..., shall be subject to the examination and audit of the State Auditor, at the request of the public entity or as part of any audit of the public entity, for a period of three years after final payment under the contract."
3. This Subaward and any disputes concerning it shall be interpreted under the laws of the State of California.
4. If Subrecipient fails to perform the services required under this Subaward within the time limits specified herein, or otherwise fails to comply with the terms of this Subaward, or violates any ordinance, regulations, or other law which applies to its performance herein, the Prime Recipient may terminate this Subaward with fourteen (14) days written notice. In such event, the Prime Recipient shall pay to Subrecipient an equitable portion of the total remuneration as compensation for the portion of the work deemed acceptable by the Prime Recipient, less the amount of any damages sustained by the Prime Recipient as a result of Subrecipient breach of this Subaward. The Prime Recipient shall be entitled to take possession of all studies, drawings, computations, and specifications, insofar as they are complete and acceptable to the Prime Recipient. At any time

and for any reason, upon thirty days written notice to the Subrecipient, the Prime Recipient may terminate this Subaward and pay only for those services rendered as of the date when termination is effective.

5. Subrecipient agrees that further assignments will not be made to any third or subsequent tier subcontractor without additional advance written consent of the Prime Recipient.
6. Prime Recipient and Subrecipient agree to indemnify, defend, and hold harmless the other party, its Governing Board, its officers, agents, employees, and volunteers from any and all claims and losses, whatsoever, accruing or resulting from any and all subcontractors, laborers, and any other person, firm, or corporation furnishing or supplying work services, materials, or supplies in connection with the performance of this agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged as a result of the other party, its agents and employees, pertaining to the performance of this Agreement.
7. Prime Recipient and Subrecipient acknowledge that either party may provide certain information to the other that is considered to be confidential. Prime Recipient and Subrecipient shall take reasonable precautions to protect such confidential information. Such precautions shall involve at least the same degree of care and precaution that either Party customarily uses to protect its own confidential information. Subrecipient agrees to not use the name of Prime Recipient or its employees in any advertisement, press release, or publicity without prior written approval of Prime Recipient.
8. Intellectual Property is subject to Terms and Conditions of Prime Award **Attachment 6**.

ATTACHMENT 3

Contacts

HSU-SPF Contacts	SUBRECIPIENT Contacts
Administrative Contact Name: Anthony Johnson, Grant Analyst HSU-Sponsored Programs Foundation Address: 1 Harpst Street Arcata, CA 95521 Telephone: 707-826-4189 Fax: 707-826-4783 Email: aj27@humboldt.edu	Administrative Contact Name: Lexie Fischer Redwood Coast Energy Authority Address: 633 3 rd Street Eureka, CA 95501 Telephone: 707-269-1700 x316 Fax: 707-269-1777 Email: afischer@redwoodenergy.org
Principal Investigator Name: Peter Lehman Address: 1 Harpst Street, NR 117 Arcata, CA 95521 Telephone: 707-826-4345 Fax: 707-826-4347 Email: peter.lehman@humboldt.edu	Project Director Name: Richard Engel Address: 633 3 rd Street Eureka, CA 95501 Telephone: 707-269-1700 Fax: 707-269-1777 Email: rengel@redwoodenergy.org
Financial Contact Name: Accounts Payable Humboldt State University Address: 1 Harpst Street Arcata, CA. 95521 Telephone: 707-826-3512 Fax: 707-826-3312 Email: accountspayable@humboldt.edu	Financial Contact Name: Accounting Redwood Coast Energy Authority Address: 633 3 rd Street Eureka, CA 95501 Telephone: 707-269-1700 Fax: 707-269-1777 Email: accounting@redwoodenergy.org
Authorized Official Name: Kacie Flynn, Executive Director HSU-Sponsored Programs Foundation Address: 1 Harpst Street Arcata, CA. 95521 Telephone: 707-826-5159 Fax: 707-826-4783 Email: kacie.flynn@humboldt.edu	Authorized Official Name: Matthew Marshall, Executive Director Redwood Coast Energy Authority Address: 633 3 rd Street Eureka, CA 95501 Telephone: 707-269-1700 Fax: 707-269-1777 Email: mmarshall@redwoodenergy.org

ATTACHMENT 4

Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Project Initiation and Operational Agreements
3	X	Design and Permitting
4		Procurement, Construction, Testing, Commissioning, and Training
5	X	Operation, Data Collection and Analysis
6		Business Model Evaluation and Market Replication Assessment
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
ACV Airport	California Redwood Coast–Humboldt County Airport
BESS	Battery Energy Storage System
CAISO	California Independent System Operator
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CCA	Community choice aggregation
CPR	Critical Project Review
DC	Direct Current
DR	Demand Response
DER	Distributed energy resources
EE	Energy Efficiency
EV	Electric Vehicle
IOU	Investor owned utility
kW	kilowatt
MW	megawatt
PG&E	Pacific Gas & Electric Company
PV	Photovoltaic
RCEA	Redwood Coast Energy Authority
TAC	Technical Advisory Committee
USCG	United States Coast Guard

II. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The Energy Commission released a competitive solicitation GFO-17-302 Demonstrate Business Case for Advanced Microgrids in Support of California's Energy and GHG Policies to fund technology

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

demonstration and deployment projects with Electric Program Investment Charge (EPIC) funding. These projects would deploy field examples of advanced microgrids within investor owned utility (IOU) service territories and produce business cases for scalable and repeatable standardized commercial-scale microgrid configurations with measurable benefits for end users of the selected market segments. These microgrid projects would also support California's energy policies, reduce greenhouse gases and attract non-EPIC funding opportunities for future microgrids. In response to GFO-17-302, Humboldt State University Sponsored Programs Foundation (Recipient) submitted an application, which was proposed for funding in the Energy Commission's Notice of Proposed Awards (NOPA) dated February 20, 2018. The Recipient's application and the NOPA issued are incorporated by reference to this Agreement in their entirety.

The purpose of this Agreement is to develop a multi-customer, renewable energy microgrid implemented under a partnership between Pacific Gas & Electric Company (PG&E), an IOU, as the microgrid distribution circuit owner, and Redwood Coast Energy Authority (RCEA), a community choice aggregation (CCA), as the generation asset owner. The microgrid will add resiliency to 18 electricity accounts on PG&E's Janes Creek 1103 distribution circuit, which includes two critical facilities in the host community: (1) the California Redwood Coast–Humboldt County Airport (ACV Airport), and (2) the United States Coast Guard (USCG) Air Station. The project will demonstrate a replicable business model and will illustrate a clear path to microgrid deployment throughout California. The project will be led by the Schatz Energy Research Center (SERC) of the Recipient.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient's Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient's Application and the terms of the Energy Commission's Award, the Commission's Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient's Application, the terms of this Agreement shall control.

B. Problem/ Solution Statement

Problem

Microgrids can facilitate greater penetration of distributed energy resources (DER) and are an important tool in the transition to the sustainable, smart grid of the future. In addition, microgrids can provide needed improvements to the reliability and resilience of the electric grid. However, deploying microgrids is both challenging and expensive, especially for multi-customer microgrids. Barriers to deployment include a lack of necessary standards, procedures and agreements, insufficient knowledge of costs and benefits, and a failure to demonstrate viable, replicable business models.

Solution

The ACV Airport Microgrid will be the first multi-customer, front-of-the-meter microgrid in PG&E's service territory. It will feature an innovative partnership between a CCA and an IOU. Through this project, the Recipient will develop a set of design standards, operating procedures, agreements and tariffs that will help pave the way for future microgrids. The recipient will measure and document project costs and benefits, and will demonstrate a viable, replicable business model. The Recipient will illustrate a clear path to microgrid deployment for CCAs and their community partners throughout California, and the Recipient will conduct effective outreach to share the lessons learned with the CCA communities and other interested stakeholders.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Successfully design, install, and operate a renewable energy microgrid at the ACV Airport and USCG Air Station,

- Develop and implement the agreements, operating procedures, safety protocols, and tariffs necessary for a multi-customer, front-of-the-meter microgrid,
- Measure the benefits and costs of the microgrid and DER included in the project,
- Evaluate the business case and assess market opportunities for replication, and
- Report on results and lessons learned for the benefit of IOUs, CCAs, and others wishing to install similar systems.

Ratepayer Benefits:² This Agreement will result in ratepayer benefits of greater electricity reliability, lower costs, and increased safety. The Photovoltaic (PV) array and battery energy storage system (BESS) included in the ACV Airport Microgrid will provide greater reliability for two critical facilities: the ACV Airport and the USCG Air Station. After shedding non-critical loads, the PV/BESS will be large enough to supply power continuously for at least 10 days, even in worst-case conditions. The existing diesel generators will become the last resort and should run very infrequently, if ever. In the event of a true emergency like an earthquake, tsunami, flood, or fire, public safety will be increased enormously by having these facilities powered by local renewable energy. The project will also result in lower energy costs for the ACV Airport, and will provide considerable locally generated renewable energy to CCA ratepayers. This is a stated goal of the CCA and is strongly supported by local citizens.

In the longer term, this project aims to reduce barriers to the deployment of microgrids. As a result, ratepayers will likely enjoy the benefits of having more microgrids installed on the grid, including greater resiliency, the ability to achieve greater penetrations of DER, reduced greenhouse gas emissions, and a smarter and more sustainable electric grid.

Technological Advancement and Breakthroughs:³ This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by being the first multi-customer, front-of-the-meter microgrid combining an IOU distribution circuit with a CCA generation/storage asset. It will require design innovation for the PV/BESS direct current (DC) coupled system and its interconnection with the larger grid, new microgrid control software, and new safety protocols to protect microgrid ratepayers and the downstream IOU grid. This technological progress will help California add the resiliency of microgrids and additional distributed renewable energy to its electricity supply. New operational agreements between PG&E and RCEA and experimental tariffs that will be developed will serve as models for future projects.

Agreement Objectives

The objectives of this Agreement are to:

1. Safely integrate a CCA owned, community-scale, direct DC-coupled PV array and BESS with PG&E's electric grid,
2. Develop and commission a microgrid control system that will allow the ACV Microgrid to operate safely and function well,
3. Install four electric vehicle (EV) chargers that can participate in demand response (DR),
4. Install an independent net-metered PV system for ACV to offset electricity costs and to evaluate the microgrid's ability to help ease constraints on distributed PV,
5. Coordinate with Humboldt County Department of Public Works on the upgrade of runway lighting to light emitting diode technology,

² California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

³ California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

6. Provide local renewable energy to CCA customers,
7. Develop a protocol and utilize the BESS to optimize the dispatch of solar electricity according to California Independent System Operator (CAISO) day-ahead market prices,
8. Increase the resiliency of critical facilities, i.e., Humboldt County's main, commercial airport and a USCG Air Station,
9. Provide a demonstration site that will assist PG&E in developing institutional capacity to support future multi-customer microgrids as part of their efforts to, in their words, *"Design, test, and integrate innovative solutions to accelerate PG&E's transition to the sustainable grid of the future,"*
10. Develop necessary tariffs/agreements to facilitate deployment of multi-customer microgrids on PG&E's distribution system, including allowing PG&E bundled customers to be served by a CCA owned generation asset during islanded microgrid operation,
11. Generate data, results, and lessons learned to inform other communities, CCAs, and IOUs and aid them in implementing future multi-customer microgrids,
12. Examine the potential to provide ancillary benefits to the local distribution system, including allowing more DER capacity with lower infrastructure upgrade costs,
13. Quantify stacked benefits from the ACV Airport Microgrid project, including:
 - energy and peak demand savings,
 - an increase in local jobs and economic activity,
 - energy arbitrage in the day ahead energy market,
 - greenhouse gas reductions, and
 - increased energy resiliency and more secure power for critical emergency services,
14. Evaluate the ACV Airport Microgrid business model, assess market potential and develop a plan to promote replication,
15. Develop an approach and lessons learned to support replicability at other facilities
16. Conduct an effective technology and knowledge transfer strategy, and
17. By meeting the objectives above, demonstrate a business case for multi-customer microgrids that will lead to significant market penetration.

III. TASK 1 GENERAL PROJECT TASKS

Subtask 1.1 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

Subtask 1.1.1 Final Report Outline

RCEA shall:

- Review and comment on a Final Report Outline prepared by SERC.

Products:

- Written Comments on the Final Report Outline (draft and final)

Subtask 1.1.2 Final Report

Under this task RCEA will support the preparation of the Draft Final Report.

RCEA shall:

- Review and comment on the Draft Final Report for the project.

Products:

- Written Comments on the Draft Final Report

Subtask 1.2 Technical Advisory Committee (TAC)

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
 - Technical area expertise;
 - Knowledge of market applications; or
 - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

RCEA shall:

- Participate in TAC meetings throughout the project.

IV. TECHNICAL TASKS**TASK 2 PROJECT INITIATION AND OPERATIONAL AGREEMENTS**

The goals of this task are to: (1) organize and launch the project team into the technical work that will be completed under the project and (2) develop one or more agreements between PG&E, RCEA, and participating customers that will govern the operational roles and responsibilities, service obligations, and commercial terms and conditions to facilitate long term operation of the microgrid.

RCEA shall:

- Review and comment on the *Project Workplan* prepared by SERC.

- Collaborate as needed with PG&E (lead) and SERC to develop an experimental *Microgrid Infrastructure Cost Recovery Tariff* that PG&E can use to recover infrastructure investment incurred and incremental distribution services provided to support a microgrid on their distribution system.
- Be responsible for developing and implementing an experimental *Islanded Microgrid Generation Support Tariff* that RCEA can use to recover operating costs for generation services provided as a third party generation asset owner within a microgrid.
 - Collaborate with PG&E and SERC in development and implementation of the *Islanded Microgrid Generation Support Tariff*.
- Collaborate with SERC (facilitator) and PG&E in development of an *Operational Roles and Responsibilities Agreement* between PG&E and RCEA regarding how the microgrid will be operated during grid connected state and islanded state.

Products:

- Written Comments on the Project Workplan
- Written Comments on the Microgrid Infrastructure Cost Recovery Tariff
- Islanded Microgrid Generation Support Tariff
- Written Comments on the Operational Roles and Responsibilities Agreement

TASK 3 DESIGN AND PERMITTING

The goals of this task are to: (1) complete the engineering design and (2) obtain the permits necessary for construction and operation.

RCEA shall:

- Collaborate with SERC (lead) and PG&E as the “Owner” on the required Interconnection Application for the 2.1 MW RCEA Wholesale Generation System
- Collaborate with SERC (lead) as the “Owner” to complete CAISO new resource implementation process for the RCEA wholesale generation system
- Collaborate with SERC (lead) as the “Owner” to register RCEA wholesale generation system in Western Renewable Energy Generation Information System (WREGIS)
- Collaborate with SERC (lead) on the design of four EV charging stations at the Airport
- Responsible for, with technical support from SERC, conceptualizing an automated demand response system for EV charging that could be deployed on RCEA administered EV charging stations
- Collaborate with TRC (lead) and SERC on the development of a Cyber Security Plan for the microgrid
 - Collaboration will primarily consist of participation by Schweitzer Engineering Laboratories, a vendor to RCEA in the Cyber Security Plan
- Collaborate with TEA (lead) and SERC in the development of a system to determine and transmit daily optimal dispatch schedules to the microgrid controller at the project site
- Collaborate with SERC (lead), TEA, SEL, and PG&E on a Concept of Operations document that describes how the microgrid will operate.

Products:

- Concept level documentation of a pilot automated demand response methodology for the EV chargers with sufficient detail for SERC engineers to implement the system during testing and commissioning.
- Written comments on the Concept of Operations document
- Written comments on the Cyber Security Plan

TASK 4 PROCUREMENT, CONSTRUCTION, TESTING, COMMISSIONING, AND TRAINING

The goal of this task is to procure equipment and construction services; construct, test, and commission the various components of the microgrid; and then commission the entire ACV Airport Microgrid as an operating system.

RCEA shall:

- Procure, with technical leadership from SERC, a turnkey net-metered PV Array approximately 340 kW_DC in size to offset electricity consumption at the airport
- Procure, with technical leadership from SERC, a BESS with inverter capacity of approximately 2 MW and energy storage capacity of up to 8 MWh that can be direct DC coupled to a PV array
- Procure, with technical leadership from SERC, a PV array approximately 2 MW in size that can be direct DC coupled to the BESS.
- Procure, with technical leadership from SERC, a microgrid protection and control system to be deployed at the airport
 - Including control hardware in the loop testing prior to deployment
 - Including commissioning support
- Procure improvements on Janes Creek 1103 distribution circuit to support microgrid.
- Collaborate with SERC on procurement and construction of the balance of systems for the RCEA wholesale generation system.
- Collaborate with SERC on procurement of four demand response capable EV chargers.
- Collaborate with SERC to test a remote automated demand response system for the EV chargers to be installed at the airport under the project.
- Collaborate with SERC (facilitator), PG&E, TEA and TRC to implement the Cyber Security Plan prepared by TRC
- Participate in microgrid controller operational training as appropriate
- Collaborate with SERC in preparation of a Procurement Lessons Learned Summary
- Collaborate with SERC in preparation of a Construction Lessons Learned Summary

Products:

- A turnkey net-metered PV Array approximately 340 kW_DC in size
- A BESS with inverter capacity of approximately 2 MW and energy storage capacity of up to 8 MWh that can be direct DC coupled to a PV array
- A PV array approximately 2 MW_DC in size that can be direct DC coupled to the BESS
- A microgrid protection and control system at the airport
- Upgrades to Janes Creek 1103 circuit through construction agreement with PG&E
- Written comments on the Procurement Lessons Learned Summary
- Written comments on the Construction Lessons Learned Summary

TASK 5 OPERATION, DATA COLLECTION, AND ANALYSIS

The goal of this subtask is to monitor the operation of ACV airport microgrid for at least one (1) year and assess its performance. In addition, systems will be put in place to allow for the continued monitoring and reporting of system performance over the subsequent three years after this contractual agreement has ended.

RCEA shall:

- Collaborate with SERC on the development of a Data Collection Plan to document technical, environmental and economic data for each DER element included in the project.
- Collaborate with SERC on monitoring and reporting for three years following the end of the contract.
- Collaborate with SERC in preparation of the Draft Microgrid Performance Report to capture aspects of wholesale market participation performance.

Products:

- Written comments on the Draft Data Collection Plan
- Written comments and input on the Draft Microgrid Performance Report
- Energy consumption and charging session frequency and duration data from the EV charging Stations for reporting purposes and for determining the effectiveness of the automated demand response system

TASK 6 BUSINESS MODEL EVALUATION AND MARKET REPLICATION ASSESSMENT

The goals of this task are to: 1) evaluate the microgrid business model being demonstrated, 2) assess the market potential for this business model, and 3) develop a plan to promote market replication.

RCEA shall:

- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Business Model Evaluation Report, which will include:
 - Developing a business model that describes the financial and business arrangements associated with the ACV Airport Microgrid.
 - Evaluating the viability of the ACV Airport Microgrid business model and identifying and assessing alternative configurations as appropriate.
 - Identifying potential revenue streams and ways to quantify benefits.
 - Conducting a cost benefit analysis for the ACV Microgrid Project.
- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Market Evaluation Report, which will include:
 - Assessing the market potential for the ACV airport microgrid business model.
 - Identifying relevant stakeholders.
 - Conducting stakeholder engagement.
 - Identifying potential costs and benefits to each stakeholder group and assessing pay back periods.
 - Assessing California and non-California market potential by key segments.
 - Estimating adoption projection scenarios for key market segments.
 - Identifying primary barriers to adoption.
- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Market Replication Plan, which will include:
 - Developing promotional materials:
 - Best practices guide for CCAs interested in microgrids
 - Financing solutions and procurement strategies
 - Energy assurance planning opportunities
 - Market pathways, revenue generation from stacked benefits
 - Technology options
 - Utility products, tariffs, services
 - Identifying existing and emerging market outreach channels.
 - Developing a market communication schedule for team members during project period.
 - Establishing market replication plan success metrics.
 - Documenting results.

Product:

- Written comments on the Draft Microgrid Business Model Evaluation Report
- Written comments on the Draft Microgrid Market Evaluation Report
- Written comments on the Microgrid Market Replication Plan

TASK 7 EVALUATION OF PROJECT BENEFITS

The goal of this task is to report the benefits resulting from this project.

RCEA shall:

- Collaborate with SERC (lead), TRC, and TEA to complete two Benefits Questionnaires that correspond to two main intervals in the Agreement: (1) *Mid-term Benefits Questionnaire*; and (2) *Final Meeting Benefits Questionnaire*.
 - Examples of information that may be requested in the questionnaires include, but are not limited to:
 - For Advanced Microgrid Business Case Demonstrations:
 - Reliability, resiliency and sustainability improvements as provided by the microgrid.
 - Net impacts on the larger grid's load and load shape as provided by the microgrid.
 - Greenhouse gas reductions as provided by the microgrid, compared to using the utility grid for the electricity and also greenhouse gas reductions as provided by any new energy efficiency capabilities of the microgrid project.
 - The dollar value of energy savings as provided by the microgrid, each year.
 - The dollar value of any co-benefits that may accrue to the project, each year.
 - Cost savings or increments compared to business as usual, as provided by the microgrid, including but not limited to technology and installation costs, operations and maintenance, and energy use.
 - Benefit metrics for each of the different DER separated by the specific DER element (e.g., the value energy storage provides to the microgrid owner/operator, the value renewables provide to the microgrid owner/operator, the value demand response services provide to the microgrid owner/operator).
 - Benefit of services as provided by the microgrid to the utility grid.

Products:

- Written comments on the Draft Mid-term Benefits Questionnaire
- Written comments on the Draft Final Meeting Benefits Questionnaire

TASK 8 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES (*Mandatory task*)

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

RCEA shall:

- Review and comment on a *Final Project Fact Sheet* at the project's conclusion that discusses results.
- Collaborate with SERC on a *Technology/Knowledge Transfer Plan* that includes:
 - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
 - A description of the intended use(s) for and users of the project results.
 - Published documents, including date, title, and periodical name.
 - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
 - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
 - The number of website downloads or public requests for project results.
 - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan.

- Collaborate with SERC (lead), TRC, TEA, and PG&E on a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.
- Collaborate with SERC (lead) on a *Presentation Materials* for an Energy Commission- sponsored conference/workshop(s) on the project.

Products:

- Written comments on the Draft Final Project Fact Sheet
- Written comments on the Draft Technology/Knowledge Transfer Plan
- Written comments on the Draft Technology/Knowledge Transfer Report
- Written comments on the Presentation Materials

Materials Submitted

After Agenda

Publication

RESEARCH SUBAWARD AGREEMENT

Institution/Organization Humboldt State University Sponsored Programs Foundation ("Prime Recipient") 1 Harpst Street Arcata, CA 95521-8222		Institution/Organization Redwood Coast Energy Authority (RCEA) ("Subrecipient") 633 3 rd Street Eureka, CA 95501 EIN/TIN No.: 74-3104616 DUNS No.: 025167472	
Prime Award No. (if applicable):	EPC-17-055	PO #:	
Awarding Agency:	California Energy Commission		
Budget Period:	9/1/2018-12/31/2022	Est. Total:	<div style="display: flex; justify-content: space-between;"> \$2,214,853 Funded This Action: \$2,214,853 </div>
Performance Period:	9/1/2018-12/31/2022	Cost Sharing Amount:	\$5,996,358
PROJECT TITLE: Airport Microgrid (S4031)			
TERMS AND CONDITIONS			
<ol style="list-style-type: none"> 1) HSU-SPF hereby awards a Cost-Reimbursable Subaward, as described above, to SUBRECIPIENT. The statement of work and budget for this subaward are as shown in Attachments 4 and 5. In its performance of subaward work, SUBRECIPIENT shall be an independent entity and not an employee or agent of HSU-SPF. 2) In undertaking the performance of this subaward, SUBRECIPIENT represents that the work or services performed by SUBRECIPIENT under this Subaward will be performed in compliance with such standards as may reasonably be expected. 3) HSU-SPF shall reimburse SUBRECIPIENT not more often than monthly for allowable costs. All invoices shall be itemized by cost category, and at a minimum shall include current and cumulative costs (including cost sharing), Purchase Order (PO) Number, CEC invoice template (to be provided in Excel format) and certification as to truth and accuracy of invoice. <i>Invoices that do not reference HSU-SPF's Purchase Order Number shall be returned to SUBRECIPIENT. Receipts must accompany invoices that include reimbursement for materials, supplies, equipment and/or travel. This is a cost reimbursable award that requires full back up documentation to support your invoice. Full back up supporting documentation includes copies of receipts for all expense items and detailed general ledger report that clearly reconciles to the period invoiced.</i> It is understood that no substantial variations will be made in the budget without prior written approval by the HSU-SPF. Invoices and questions concerning invoice receipt or payments should be directed to the appropriate party's Financial Contact, as shown in Attachment 3. 4) A final statement of cumulative costs incurred, including cost sharing, marked "FINAL," must be submitted to the HSU-SPF Administrative Contact, as shown in Attachment 3 NOT LATER THAN thirty (30) days after subaward end date. The final statement of costs shall constitute SUBRECIPIENT's final financial report. 5) All payments shall be considered provisional and subject to adjustment within the total estimated cost in the event such adjustment is necessary as a result of an adverse audit finding against the SUBRECIPIENT. 6) Matters concerning the technical performance of this subaward should be directed to the appropriate party's Principal Investigator/Project Director, as shown in Attachment 3. Deliverables and reporting requirements are as shown in Attachment 4 Scope of Work. 7) Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this subaward agreement, and any changes requiring prior approval, should be directed to the appropriate party's Administrative Contact, as shown in Attachment 3. Any such changes made to this subaward agreement require the written approval of each party's Authorized Official, as shown in Attachment 3. 8) Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law. 9) Either party may terminate this agreement with thirty (30) days written notice to the appropriate party's Administrative Contact, as shown in Attachment 3. HSU-SPF shall pay SUBRECIPIENT only for costs in connection with accepted work and deliverables. 10) No-cost time extensions require the written approval of the HSU-SPF. Any requests for a no-cost time extension should be addressed to and received by the Administrative Contact, as shown in Attachment 3, not less than thirty (30) days prior to the desired effective date of the requested change. 11) This Subaward is subject to the terms and conditions of the Recipient Agreement No. EPC-17-055 ("Prime Award") between the CEC and HSUSPF as identified in Attachment 6, and other special terms and conditions, as identified in Attachment 2. The terms of Prime Award will prevail if they conflict with this Subaward. 12) This Subaward, including any referenced attachments, appendices and references, constitutes the entire Subaward and supersedes any other written or oral representations, statements negotiations, or agreements. 13) By signing below SUBRECIPIENT accepts all the terms and conditions of this agreement, and makes the certifications and assurances shown in Attachments 1 and 2. 			
By an Authorized Official of HSU-SPF <div style="border-top: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> Name: Kacie Flynn Date </div> <div style="display: flex; justify-content: space-between;"> Title: Executive Director </div>		By an Authorized Official of SUBCONTRACTOR: <div style="border-top: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> Name: Date </div> <div style="display: flex; justify-content: space-between;"> Title: </div>	

ATTACHMENT 1

Certifications and Assurances

By signing the Subaward Agreement, the authorized official of SUBRECIPIENT certifies, to the best of his/her knowledge and belief, that:

CERTIFICATION REGARDING LOBBYING

1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the SUBRECIPIENT, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or intending to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the SUBRECIPIENT shall complete and submit Standard Form -LLL, "Disclosure Form to Report Lobbying," to the HSU-SPF.

3) The SUBRECIPIENT shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

SUBRECIPIENT certifies by signing this Subaward Agreement that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency.

TITLE 2 CFR ASSURANCE

SUBRECIPIENT assures the HSU-SPF that it complies with the Code of Federal Regulations Title 2: Grants and Agreements PART 200, and that it will notify the HSU-SPF of completion of required audits and of any adverse findings, which impact this subaward.

DAVIS-BACON AND RELATED ACTS

If applicable, by signing this Subaward Agreement, SUBRECIPIENT certifies that it complies with the Davis-Bacon act and warrants proper wages are applied to federally-funded or assisted construction projects.

ATTACHMENT 2

Prime Award and Special Terms and Conditions

PRIME AWARD

*All references to the Humboldt State University Sponsored Programs Foundation (HSUSPF) and its variants, Awardee, Grantee, Recipient, Subrecipient, etc. in the Prime Award shall mean the Subrecipient. Subrecipient shall be bound by the terms and conditions in the Recipient Agreement No. EPC-17-055 ("Prime Award"). A copy of the Prime Award terms and conditions is attached hereto and incorporated herein as **Attachment 6**. In accordance with the terms and conditions described in Attachment 6, Subrecipient shall pay particular attention to the following Flow-Down Provisions:*

- Standard of Performance (Att. 6 Section 14; Subaward Agreement Terms & Conditions #2)
- Nondiscrimination (Att. 6 Section 24)
- Indemnification (Att. 6 Section 17; Subaward Agreement Special Terms & Conditions #6)
- Pre-Existing and Independently Funded Intellectual Property, and Pre-Existing Data (Att. 6 Section 20)
- Intellectual Property (Att. 6 Section 21; Subaward Agreement Special Terms & Conditions #8)
- Royalty Payments to the Commission (Att. 6 Section 22)
- Travel and Per Diem (Att. 6 Section 13)
- Equipment (Att. 6 Section 11)
- Recordkeeping, Cost Accounting, and Auditing (Att. 6 Section 16; Subaward Agreement Special Terms & Conditions #2)
- Access to Sites and Records (Att. 6 Section 23 and Subaward Agreement Special Terms & Conditions #2)
- Legal Statement on Products (Att. 6 Section 7)

The following sections survive this subaward:

- Recordkeeping, Cost Accounting, and Auditing (Att. 6 Section 16; Subaward Agreement Special Terms & Conditions #2)
- Equipment (Att. 6 Section 11)
- Pre-Existing and Independently Funded Intellectual Property, and Pre-Existing Data (Att. 6 Section 20)
- Intellectual Property (Att. 6 Section 21; Subaward Agreement Special Terms & Conditions #8)
- Royalty Payments to the Commission (Att. 6 Section 22)
- Access to Sites and Records (Att. 6 Section 23 Subaward Agreement Special Terms & Conditions #2)

SPECIAL TERMS AND CONDITIONS

1. Without limiting the parties' indemnification, SUBRECIPIENT warrants that it has and will maintain Workers' compensation insurance coverage as required by the State of California, with Statutory Limits; General Liability insurance of not less than one million dollars (\$1,000,000), and Automobile Liability insurance of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned, and hired vehicles.
2. SUBRECIPIENT agrees to maintain and preserve all records relative to this Subaward, for three (3) years after termination. SUBRECIPIENT agrees to permit the HSU-SPF duly authorized representatives to have access to and to examine and audit, any pertinent books, documents, papers, and records related to this Subaward. Furthermore, all records related to this Subaward shall be reasonably available for inspection by the State of California pursuant to Government Code § 8546.7 which states in pertinent part: "...every contract involving the expenditure of public funds in excess of ten thousand dollars (\$10,000) entered into by any state agency, ... or by any other public entity, including a city, county..., shall be subject to the examination and audit of the State Auditor, at the request of the public entity or as part of any audit of the public entity, for a period of three years after final payment under the contract."
3. This Subaward and any disputes concerning it shall be interpreted under the laws of the State of California.
4. If Subrecipient fails to perform the services required under this Subaward within the time limits specified herein, or otherwise fails to comply with the terms of this Subaward, or violates any ordinance, regulations, or other law which applies to its performance herein, the Prime Recipient may terminate this Subaward with fourteen (14) days written notice. In such event, the Prime Recipient shall pay to Subrecipient an equitable portion of the total remuneration as compensation for the portion of the work deemed acceptable by the Prime Recipient, less the amount of any damages sustained by the Prime Recipient as a result of Subrecipient breach of this Subaward. The Prime Recipient shall be entitled to take possession of all studies, drawings, computations, and specifications, insofar as they are complete and acceptable to the Prime Recipient. At any time

and for any reason, upon thirty days written notice to the Subrecipient, the Prime Recipient may terminate this Subaward and pay only for those services rendered as of the date when termination is effective.

5. Subrecipient agrees that further assignments will not be made to any third or subsequent tier subcontractor without additional advance written consent of the Prime Recipient.
6. Prime Recipient and Subrecipient agree to indemnify, defend, and hold harmless the other party, its Governing Board, its officers, agents, employees, and volunteers from any and all claims and losses, whatsoever, accruing or resulting from any and all subcontractors, laborers, and any other person, firm, or corporation furnishing or supplying work services, materials, or supplies in connection with the performance of this agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged as a result of the other party, its agents and employees, pertaining to the performance of this Agreement.
7. Prime Recipient and Subrecipient acknowledge that either party may provide certain information to the other that is considered to be confidential. Prime Recipient and Subrecipient shall take reasonable precautions to protect such confidential information. Such precautions shall involve at least the same degree of care and precaution that either Party customarily uses to protect its own confidential information. Subrecipient agrees to not use the name of Prime Recipient or its employees in any advertisement, press release, or publicity without prior written approval of Prime Recipient.
8. Intellectual Property is subject to Terms and Conditions of Prime Award **Attachment 6**.

ATTACHMENT 3

Contacts

HSU-SPF Contacts	SUBRECIPIENT Contacts
<p>Administrative Contact</p> <p>Name: Anthony Johnson, Grant Analyst HSU-Sponsored Programs Foundation</p> <p>Address: 1 Harpst Street Arcata, CA 95521</p> <p>Telephone: 707-826-4189 Fax: 707-826-4783 Email: aj27@humboldt.edu</p>	<p>Administrative Contact</p> <p>Name: Lexie Fischer Redwood Coast Energy Authority</p> <p>Address: 633 3rd Street Eureka, CA 95501</p> <p>Telephone: 707-269-1700 x316 Fax: 707-269-1777 Email: afischer@redwoodenergy.org</p>
<p>Principal Investigator</p> <p>Name: Peter Lehman</p> <p>Address: 1 Harpst Street, NR 117 Arcata, CA 95521</p> <p>Telephone: 707-826-4345 Fax: 707-826-4347 Email: peter.lehman@humboldt.edu</p>	<p>Project Director</p> <p>Name: Dana Boudreau</p> <p>Address: 633 3rd Street Eureka, CA 95501</p> <p>Telephone: 707-269-1700 Fax: 707-269-1777 Email: dboudreau@redwoodenergy.org</p>
<p>Financial Contact</p> <p>Name: Accounts Payable Humboldt State University</p> <p>Address: 1 Harpst Street Arcata, CA. 95521</p> <p>Telephone: 707-826-3512 Fax: 707-826-3312 Email: accountspayable@humboldt.edu</p>	<p>Financial Contact</p> <p>Name: Accounting Redwood Coast Energy Authority</p> <p>Address: 633 3rd Street Eureka, CA 95501</p> <p>Telephone: 707-269-1700 Fax: 707-269-1777 Email: accounting@redwoodenergy.org</p>
<p>Authorized Official</p> <p>Name: Kacie Flynn, Executive Director HSU-Sponsored Programs Foundation</p> <p>Address: 1 Harpst Street Arcata, CA. 95521</p> <p>Telephone: 707-826-5159 Fax: 707-826-4783 Email: kacie.flynn@humboldt.edu</p>	<p>Authorized Official</p> <p>Name: Matthew Marshall, Executive Director Redwood Coast Energy Authority</p> <p>Address: 633 3rd Street Eureka, CA 95501</p> <p>Telephone: 707-269-1700 Fax: 707-269-1777 Email: mmarshall@redwoodenergy.org</p>

ATTACHMENT 4

Scope of Work

I. TASK ACRONYM/TERM LISTS

A. Task List

Task #	CPR ¹	Task Name
1		General Project Tasks
2		Project Initiation and Operational Agreements
3	X	Design and Permitting
4		Procurement, Construction, Testing, Commissioning, and Training
5	X	Operation, Data Collection and Analysis
6		Business Model Evaluation and Market Replication Assessment
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities

B. Acronym/Term List

Acronym/Term	Meaning
ACV Airport	California Redwood Coast–Humboldt County Airport
BESS	Battery Energy Storage System
CAISO	California Independent System Operator
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CCA	Community choice aggregation
CPR	Critical Project Review
DC	Direct Current
DR	Demand Response
DER	Distributed energy resources
EE	Energy Efficiency
EV	Electric Vehicle
IOU	Investor owned utility
kW	kilowatt
MW	megawatt
PG&E	Pacific Gas & Electric Company
PV	Photovoltaic
RCEA	Redwood Coast Energy Authority
TAC	Technical Advisory Committee
USCG	United States Coast Guard

II. PURPOSE OF AGREEMENT, PROBLEM/SOLUTION STATEMENT, AND GOALS AND OBJECTIVES

A. Purpose of Agreement

The Energy Commission released a competitive solicitation GFO-17-302 Demonstrate Business Case for Advanced Microgrids in Support of California's Energy and GHG Policies to fund technology

¹ Please see subtask 1.3 in Part III of the Scope of Work (General Project Tasks) for a description of Critical Project Review (CPR) Meetings.

demonstration and deployment projects with Electric Program Investment Charge (EPIC) funding. These projects would deploy field examples of advanced microgrids within investor owned utility (IOU) service territories and produce business cases for scalable and repeatable standardized commercial-scale microgrid configurations with measurable benefits for end users of the selected market segments. These microgrid projects would also support California's energy policies, reduce greenhouse gases and attract non-EPIC funding opportunities for future microgrids. In response to GFO-17-302, Humboldt State University Sponsored Programs Foundation (Recipient) submitted an application, which was proposed for funding in the Energy Commission's Notice of Proposed Awards (NOPA) dated February 20, 2018. The Recipient's application and the NOPA issued are incorporated by reference to this Agreement in their entirety.

The purpose of this Agreement is to develop a multi-customer, renewable energy microgrid implemented under a partnership between Pacific Gas & Electric Company (PG&E), an IOU, as the microgrid distribution circuit owner, and Redwood Coast Energy Authority (RCEA), a community choice aggregation (CCA), as the generation asset owner. The microgrid will add resiliency to 18 electricity accounts on PG&E's Janes Creek 1103 distribution circuit, which includes two critical facilities in the host community: (1) the California Redwood Coast–Humboldt County Airport (ACV Airport), and (2) the United States Coast Guard (USCG) Air Station. The project will demonstrate a replicable business model and will illustrate a clear path to microgrid deployment throughout California. The project will be led by the Schatz Energy Research Center (SERC) of the Recipient.

In the event of any conflict or inconsistency between the terms of the Solicitation and the terms of the Recipient's Application, the Solicitation shall control. In the event of any conflict or inconsistency between the Recipient's Application and the terms of the Energy Commission's Award, the Commission's Award shall control. Similarly, in the event of any conflict or inconsistency between the terms of this Agreement and the Recipient's Application, the terms of this Agreement shall control.

B. Problem/ Solution Statement

Problem

Microgrids can facilitate greater penetration of distributed energy resources (DER) and are an important tool in the transition to the sustainable, smart grid of the future. In addition, microgrids can provide needed improvements to the reliability and resilience of the electric grid. However, deploying microgrids is both challenging and expensive, especially for multi-customer microgrids. Barriers to deployment include a lack of necessary standards, procedures and agreements, insufficient knowledge of costs and benefits, and a failure to demonstrate viable, replicable business models.

Solution

The ACV Airport Microgrid will be the first multi-customer, front-of-the-meter microgrid in PG&E's service territory. It will feature an innovative partnership between a CCA and an IOU. Through this project, the Recipient will develop a set of design standards, operating procedures, agreements and tariffs that will help pave the way for future microgrids. The recipient will measure and document project costs and benefits, and will demonstrate a viable, replicable business model. The Recipient will illustrate a clear path to microgrid deployment for CCAs and their community partners throughout California, and the Recipient will conduct effective outreach to share the lessons learned with the CCA communities and other interested stakeholders.

C. Goals and Objectives of the Agreement

Agreement Goals

The goals of this Agreement are to:

- Successfully design, install, and operate a renewable energy microgrid at the ACV Airport and USCG Air Station,

- Develop and implement the agreements, operating procedures, safety protocols, and tariffs necessary for a multi-customer, front-of-the-meter microgrid,
- Measure the benefits and costs of the microgrid and DER included in the project,
- Evaluate the business case and assess market opportunities for replication, and
- Report on results and lessons learned for the benefit of IOUs, CCAs, and others wishing to install similar systems.

Ratepayer Benefits:² This Agreement will result in ratepayer benefits of greater electricity reliability, lower costs, and increased safety. The Photovoltaic (PV) array and battery energy storage system (BESS) included in the ACV Airport Microgrid will provide greater reliability for two critical facilities: the ACV Airport and the USCG Air Station. After shedding non-critical loads, the PV/BESS will be large enough to supply power continuously for at least 10 days, even in worst-case conditions. The existing diesel generators will become the last resort and should run very infrequently, if ever. In the event of a true emergency like an earthquake, tsunami, flood, or fire, public safety will be increased enormously by having these facilities powered by local renewable energy. The project will also result in lower energy costs for the ACV Airport, and will provide considerable locally generated renewable energy to CCA ratepayers. This is a stated goal of the CCA and is strongly supported by local citizens.

In the longer term, this project aims to reduce barriers to the deployment of microgrids. As a result, ratepayers will likely enjoy the benefits of having more microgrids installed on the grid, including greater resiliency, the ability to achieve greater penetrations of DER, reduced greenhouse gas emissions, and a smarter and more sustainable electric grid.

Technological Advancement and Breakthroughs:³ This Agreement will lead to technological advancement and breakthroughs to overcome barriers to the achievement of the State of California's statutory energy goals by being the first multi-customer, front-of-the-meter microgrid combining an IOU distribution circuit with a CCA generation/storage asset. It will require design innovation for the PV/BESS direct current (DC) coupled system and its interconnection with the larger grid, new microgrid control software, and new safety protocols to protect microgrid ratepayers and the downstream IOU grid. This technological progress will help California add the resiliency of microgrids and additional distributed renewable energy to its electricity supply. New operational agreements between PG&E and RCEA and experimental tariffs that will be developed will serve as models for future projects.

Agreement Objectives

The objectives of this Agreement are to:

1. Safely integrate a CCA owned, community-scale, direct DC-coupled PV array and BESS with PG&E's electric grid,
2. Develop and commission a microgrid control system that will allow the ACV Microgrid to operate safely and function well,
3. Install four electric vehicle (EV) chargers that can participate in demand response (DR),
4. Install an independent net-metered PV system for ACV to offset electricity costs and to evaluate the microgrid's ability to help ease constraints on distributed PV,
5. Coordinate with Humboldt County Department of Public Works on the upgrade of runway lighting to light emitting diode technology,

² California Public Resources Code, Section 25711.5(a) requires projects funded by the Electric Program Investment Charge (EPIC) to result in ratepayer benefits. The California Public Utilities Commission, which established the EPIC in 2011, defines ratepayer benefits as greater reliability, lower costs, and increased safety (See CPUC "Phase 2" Decision 12-05-037 at page 19, May 24, 2012, http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF).

³ California Public Resources Code, Section 25711.5(a) also requires EPIC-funded projects to lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory and energy goals.

6. Provide local renewable energy to CCA customers,
7. Develop a protocol and utilize the BESS to optimize the dispatch of solar electricity according to California Independent System Operator (CAISO) day-ahead market prices,
8. Increase the resiliency of critical facilities, i.e., Humboldt County's main, commercial airport and a USCG Air Station,
9. Provide a demonstration site that will assist PG&E in developing institutional capacity to support future multi-customer microgrids as part of their efforts to, in their words, *"Design, test, and integrate innovative solutions to accelerate PG&E's transition to the sustainable grid of the future,"*
10. Develop necessary tariffs/agreements to facilitate deployment of multi-customer microgrids on PG&E's distribution system, including allowing PG&E bundled customers to be served by a CCA owned generation asset during islanded microgrid operation,
11. Generate data, results, and lessons learned to inform other communities, CCAs, and IOUs and aid them in implementing future multi-customer microgrids,
12. Examine the potential to provide ancillary benefits to the local distribution system, including allowing more DER capacity with lower infrastructure upgrade costs,
13. Quantify stacked benefits from the ACV Airport Microgrid project, including:
 - energy and peak demand savings,
 - an increase in local jobs and economic activity,
 - energy arbitrage in the day ahead energy market,
 - greenhouse gas reductions, and
 - increased energy resiliency and more secure power for critical emergency services,
14. Evaluate the ACV Airport Microgrid business model, assess market potential and develop a plan to promote replication,
15. Develop an approach and lessons learned to support replicability at other facilities
16. Conduct an effective technology and knowledge transfer strategy, and
17. By meeting the objectives above, demonstrate a business case for multi-customer microgrids that will lead to significant market penetration.

III. TASK 1 GENERAL PROJECT TASKS

Subtask 1.1 Final Report

The goal of this subtask is to prepare a comprehensive Final Report that describes the original purpose, approach, results, and conclusions of the work performed under this Agreement. The CAM will review the Final Report, which will be due at least **two months** before the Agreement end date. When creating the Final Report Outline and the Final Report, the Recipient must use the Style Manual provided by the CAM.

Subtask 1.1.1 Final Report Outline

RCEA shall:

- Review and comment on a Final Report Outline prepared by SERC.

Products:

- Written Comments on the Final Report Outline (draft and final)

Subtask 1.1.2 Final Report

Under this task RCEA will support the preparation of the Draft Final Report.

RCEA shall:

- Review and comment on the Draft Final Report for the project.

Products:

- Written Comments on the Draft Final Report

Subtask 1.2 Technical Advisory Committee (TAC)

The goal of this subtask is to create an advisory committee for this Agreement. The TAC should be composed of diverse professionals. The composition will vary depending on interest, availability, and need. TAC members will serve at the CAM's discretion. The purpose of the TAC is to:

- Provide guidance in project direction. The guidance may include scope and methodologies, timing, and coordination with other projects. The guidance may be based on:
 - Technical area expertise;
 - Knowledge of market applications; or
 - Linkages between the agreement work and other past, present, or future projects (both public and private sectors) that TAC members are aware of in a particular area.
- Review products and provide recommendations for needed product adjustments, refinements, or enhancements.
- Evaluate the tangible benefits of the project to the state of California, and provide recommendations as needed to enhance the benefits.
- Provide recommendations regarding information dissemination, market pathways, or commercialization strategies relevant to the project products.

The TAC may be composed of qualified professionals spanning the following types of disciplines:

- Researchers knowledgeable about the project subject matter;
- Members of trades that will apply the results of the project (e.g., designers, engineers, architects, contractors, and trade representatives);
- Public interest market transformation implementers;
- Product developers relevant to the project;
- U.S. Department of Energy research managers, or experts from other federal or state agencies relevant to the project;
- Public interest environmental groups;
- Utility representatives;
- Air district staff; and
- Members of relevant technical society committees.

RCEA shall:

- Participate in TAC meetings throughout the project.

IV. TECHNICAL TASKS

TASK 2 PROJECT INITIATION AND OPERATIONAL AGREEMENTS

The goals of this task are to: (1) organize and launch the project team into the technical work that will be completed under the project and (2) develop one or more agreements between PG&E, RCEA, and participating customers that will govern the operational roles and responsibilities, service obligations, and commercial terms and conditions to facilitate long term operation of the microgrid.

RCEA shall:

- Review and comment on the *Project Workplan* prepared by SERC.

- Collaborate as needed with PG&E (lead) and SERC to develop an experimental *Microgrid Infrastructure Cost Recovery Tariff* that PG&E can use to recover infrastructure investment incurred and incremental distribution services provided to support a microgrid on their distribution system.
- Be responsible for developing and implementing an experimental *Islanded Microgrid Generation Support Tariff* that RCEA can use to recover operating costs for generation services provided as a third party generation asset owner within a microgrid.
 - Collaborate with PG&E and SERC in development and implementation of the *Islanded Microgrid Generation Support Tariff*.
- Collaborate with SERC (facilitator) and PG&E in development of an *Operational Roles and Responsibilities Agreement* between PG&E and RCEA regarding how the microgrid will be operated during grid connected state and islanded state.

Products:

- Written Comments on the Project Workplan
- Written Comments on the Microgrid Infrastructure Cost Recovery Tariff
- Islanded Microgrid Generation Support Tariff
- Written Comments on the Operational Roles and Responsibilities Agreement

TASK 3 DESIGN AND PERMITTING

The goals of this task are to: (1) complete the engineering design and (2) obtain the permits necessary for construction and operation.

RCEA shall:

- Collaborate with SERC (lead) and PG&E as the “Owner” on the required Interconnection Application for the 2.1 MW RCEA Wholesale Generation System
- Collaborate with SERC (lead) as the “Owner” to complete CAISO new resource implementation process for the RCEA wholesale generation system
- Collaborate with SERC (lead) as the “Owner” to register RCEA wholesale generation system in Western Renewable Energy Generation Information System (WREGIS)
- Collaborate with SERC (lead) on the design of four EV charging stations at the Airport
- Responsible for, with technical support from SERC, conceptualizing an automated demand response system for EV charging that could be deployed on RCEA administered EV charging stations
- Collaborate with TRC (lead) and SERC on the development of a Cyber Security Plan for the microgrid
 - Collaboration will primarily consist of participation by Schweitzer Engineering Laboratories, a vendor to RCEA in the Cyber Security Plan
- Collaborate with TEA (lead) and SERC in the development of a system to determine and transmit daily optimal dispatch schedules to the microgrid controller at the project site
- Collaborate with SERC (lead), TEA, SEL, and PG&E on a Concept of Operations document that describes how the microgrid will operate.

Products:

- Concept level documentation of a pilot automated demand response methodology for the EV chargers with sufficient detail for SERC engineers to implement the system during testing and commissioning.
- Written comments on the Concept of Operations document
- Written comments on the Cyber Security Plan

TASK 4 PROCUREMENT, CONSTRUCTION, TESTING, COMMISSIONING, AND TRAINING

The goal of this task is to procure equipment and construction services; construct, test, and commission the various components of the microgrid; and then commission the entire ACV Airport Microgrid as an operating system.

RCEA shall:

- Procure, with technical leadership from SERC, a turnkey net-metered PV Array approximately 340 kW_DC in size to offset electricity consumption at the airport
- Procure, with technical leadership from SERC, a BESS with inverter capacity of approximately 2 MW and energy storage capacity of up to 8 MWh that can be direct DC coupled to a PV array
- Procure, with technical leadership from SERC, a PV array approximately 2 MW in size that can be direct DC coupled to the BESS.
- Procure, with technical leadership from SERC, a microgrid protection and control system to be deployed at the airport
 - Including control hardware in the loop testing prior to deployment
 - Including commissioning support
- Procure improvements on Janes Creek 1103 distribution circuit to support microgrid.
- Collaborate with SERC on procurement and construction of the balance of systems for the RCEA wholesale generation system.
- Collaborate with SERC on procurement of four demand response capable EV chargers.
- Collaborate with SERC to test a remote automated demand response system for the EV chargers to be installed at the airport under the project.
- Collaborate with SERC (facilitator), PG&E, TEA and TRC to implement the Cyber Security Plan prepared by TRC
- Participate in microgrid controller operational training as appropriate
- Collaborate with SERC in preparation of a Procurement Lessons Learned Summary
- Collaborate with SERC in preparation of a Construction Lessons Learned Summary

Products:

- A turnkey net-metered PV Array approximately 340 kW_DC in size
- A BESS with inverter capacity of approximately 2 MW and energy storage capacity of up to 8 MWh that can be direct DC coupled to a PV array
- A PV array approximately 2 MW_DC in size that can be direct DC coupled to the BESS
- A microgrid protection and control system at the airport
- Upgrades to Janes Creek 1103 circuit through construction agreement with PG&E
- Written comments on the Procurement Lessons Learned Summary
- Written comments on the Construction Lessons Learned Summary

TASK 5 OPERATION, DATA COLLECTION, AND ANALYSIS

The goal of this subtask is to monitor the operation of ACV airport microgrid for at least one (1) year and assess its performance. In addition, systems will be put in place to allow for the continued monitoring and reporting of system performance over the subsequent three years after this contractual agreement has ended.

RCEA shall:

- Collaborate with SERC on the development of a Data Collection Plan to document technical, environmental and economic data for each DER element included in the project.
- Collaborate with SERC on monitoring and reporting for three years following the end of the contract.
- Collaborate with SERC in preparation of the Draft Microgrid Performance Report to capture aspects of wholesale market participation performance.

Products:

- Written comments on the Draft Data Collection Plan
- Written comments and input on the Draft Microgrid Performance Report
- Energy consumption and charging session frequency and duration data from the EV charging Stations for reporting purposes and for determining the effectiveness of the automated demand response system

TASK 6 BUSINESS MODEL EVALUATION AND MARKET REPLICATION ASSESSMENT

The goals of this task are to: 1) evaluate the microgrid business model being demonstrated, 2) assess the market potential for this business model, and 3) develop a plan to promote market replication.

RCEA shall:

- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Business Model Evaluation Report, which will include:
 - Developing a business model that describes the financial and business arrangements associated with the ACV Airport Microgrid.
 - Evaluating the viability of the ACV Airport Microgrid business model and identifying and assessing alternative configurations as appropriate.
 - Identifying potential revenue streams and ways to quantify benefits.
 - Conducting a cost benefit analysis for the ACV Microgrid Project.
- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Market Evaluation Report, which will include:
 - Assessing the market potential for the ACV airport microgrid business model.
 - Identifying relevant stakeholders.
 - Conducting stakeholder engagement.
 - Identifying potential costs and benefits to each stakeholder group and assessing pay back periods.
 - Assessing California and non-California market potential by key segments.
 - Estimating adoption projection scenarios for key market segments.
 - Identifying primary barriers to adoption.
- Collaborate with TRC (lead), SERC, and TEA in the development of a Microgrid Market Replication Plan, which will include:
 - Developing promotional materials:
 - Best practices guide for CCAs interested in microgrids
 - Financing solutions and procurement strategies
 - Energy assurance planning opportunities
 - Market pathways, revenue generation from stacked benefits
 - Technology options
 - Utility products, tariffs, services
 - Identifying existing and emerging market outreach channels.
 - Developing a market communication schedule for team members during project period.
 - Establishing market replication plan success metrics.
 - Documenting results.

Product:

- Written comments on the Draft Microgrid Business Model Evaluation Report
- Written comments on the Draft Microgrid Market Evaluation Report
- Written comments on the Microgrid Market Replication Plan

TASK 7 EVALUATION OF PROJECT BENEFITS

The goal of this task is to report the benefits resulting from this project.

RCEA shall:

- Collaborate with SERC (lead), TRC, and TEA to complete two Benefits Questionnaires that correspond to two main intervals in the Agreement: (1) *Mid-term Benefits Questionnaire*; and (2) *Final Meeting Benefits Questionnaire*.
 - Examples of information that may be requested in the questionnaires include, but are not limited to:
 - For Advanced Microgrid Business Case Demonstrations:
 - Reliability, resiliency and sustainability improvements as provided by the microgrid.
 - Net impacts on the larger grid's load and load shape as provided by the microgrid.
 - Greenhouse gas reductions as provided by the microgrid, compared to using the utility grid for the electricity and also greenhouse gas reductions as provided by any new energy efficiency capabilities of the microgrid project.
 - The dollar value of energy savings as provided by the microgrid, each year.
 - The dollar value of any co-benefits that may accrue to the project, each year.
 - Cost savings or increments compared to business as usual, as provided by the microgrid, including but not limited to technology and installation costs, operations and maintenance, and energy use.
 - Benefit metrics for each of the different DER separated by the specific DER element (e.g., the value energy storage provides to the microgrid owner/operator, the value renewables provide to the microgrid owner/operator, the value demand response services provide to the microgrid owner/operator).
 - Benefit of services as provided by the microgrid to the utility grid.

Products:

- Written comments on the Draft Mid-term Benefits Questionnaire
- Written comments on the Draft Final Meeting Benefits Questionnaire

TASK 8 TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES (*Mandatory task*)

The goal of this task is to develop a plan to make the knowledge gained, experimental results, and lessons learned available to the public and key decision makers.

RCEA shall:

- Review and comment on a *Final Project Fact Sheet* at the project's conclusion that discusses results.
- Collaborate with SERC on a *Technology/Knowledge Transfer Plan* that includes:
 - An explanation of how the knowledge gained from the project will be made available to the public, including the targeted market sector and potential outreach to end users, utilities, regulatory agencies, and others.
 - A description of the intended use(s) for and users of the project results.
 - Published documents, including date, title, and periodical name.
 - Copies of documents, fact sheets, journal articles, press releases, and other documents prepared for public dissemination. These documents must include the Legal Notice required in the terms and conditions. Indicate where and when the documents were disseminated.
 - A discussion of policy development. State if project has been or will be cited in government policy publications, or used to inform regulatory bodies.
 - The number of website downloads or public requests for project results.
 - Additional areas as determined by the CAM.
- Conduct technology transfer activities in accordance with the Technology/Knowledge Transfer Plan.

- Collaborate with SERC (lead), TRC, TEA, and PG&E on a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.
- Collaborate with SERC (lead) on a *Presentation Materials* for an Energy Commission- sponsored conference/workshop(s) on the project.

Products:

- Written comments on the Draft Final Project Fact Sheet
- Written comments on the Draft Technology/Knowledge Transfer Plan
- Written comments on the Draft Technology/Knowledge Transfer Report
- Written comments on the Presentation Materials

Attachment 5 Category Budget

Name of Organization	Redwood Coast Energy Authority
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☐ Small
 ☐ Micro
 ☐ Disabled Veteran Business Enterprise
☐ Contractor/Recipient
 ☒ Subcontractor

Cost Category	Energy Commission Reimbursable Share	Match Share	Total
Direct Labor	\$ -	\$ -	\$ -
Fringe Benefits	\$ -	\$ -	\$ -
Total Labor	\$ -	\$ -	\$ -
Travel	\$ -	\$ -	\$ -
Equipment	\$ 1,557,412	\$ 5,996,358	\$ 7,553,770
Materials/Miscellaneous	\$ 657,441	\$ -	\$ 657,441
Subcontractors	\$ -	\$ -	\$ -
Total Other Direct Costs	\$ 2,214,853	\$ 5,996,358	\$ 8,211,211
Indirect Costs	\$ -	\$ -	\$ -
Profit (not allowed for grant recipients)	\$ -	\$ -	\$ -
Total Indirect and Profit	\$ -	\$ -	\$ -
Grand Totals	\$ 2,214,853	\$ 5,996,358	\$ 8,211,211
Amount of funds to be Spent in California**	\$ 2,214,853		
Percentage of Funds to be spent in California	100%		

Materials & Miscellaneous

Redwood Coast Energy Authority

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
4	Electricity Distribution Infrastructure	<p>Item No: S1MM1</p> <p>Connect new net metered PV system for airport loads to PG&E distribution circuit, reconfigure PG&E distribution circuit for microgrid operation, and connect RCEA wholesale generation system to microgrid distribution circuit.</p> <p>ps: several invoices will be submitted as the payments are made to the vendor (TBD) for meeting contractual milestones agreed upon between the RCEA and the vendor.</p>	1	\$ 657,441	\$ 657,441	\$ -	\$ 657,441
Total:					\$ 657,441	\$ -	\$ 657,441

Equipment

Redwood Coast Energy Authority

Task No.	Description	Purpose	# Units	Unit Cost	Energy Commission Funds	Match Share	Total
4	<p>Item No: S1E1</p> <p>Lithium-ion battery energy storage system with hybrid inverters capable of being direct DC coupled to a PV array.</p> <p>ps: several invoices will be submitted as the payments are made to the vendor (TBD) for meeting contractual milestones agreed upon between the RCEA and the vendor.</p>	Store and discharge energy for RCEA wholesale generation system.	1	\$ 2,331,965	\$ 960,607	\$ 1,371,358	\$ 2,331,965
4	<p>Item No: S1E2</p> <p>Microgrid control system hardware and software. Includes acceptance testing and commissioning.</p> <p>ps: several invoices will be submitted as the payments are made to the vendor (TBD) for meeting contractual milestones agreed upon between the RCEA and the vendor.</p>	Provides controls and protection for microgrid circuit.	1	\$ 596,805	\$ 596,805	\$ -	\$ 596,805
4	<p>Item No: S1E3</p> <p>Two separate, co-located PV systems: Array 1: net metered for airport loads. Array 2: DC coupled to battery energy storage system for RCEA wholesale generation system.</p> <p>ps: several invoices will be submitted as the payments are made to the vendor (TBD) for meeting contractual milestones agreed upon between the RCEA and the vendor.</p>	<p>Array 1: offset airport energy costs and support islanded microgrid operation.</p> <p>Array 2: Provide renewable energy to RCEA CCA customers through wholesale market participation and form islanded microgrid.</p>	1	\$ 4,600,000	\$ -	\$ 4,600,000	\$ 4,600,000
4	<p>Item No: S1E4</p> <p>EV charging system (multiple demand response capable Level 2 chargers installed)</p> <p>ps: several invoices will be submitted as the payments are made to the vendor (TBD) for meeting contractual milestones agreed upon between the RCEA and the vendor.</p>	Charge electric vehicles and provide demand response services	1	\$ 25,000	\$ -	\$ 25,000	\$ 25,000
Total:					\$ 1,557,412	\$ 5,996,358	\$ 7,553,770

ATTACHMENT 6
EPIC CSU Auxiliary Organization TERMS AND
CONDITIONS

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ATTACHMENT 6

EPIC CSU Auxiliary Organization TERMS AND CONDITIONS

1. Grant Agreement

This grant agreement (Agreement) between the California Energy Commission (Energy Commission, or Commission) and the California State University ("CSU") Auxiliary Organization ("Recipient" or "Auxiliary")¹ Recipient is funded by the Electric Program Investment Charge (EPIC), an electricity ratepayer surcharge authorized by the California Public Utilities Commission (CPUC).

Project refers to the entire effort undertaken and planned by the Recipient, including the work co-funded by the Commission. The project may coincide with or extend beyond the Agreement period. **Project tasks** refer to the work elements of the project. Typically, there are distinct projects tasks within the project being paid for by the Commission under this Agreement.

This Agreement is comprised of the grant funding award, the Terms and Conditions, and all attachments. These Terms and Conditions are standard requirements for EPIC grant awards. The Energy Commission may impose special conditions in this grant Agreement which address the unique circumstances of this project. Special conditions that conflict with these standard provisions take precedence. Any special conditions are attached to this Agreement.

All work and/or the expenditure of funds (Energy Commission-reimbursed and/or match share) must occur within the approved term of this Agreement. The Energy Commission cannot authorize any payments until all parties sign this Agreement. The start term of this Agreement is either the specified start term or the date the Energy Commission signs the Agreement, whichever is later. The Energy Commission will only sign the Agreement after the Recipient signs it and it has been approved at an Energy Commission Business Meeting.

2. Attachments and References

The following are attached and hereby expressly incorporated into this Agreement.

- A. The funding solicitation for the project supported by this Agreement
- B. The Recipient's proposal submitted in response to the solicitation, but in the event of a conflict between the proposal and this Agreement, this Agreement prevails
- C. Confidentiality Exhibit (if applicable)
- D. Intellectual Property Exhibit (if applicable)
- E. Special Conditions (if applicable)

¹ CSU Auxiliary Organization: A CSU Auxiliary Organization authorized to receive and administer externally funded projects on behalf of the Trustees of the California State University, pursuant to CCR Title 5, Division 5, Chapter 1, Subchapter 6, Article 2, Section 42500 ([5 CCR § 42500](#)).

The federal regulations identified below are incorporated by reference as part of this Agreement. These Terms and Conditions and any Special Conditions take precedence over the regulations:

2 CFR Part 200 (See cost principles in Subpart E, Sections 200.400 et seq.
See procurement standards in Subpart D, Sections 200.317 et seq.)

3. Applicable Laws

Recipient agrees to abide by all federal, state, and local laws and regulations applicable to the project even if they are not stated in this Agreement.

Recipient also asserts that it follows the Information Practices Act ("IPA") as codified at California Civil Code sections 1798 et seq. To the extent that Recipient will collect or otherwise have access to Personal Information as defined in the IPA in carrying out the Scope of Work of this Agreement, Recipient will follow the requirements of the IPA. Subject to applicable IPA disclosure restrictions, other applicable pre-existing use and disclosure restrictions identified in Attachment 1, or any other provisions in this Agreement, including but not limited to Confidentiality, Recipient may provide the Commission access to Personal Information collected under this Agreement only for the purpose of verifying aspects of the Recipient's analysis. The Commission takes no ownership interest in or license to the Personal Information.

4. Due Diligence

The Recipient is required to take timely actions which, taken collectively, move this project to completion. The Commission Agreement Manager will periodically evaluate the schedule for completion of Scope of Work tasks. If the Commission Agreement Manager determines (1) the Recipient is not being diligent in completing the tasks in the Scope of Work or (2) the time remaining in the funding award is insufficient to complete all project work tasks not later than the Agreement term date, the Project Manager shall consult with the Recipient to determine whether the tasks will be completed according to schedule. If completion cannot be completed on schedule or by a mutually agreeable extension in time, the Energy Commission may, without prejudice to any of its remedies, terminate this Agreement in accordance with the Termination provisions stated in Section 12.

5. Products

Unless otherwise directed, draft copies of all Products identified in the Scope of Work shall be submitted to the Energy Commission's Accounting Office at the address below. The Accounting Office will forward Products to the Commission Agreement Manager for review and comment. The Recipient will submit an original and two copies of the final version of all Products to the Accounting Office.

California Energy Commission
Accounting Office
1516 Ninth Street, MS-2
Sacramento, CA 95814

6. Reports

A. Submission of Reports

All Reports will be submitted to the Accounting Office at the address listed in Section 5 above. The Commission Agreement Manager (CAM) will provide the reporting components, style, and formatting requirements to the Principal Investigator.

B. Progress Reports

The Recipient shall prepare progress Reports on the schedule provided and in the manner and form specified in the Scope of Work. The Recipient shall prepare progress Reports, which summarize all grant activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the project within the current budget and any anticipated cost overruns.

C. Final Reports

The Recipient shall prepare a final Report outline, draft final Report and final Report on the schedule provided in the Scope of Work. The final Report shall describe the original purpose, approach, results and conclusions of the work done under this Agreement.

The Payment Request for the final payment (including any retention) may only be submitted after the final Report is completed and the Commission Agreement Manager has verified that all work has been completed in accordance with the requirements of this Agreement.

D. Rights in Reports

The Energy Commission retains ownership and copyright rights in all Reports produced and delivered pursuant to this Agreement, including the right to grant others any or all copyright rights in such materials. The Energy Commission grants Recipient a fully paid-up, royalty-free, nonexclusive, nontransferable, nonsublicensable, irrevocable license to reproduce, prepare derivative works, distribute copies, perform publicly, and display publicly such Reports for educational and research purposes and to allow other educational and nonprofit institutions to do so for educational and research purposes.

E. Failure to Comply with Reporting Requirements

Failure to comply with the reporting requirements contained in this award will be considered a material noncompliance with the terms of the award.

7. Legal Statement on Reports and Products

No Product or Report produced as a result of work funded by this program shall be represented to be endorsed by the Energy Commission, and all such Products or Reports shall include the following statement:

LEGAL NOTICE

This document was prepared as a result of work sponsored by the California Energy Commission. It does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Energy Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this document; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Energy Commission nor has the Energy Commission passed upon the accuracy of the information in this report.

8. Amendments

A. Procedure for Requesting Changes

The Recipient must submit a written request to the Commission Agreement Manager for any change to the Agreement. The request must include:

- i. A brief summary of the proposed change;
- ii. A brief summary of the reason(s) for the change; and
- iii. The revised section(s) of the Agreement, with changes made in underline/ strikeout format.

B. Approval of Changes

Certain changes to the Agreement (e.g., changes that increase the Agreement amount or substitute one Recipient for another) must be approved at a Commission business meeting or by the Executive Director (or his/her designee). Generally, changes that are not significant to the Agreement may be documented in an email that is approved by both parties.

The Contract Agreement Manager or Contract Agreement Officer will provide the Recipient with guidance regarding the level of Commission approval required for a proposed change.

C. Personnel or Subcontractor Changes

All changes below require advance written approval by the Commission Agreement Manager, in addition to the appropriate level of Commission approval as described in subsection B.

i. Replacement of Key Personnel, Subcontractors, and Vendors

The Commission Agreement Manager must provide advance written approval of the replacement of Key Personnel, Key Subcontractors, and Key Vendors who are both identified in the Agreement and are critical to the outcome of the project, such as the Project Manager.

ii. Assignment of New Personnel to an Existing Job Classification

If the Recipient or a subcontractor seeks to assign new personnel who are critical to the outcome of the project to a job classification identified in Exhibit B, the Recipient or subcontractor must submit the individual's resume and proposed job classification and rate to the Commission Agreement Manager for approval. The proposed rate may not exceed the maximum rate identified for the job classification. Neither the Recipient nor any subcontractor may use the job classifications or rates of their subcontractors for personnel.

iii. **Promotion of Existing Personnel to an Existing Job Classification**

Recipient or subcontractor personnel that are identified in Exhibit B may be assigned to a higher-paying job classification identified in Exhibit B.

iv. **Addition of Subcontractors**

In order to add subcontractors to Exhibit B, the Commission Agreement Manager must submit a "Subcontractor Addition" form to the Commission Agreement Officer. The form identifies the new subcontractor, bidding method used (competitive or non-competitive), and the tasks the new subcontractor will perform.

v. **Addition of Job Classifications**

vi. **Increased Rates that Exceed the Rates Identified in Exhibit B.**

vii. **Increased total costs above the total grant award amount. The Commission will not be liable for expenses exceeding the total grant award amount, unless an amendment has been approved.**

9. Contracting and Procurement Procedures

This section provides general requirements for an agreement between the Recipient and a third party ("subcontractor").

Subcontracting criteria are specified in the applicable federal regulations incorporated by reference in this Agreement. The Energy Commission will defer to the Recipient's own regulations and procedures as long as they reflect applicable state and local laws and regulations and are not in conflict with the minimum standards specified in this Agreement and any Code of Federal Regulations incorporated by reference in this Agreement.

Upon request, the Recipient must submit to the Commission Agreement Manager a copy of all solicitations for services or products required to carry out the terms of this Agreement, copies of the proposals or bids received, and copies of subcontracts executed.

The Recipient is responsible for handling all contractual and administrative issues arising out of or related to any subcontracts it enters into under this Agreement.

All subcontracts except those with U.S. Department of Energy National Laboratories must incorporate all of the following:

- A. A clear and accurate description of the material, products, or services to be procured as well as a detailed budget and timeline.
- B. Provisions which allow for administrative, contractual, or legal remedies in instances where subcontractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.
- C. Provisions for termination by the Recipient including termination procedures and the basis for settlement.
- D. Any additional requirements specified in the federal regulations incorporated by reference in this Agreement.
- E. Further assignments shall not be made to any third or subsequent tier subcontractor without additional advance written consent of the Energy Commission's Grants Officer.

All subcontracts except those with U.S. Department of Energy National Laboratories must also incorporate language conforming to the following provisions specified in this Agreement and contain the following provisions:

- A. Standard of Performance
- B. Nondiscrimination
- C. Indemnification
- D. Pre-Existing Intellectual Property, Independently Funded Intellectual Property, and Pre-existing Data
- E. Intellectual Property
- F. Royalty Payments to the Energy Commission
- G. Travel and Per Diem
- H. Equipment
- I. Recordkeeping, Cost Accounting, and Auditing
- J. Access to Sites and Records
- K. Legal Notice
- L. Survival of the following sections:
 - i. Recordkeeping, Cost Accounting and Auditing
 - ii. Equipment
 - iii. Pre-Existing Intellectual Property, Independently Funded Intellectual Property, and Pre-existing Data
 - iv. Intellectual Property
 - v. Royalty Payments to the Energy Commission
 - vi. Access to Sites and Records

Nothing contained in this Agreement or otherwise, shall create any contractual relation between the Energy Commission and any subcontractors, and no subcontract shall relieve the Recipient of its responsibilities and obligations hereunder.

Recipient shall be responsible for establishing and maintaining contractual agreements with and reimbursement of each subcontractor for work performed in accordance with the terms of this Agreement.

All subcontracts entered into pursuant to this Agreement shall be subject to examination and audit by the Bureau of State Audits for a period of three years after final payment under this Agreement.

Failure to comply with the above requirements may result in the termination of this Agreement.

10. Permits and Clearances

The Recipient is responsible for ensuring all necessary permits and environmental documents are prepared and clearances are obtained from the appropriate agencies.

11. Equipment

Title to equipment acquired by the Recipient with grant funds shall vest in the Recipient. The Recipient shall use the equipment in the project or program for which it was acquired as long as needed, whether or not the project or program continues to be supported by grant funds and shall not encumber the property without Commission Agreement Manager approval.

Recipient should refer to the applicable federal regulations incorporated by reference in this Agreement for additional equipment requirements.

12. Termination

A. Default

In the event of any default of this Agreement, the Commission may, without prejudice to any of its other legal remedies, terminate this Agreement upon five (5)-days written notice to Recipient.

B. For Cause

The Commission may, for cause, and at its option, terminate this Agreement upon giving thirty (30)-days advance written notice to Recipient. In such event, Recipient agrees to use all reasonable efforts to mitigate its expenses and obligations.

The term "for cause" includes, but is not limited to, the following reasons:

- i. Loss or redirection of State or Federal funding for this Agreement;
- ii. Significant change in State or Commission policy such that the work or Product being funded would not be supported by the Commission;

- iii. Change in Commission's staffing such that the work or Product being funded can be done by staff of the Commission.
- C. Without Cause

The Energy Commission may terminate this Agreement with or without cause and upon thirty (30) calendar day's written notice to the Recipient of the cause for termination. Upon receipt of the Commission's notice of termination, the Recipient shall take reasonable efforts to limit or terminate all financial commitments and will not incur new obligations under this Agreement. In accordance with the Payment of Funds Provision of this Agreement, the Commission shall reimburse the Recipient for costs incurred up to the effective date of termination and for costs incurred due to Non-cancellable Obligations, up to the undisbursed balance of funds authorized in this Agreement.
- D. The Recipient's Authorized Official may terminate this Agreement for Good Cause and upon thirty (30) calendar day's written notice to the Commission of the cause for termination. Upon submission of the Recipient's notice of termination, the Recipient shall take reasonable efforts to limit or terminate all financial commitments and will not incur new obligations under this Agreement. In accordance with the Invoice Provision of this Agreement the Commission shall reimburse the Recipient for costs incurred up to the effective date of termination and for costs incurred due to Non-cancellable Obligations, up to the undisbursed balance of funds authorized in this Agreement.
- E. Good Cause is defined as impossibility of performance or frustration of purpose. Good cause does not include material breach or termination for convenience.

13. Travel and Per Diem

- A. Recipient shall be reimbursed for travel and per diem for trips in accordance with the California State University (CSU)-approved rates for CSU employees. Recipient shall provide a copy of the current CSU-approved rates to the Energy Commission upon request. Travel expenses in excess of CSU-approved rates cannot be reimbursed.
- B. Those trips already identified in the Budget section are considered approved when this Agreement goes into effect. Travel not listed in the Budget section of this Agreement shall require prior written authorization from the Commission Agreement Manager. When requesting such approval, Recipient will identify who shall travel, the purpose of travel and the destination.
- C. Any Department of Energy (DOE) authorized travel shall be reimbursed on the same basis as the DOE approved rates in effect during this Agreement.
- D. Recipient must document travel expenses in its financial records as follows:

- i. Expenses must be detailed using the current CSU / DOE-approved rates.
 - ii. Expenses must be listed by trip, including dates and times of departure and return.
 - iii. Recipient must retain receipts for travel expenses claimed for audit and verification.
- E. Travel not listed in the Budget section of this Agreement shall require prior written authorization, via e-mail or other means, from the Commission Agreement Manager.

14. Standard of Performance

- A. Recipient, its subcontractors and their employees in the performance of Recipient's work under this Agreement shall be responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures used in scientific and engineering research fields.
- B. The failure of a project to achieve the technical or economic goals stated in the Scope of Work is not a basis for the Energy Commission to determine that the work is unacceptable, unless the work conducted by the Recipient or its subcontractors is deemed by the Energy Commission to have failed the foregoing standard of performance.
- C. In the event that Recipient or its subcontractor fails to perform in accordance with the foregoing standard of performance, the Commission Agreement Manager and the Recipient Project Manager shall seek to negotiate in good faith an equitable resolution satisfactory to both parties.
- D. Nothing contained in this section is intended to limit any of the rights or remedies which the Energy Commission may have under law.

15. Payment of Funds

A. Payment Requests

Unless indicated otherwise in Special Conditions, the Recipient may request payment from the Energy Commission at any time during the term of this Agreement, but no more frequently than monthly, although it is preferred that payment requests be submitted with the progress reports.

Payments will generally be made on a reimbursement basis for Recipient's expenditures, i.e., after the Recipient has paid for a service, product, supplies, or other approved budget item. No reimbursement for food or beverages shall be made other than allowable per diem charges.

Funds in this award have a limited period in which they must be expended. All Recipient expenditures must occur within the approved term of this Agreement.

B. Payment Request Format

Invoices shall:

- i. Bear the Auxiliary's name as shown on the Agreement.
- ii. Include the Agreement number and Auxiliary fund/reference number.
- iii. Identify the billing and/or performance period covered by the invoice and provide a detailed transaction ledger, including payroll detail, for the same period.
- iv. Provide Auxiliary invoice contact, telephone number and/or email address.
- v. Be prepared in accordance with the approved cost categories identified in Exhibit B. A sample invoice template that contains all the required information is located at:
<http://www.energy.ca.gov/contracts/>.
- vi. Be certified as true and correct in ink or by an electronically scanned copy of a signature by the Auxiliary's Authorized Financial Contact.

The Energy Commission will accept computer-generated or electronically transmitted invoices without backup documentation provided that the Recipient sends a hardcopy the same day.

Recipient shall submit all invoices to the following address:

California Energy Commission
Accounting Office
EPIC Grant Program
1516 Ninth Street, MS-2
Sacramento, CA 95814

C. Release of Funds

Each invoice is subject to both Commission Agreement Manager and Commission Grants Officer approval. The Commission Agreement Manager will not process any payment request during the Agreement term if the following conditions have not been met:

- i. All required Products and Reports have been submitted and are in accordance with the Standard of Performance Clause.
- ii. All applicable special conditions have been met.
- iii. All appropriate permits or permit waivers from governmental agencies have been issued to the Recipient and copies have been received by the Commission Agreement Manager.

Payments shall be made to the Recipient only for undisputed invoices. An undisputed invoice is an invoice executed by the Recipient for project expenditures, that meets all payment conditions of the Agreement, and for which additional evidence is not required to make payment. The invoice may be disputed if all Products due for the billing period have not been received and approved, if the invoice is inaccurate, or if it does not comply with the terms of this Agreement. If the invoice is disputed the Recipient will be notified via a Dispute Notification Form within 15 working days of receipt of the invoice. On any disputed invoice, the Commission shall withhold payment only on that portion of the invoice that is disputed.

D. Indirect Costs

For any Auxiliary or CSU campuses, whether funds are received through a prime award or through a subaward, the maximum indirect cost rate allowable under this Agreement is 25% of Modified Total Direct Cost (MDTC).

E. Retention

No retention will be withheld under this Agreement.

F. State Controller's Office

Payments are made by the State Controller's Office.

16. Recordkeeping, Cost Accounting, and Auditing

A. Cost Accounting

Recipient agrees to keep separate, complete, and correct accounting of the costs involved in completing the grant and match funded (if any) portion of this project. The Energy Commission or its agent shall have the right to examine Recipient's books of accounts at all reasonable times to the extent and as is necessary to verify the accuracy of Recipient's reports.

B. Accounting Procedures

The Recipient's costs shall be determined on the basis of the Recipient's accounting system procedures and practices employed as of the effective date of this Agreement, provided that the Recipient shall use generally accepted accounting principles and cost reimbursement practices. The Recipient's cost accounting practices used in accumulating and reporting costs during the performance of this Agreement shall be consistent with the practices used in estimating costs for any proposal to which this Agreement relates; provided that such practices are consistent with the other terms of this Agreement and provided, further, that such costs may be accumulated and reported in greater detail during performance of this Agreement. The Recipient's accounting system shall distinguish between direct costs and indirect costs. All costs incurred for the same purpose, in like circumstances, are either direct costs only or indirect costs only with respect to costs incurred under this Agreement.

C. Allowability of Costs

i. Allowable Costs

The costs for which the Recipient shall be reimbursed under this Agreement include all costs, direct and indirect, incurred in the performance of work that are identified in the grant Budget. Costs must be incurred within the term of the Agreement. Factors to be considered in determining whether an individual item of cost is allowable include (i) reasonableness of the item, (ii) appropriate use of the allocability of the item to the work, (iii) applicable federal cost principles incorporated by reference in this Agreement, and (iv) the terms and conditions of this Agreement.

ii. Unallowable Costs

The following is a description of some specific items of cost that are unallowable; provided, however, that the fact that a particular item of cost is not included shall not mean that it is allowable. Details concerning the allowability of costs are available from the Energy Commission's Accounting Office.

- a. Profit or Fees, Contingency Costs, Imputed Costs, Fines and Penalties, Losses, Excess Profit Taxes and increased rates for this Agreement (if not otherwise approved by the Energy Commission as described in Section 8 of this Agreement).
 - b. The Energy Commission will pay for state or local sales or use taxes on expenditures. The State of California is exempt from Federal excise taxes.
- iii. Except as provided for in this Agreement, Recipient shall use the federal regulations incorporated by reference in this Agreement when determining allowable and unallowable costs. In the event of a conflict, this Agreement takes precedence over the federal regulations.

D. Audit Rights

Recipient shall maintain books, records, documents, and other evidence, based on the procedures set forth above, sufficient to reflect properly all costs claimed to have been incurred in performing this Agreement. The Energy Commission, an agency of the state or, at the Energy Commission's option, a public accounting firm designated by the Energy Commission, may audit such accounting records at all reasonable times with prior notice by the Energy Commission. The Energy Commission shall bear the expense of such audits. It is the intent of the parties that such audits shall ordinarily be performed not more frequently than once every twelve (12) months during the performance of the work and once at any time within three (3) years following payment by the Energy Commission of the Recipient's final invoice. However, performance of any such interim audits by the Energy Commission does not preclude further audit.

Recipient agrees that the Energy Commission, the Department of General Services, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting source documentation pertaining to the performance of this Agreement. Recipient agrees to maintain such records for possible audit for a minimum of three (3) years after final payment, unless a longer period of record retention is stipulated. Recipient agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Recipient agrees to include a similar right of the state to audit records and interview staff in any subcontract related to performance of this Agreement.

E. Refund to the Energy Commission

If the Energy Commission determines, that any invoiced and paid amounts exceed the actual allowable incurred costs, Recipient shall repay such amounts to the Energy Commission within thirty (30) days of request or as otherwise agreed by the Energy Commission and Recipient. If the Energy Commission does not receive such repayments, the Energy Commission shall be entitled to withhold further payments under this Agreement to the Recipient or seek repayment from the Recipient.

F. Match Funds

If the Budget includes a Match Funds requirement, the Recipient's commitment of resources, as described in this Agreement, is a required expenditure for receipt of Energy Commission funds. Grant funds will be released only if the required percentages of Match Funds are expended. The Recipient must maintain accounting records detailing the expenditure of the Match Funds (actual cash and in-kind services) reported as Match Funds expenditures on the Recipient's request for payment.

17. Indemnification

- A. The Auxiliary shall defend, indemnify and hold harmless the State, its officers, employees and agents from and against any and all liability, loss, expense, attorneys' fees, or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the Auxiliary, its respective officers, agents or employees.
- B. If the Auxiliary provides funds to any third party ("Subawardee"), excluding any agency or department of the United States, to accomplish any of the work of this agreement, the auxiliary shall first enter into a written agreement with each Subawardee by which the Subawardee agrees to indemnify and hold harmless the State of California, the State and its officers, agents, and employees from any and all liabilities, losses, claims, demands, damages, or costs, including without limitation litigation costs and attorney's fees, resulting from or arising out of the Subawardee's performance under its agreement with the Auxiliary, but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the Subawardees, its respective officers, agents or employees. The foregoing does not limit any breach of contract action that the State may have against the Auxiliary.

18. Workers' Compensation Insurance

- A. Recipient hereby warrants that it carries Worker's Compensation Insurance for all of its employees who will be engaged in the performance of this Agreement, and agrees to furnish to the Commission Agreement Manager satisfactory evidence of this insurance at any time the Commission Agreement Manager may request.
- B. If Recipient is self-insured for worker's compensation, it hereby warrants such self-insurance is permissible under the laws of the State of California and agrees to furnish to the Commission Agreement Manager satisfactory evidence of this insurance at any time the Commission Agreement Manager may request.

19. Confidentiality

- A. Identification of Confidential Information
 - i. For purposes of this Agreement, "**Confidential Information**" means any data or information that is proprietary to the Disclosing Party, allowed to be kept confidential under the California Public Records Act (Government Code §6250 et seq.) or other applicable law, and not publicly known at the time of disclosure to the receiving party. The obligations contained in this clause shall not apply to any confidential information which:
 - a. After disclosure becomes publicly known otherwise than through a breach by the receiving party, its officers, employees, agents or contractors;
 - b. Can be shown by reasonable proof by the receiving party to have reached its hands otherwise than by being communicated by the other party including being known to it prior to disclosure, or having been developed by or for it wholly independently of the other party or having been obtained from a third party without any restriction on disclosure on such third party of which the recipient is aware, having made due enquiry;
 - c. Is required by law, regulation or order of a competent authority (including any regulatory or governmental body or securities exchange) to be disclosed by the receiving party, provided that, where practicable, the disclosing party is given reasonable advance notice of the intended disclosure and provided that the relaxation of the obligations of confidentiality shall only last for as long as necessary to comply with the relevant law, regulation or order and shall apply solely for the purposes of such compliance; or
 - d. Is approved for release, in writing, by an authorized representative of the disclosing party.

ii. Attachment 1 to this Exhibit contains a description of the Products and Reports which contain Confidential Information, per agreement of the Recipient and the Energy Commission. The Energy Commission will not disclose the Confidential Information, except as provided in subsection B. The parties shall redact the Confidential Information from these Products and Reports prior to any public disclosure of the Products.

iii. If additional Confidential Information is developed or collected during the course of this Agreement (beyond that described in Attachment 1), the Recipient will follow the procedures for a request for designation of Confidential Information as specified in Title 20 California Code of Regulations (CCR) Section 2505.

The Energy Commission's Executive Director will make the confidentiality determination. Following this determination, the Confidential Information may be added to Attachment 1 through a Letter of Agreement (see the "Amendments" section). The Energy Commission will not disclose the Confidential Information subject to an application for confidential designation except as provided in this subsection.

iv. When submitting Products and Reports containing Confidential Information, the Recipient will mark each page of any document containing Confidential Information as "confidential", and present it in a sealed package to the Contracts, Grants, and Loans Office.

The Commission Agreement Manager may require the Recipient to submit a non-confidential version of the Product or Report, if it is feasible to separate the Confidential Information from the non-confidential information. The Recipient is not required to submit such Products in a sealed package.

B. Disclosure of Confidential Information

Disclosure of Confidential Information by the Energy Commission may only be made pursuant to 20 CCR 2506, 2507, and 2508. All confidential data, records, Products, or Reports that are legally disclosed by the Recipient or any other entity become public records and are no longer subject to the above confidentiality designation.

20. Pre-Existing Intellectual Property, Independently Funded Intellectual Property, and Pre-existing Data

A. Ownership

The Energy Commission makes no ownership, license, or royalty claims to Pre-existing Intellectual Property, Independently Funded Intellectual Property, Pre-existing Data, Project-relevant Pre-existing Intellectual Property, Project-relevant Independently Funded Intellectual Property, or Project-relevant Pre-existing Data.

B. Project-relevant Pre-Existing Intellectual Property, and Project-relevant Independently Funded Intellectual Property (collectively, "Project-relevant Intellectual Property") and Project-relevant Pre-existing Data

i. Identification of Project-relevant Intellectual Property and Project-relevant Pre-existing Data

- a. All Project-relevant Pre-existing Intellectual Property of Key Personnel that is owned or controlled by Recipient is listed in Attachment 1 to this Exhibit. Within sixty (60) days of becoming aware that additional Project-relevant Pre-existing Intellectual Property of Key Personnel that is owned or controlled by Recipient has been or will be used in the performance of this Agreement, Recipient will notify the Energy Commission. Attachment 1 may be amended by a Letter of Agreement (see the "Amendments" section).**
- b. All Project-relevant Independently Funded Intellectual Property of Key Personnel that is owned or controlled by Recipient and the source of funding for such Intellectual Property is described in Attachment 1 to this Exhibit. Within sixty (60) days of becoming aware that additional Project-relevant Independently Funded Intellectual Property of Key Personnel that is owned or controlled by Recipient has been or will be used in the performance of this Agreement, Recipient will notify the Energy Commission. Attachment 1 may be amended by a Letter of Agreement (see the "Amendments" section).**
- c. During the term of this Agreement, Recipient will use reasonable efforts to notify the Energy Commission of any Project-relevant Intellectual Property of Key Personnel that is owned or controlled by Recipient that Recipient becomes actually aware of, with the qualification that Recipient is not in a position to guarantee that all potential Project-relevant Intellectual Property has been identified.**
- d. If Recipient will be using Project-relevant Pre-existing Data of Key Personnel that is owned or controlled by Recipient in the performance of this Agreement that have restrictions on use, such data and use restrictions will also be identified in Attachment 1, which may be amended by a Letter of Agreement (see the "Amendments" section).**

ii. Access to Project-Relevant Intellectual Property and Project-relevant Pre-existing Data

The Energy Commission and California Public Utilities Commission may access Project-relevant Intellectual property identified in Attachment 1, and Project-relevant Pre-existing Data of Key Personnel that is owned or controlled by Recipient, whether or not it is identified in Attachment 1, but only to the extent that such access is limited to that reasonably necessary to: (a) demonstrate the validity of any premise, postulate, or conclusion referred to or expressed in any Product or Report; or (b) establish a baseline for repayment purposes. No express or implied licenses or other rights are provided to the Energy Commission and CPUC under any patents, patent applications, or other proprietary rights of the Recipient.

Upon the Commission Agreement Manager's request, the Recipient will provide the Commission Agreement Manager and any reviewers designated by the Energy Commission or the CPUC with access to review the Recipient's Project-relevant Intellectual Property and Project-relevant Pre-existing Data. If such Project-relevant Intellectual Property or Project-relevant Pre-existing Data has been designated as Confidential Information as specified in Section 19, the Energy Commission will only disclose it under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508.

iii. Preservation of Project-Relevant Intellectual Property

The Recipient will preserve any of its Project-relevant Intellectual Property at its own expense for at least five (5) years from the Agreement's end date or until the timeframe in Recipient's retention policy, whichever is longer. Notwithstanding the foregoing, Recipient has the sole right but not the obligation to prosecute or maintain patent protection for any of its Project-relevant Intellectual Property at any time.

The Energy Commission and the CPUC will have reasonable access to the Project-relevant Intellectual Property and Project-relevant Pre-existing Data throughout the retention period for purposes specified in this Section 20 of the Agreement.

- C. All terms of this Section 20 above will be flowed down to Subcontractors, including the access rights to Project-relevant Intellectual Property and Project-relevant Pre-existing Data in part B.ii.

21. Intellectual Property

A. Ownership

Except as otherwise specified in this Agreement, the Recipient owns all Intellectual Property created, conceived or reduced to practice, discovered, made, developed, or altered by Recipient in the performance of this Agreement.

B. Data Rights

- i. Pre-existing Data that will be included as a deliverable under this Agreement will be identified in Attachment 1. If the Commission provides its own pre-existing data, the Commission shall mark all such data, and Recipient and its subcontractors may only use it for purposes of the Scope of Work of this Agreement, unless such data is otherwise publicly available.
- ii. At the Commission's expense for actual cost of duplication and delivery, Recipient shall deliver additional Project Data that is specifically requested by the Commission.
- iii. The Commission and CPUC shall have the unrestricted right to use the Deliverable Data and delivered Project Data, subject to applicable pre-existing use and disclosure restrictions identified in Attachment 1 and other provisions in this Agreement, including but not limited to Confidentiality.
- iv. The Recipient shall have the unrestricted right to use Project Data, subject to applicable use and disclosure restrictions identified in Attachment 1 and other provisions in this Agreement, including but not limited to, Confidentiality.

C. Copyrights

- i. All rights in Copyrightable Works other than Reports first created by the Recipient are the property of the Recipient. Unless pre-existing restrictions are listed under Attachment 1, the Recipient grants The State of California, including the Commission, a fully paid-up, royalty-free, non-exclusive, non-transferable, non-sublicensable, irrevocable license to reproduce, prepare derivative works, distribute copies, perform publicly, and display publicly Copyrightable Works specified for delivery to the Commission in the Scope of Work, to fulfill the State of California's governmental purposes, including the Commission's statutory objectives.
- ii. Notwithstanding C.i. directly above, when the purpose of the Scope of Work is specifically to create a Copyrightable Work for use by the Commission and that fact is indicated in the Scope of Work, then all rights in such Copyrightable Work will be the property of the Commission. The Commission grants to Recipient a fully paid-up, royalty-free, non-exclusive, non-transferable, non-sublicensable, irrevocable license to reproduce, prepare derivative works, distribute copies, perform publicly, and display publicly such Copyrightable Work for educational and research purposes and to allow other educational and nonprofit institutions to do so for educational and research purposes.

- iii. Upon written request and subsequent amendment, the Commission may request delivery of computer software that is not identified as a Product, but was first created by the Recipient in the performance of the Scope of Work. To the extent the Recipient is legally able to do so, Recipient shall grant the State of California, including the Commission, a fully paid-up, royalty-free, nonexclusive, non-transferable, non-sublicensable, irrevocable license to reproduce, prepare derivative works, distribute copies, perform publicly, and display publicly such software to fulfill the State of California's governmental purposes, including the Commission's statutory objectives, subject to restrictions, if any, identified in Attachment 1.
- iv. Copyrightable Works that may be patentable are also subject to the Patent Rights clause, which will take precedence in case of a conflict.
- v. The Commission may direct Recipient to issue a no-cost, non-exclusive, non-sublicensable, irrevocable, royalty-free, worldwide, perpetual license to Copyrightable Works described in subparagraphs i. and iii. above to Load-serving entities and/or the third parties working with a Load-serving entity, for the Load-serving entity's use in enhancing its service to EPIC ratepayers. This license is for **non-commercial purposes**, meaning that it does not allow Load-serving entities to sell, commercially offer or distribute Copyrightable Works to others or in the marketplace. For example, if the Recipient creates copyrightable software, the Commission can give a Load-serving entity the right to use the software as part of its operations of providing service to EPIC ratepayers, but the Load-serving entity cannot sell or distribute the software.

D. Patent Rights

- i. Subject to the requirements of law, all rights to any Subject Inventions shall belong to the Recipient. The State of California, including the Commission, shall have a no-cost, non-exclusive, non-transferable, non-sublicensable, irrevocable, royalty-free, worldwide, paid-up license to practice, or have practiced, such Subject Invention for governmental purposes, including the Commission's statutory objectives. A confirmatory license will be executed by the Recipient to provide said license to any such Subject Invention, within ninety (90) days after filing of patent application. Notwithstanding the foregoing and except if the Commission exercises March-in Rights, Recipient has the sole right but not the obligation to prosecute or maintain patent protection for any Subject Invention at any time.

- ii. The Commission may direct Recipient to issue a no-cost, non-exclusive, non-sublicensable, irrevocable, royalty-free, worldwide, paid-up license to Subject Inventions to Load-serving entities and/or third parties working with a Load-serving entity, solely to practice Subject Inventions for non-commercial purposes, so as to enhance the Load-serving entities' service to EPIC ratepayers. This license is for **non-commercial purposes**, meaning that it does not allow Load-serving entities to sell, commercially offer or distribute patentable works to others or in the marketplace. For example, if the Recipient creates patentable software, the Commission can give a Load-serving entity the right to use the software as part of its operations of providing service to EPIC ratepayers, but the Load-serving entity cannot sell or distribute the software.
- iii. If any Subject Invention that is subject to the licenses above has been designated as Confidential Information as specified in Section 19, all license holders will only disclose the Subject Invention under the circumstances specified in Title 20 CCR Sections 2506, 2507, and 2508. All license holders will ensure that their officers, employees, and subcontractors who have access to the Subject Invention are informed of and abide by the disclosure limitations in Section 19.
- iv. Copyrightable Works that may be patentable are also subject to the Patent Rights clause, which will take precedence in case of a conflict.

E. Energy Commission's Rights to Subject Inventions

i. March-in Rights

With respect to any Subject Invention in which Recipient has title and to the extent permissible under Federal laws and regulations, the Energy Commission shall have the right to require Recipient or Recipient's Licensee to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant, upon terms that are reasonable under the circumstances, if the Energy Commission determines that: a) the Recipient or Recipient's Licensee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the Invention; or b) action is necessary to alleviate health or safety needs that are not reasonably satisfied by Recipient or Recipient's Licensee. If the Recipient or Recipient's Licensee refuses such request, the Commission may grant such a license itself. The parties may refer to the Federal Government's procedures for handling march-in rights.

ii. Notice of Patent

If any patent is issued for a Subject Invention, the Recipient will send the Commission Agreement Manager and Commission Agreement Officer written notice of the issuance within three (3) months of the issuance date. The notice must include the patent title, issuance number, and a general description of the Subject Invention.

iii. Legal Notice

The Recipient and all persons and/or entities obtaining an ownership interest in Subject Inventions must include the following statement within the specification of any United States patent application, and any subsequently issued patent for the invention:

"This invention was made with State of California support under California Energy Commission grant number EPC-17-055. The Energy Commission has certain rights to this invention."

F. Access to and Preservation of Subject Inventions and Copyrightable Works

i. Access

Upon the Commission Agreement Manager's request, the Recipient will provide the Commission Agreement Manager and any individuals designated by the Commission or the CPUC with access to the Recipient's Subject Inventions and to Copyrightable Works which are subject to Sections 21.C.i and 21.C.iii., in order to exercise the licenses described above, and to determine any royalty payments due under the Agreement.

ii. Preservation

The Recipient will preserve Subject Inventions and Copyrightable Works which are subject to Sections 21.C.i and 21.C.iii, in order to exercise the licenses described above, at its own expense for at least ten (10) years from the Agreement's end date or until the timeframe in Recipient's retention policy, whichever is longer. Notwithstanding the foregoing, Recipient is not obliged under this Agreement to obtain or maintain any intellectual property protection for Subject Inventions. Recipient has the sole right but not the obligation to file a patent application for a Subject Invention, but Recipient will file and prosecute a patent application for any Subject Invention which a Licensee has a license under Section 21.D.ii., upon written request by such Licensee and at Licensee's expense.

G. All terms of this Section 21 above will be flowed down to Subcontractors.

22. Royalty Payments to the Energy Commission

"Sale," "sales," and "sold" mean the sale, license, lease, or other transfer of intellectual property. **"Sales Price"** means the price at which intellectual property is sold, excluding sales tax.

- A. The Recipient will pay the Energy Commission a royalty of one and one-half percent (1.5%) of the sales price of all sales for which the Recipient receives a payment, beginning on the Agreement's effective date and extending for ten (10) years from the Agreement's end date.
- B. The Recipient will make payments in annual installments due on the first day of March in the calendar year immediately following the year during which the Recipient received any payment for sales.
- C. The Recipient is not required to make a royalty payment for any calendar year in which payments for sales are less than \$1000. Total royalty payments will be limited to three (3) times the amount of funds paid by the Energy Commission under the Agreement.
- D. If intellectual property was developed in part with match funds during the Agreement term, the royalty payment will be reduced in accordance with the percentage of intellectual property development activities that were funded with match funds. For example, if 10% of the development activities were funded with match funds during the Agreement and payments for sales totaled \$100,000 in one year, the Recipient would owe the Energy Commission \$1350 for the year (1.5% of \$100,000 = \$1500; 10% of \$1500 = \$150; \$1500 - \$150 = \$1350).

If the Energy Commission is providing funds to the Recipient under this Agreement as a project match partner and Energy Commission funds are used in part to develop intellectual property, the royalty payments will be reduced in accordance with the percentage of intellectual property development activities that were funded with non-Energy Commission funds during the Agreement term. For example, if 80% of the development activities were funded with Recipient and/or third party funds during the Agreement and payments for sales totaled \$100,000 in one year, the Recipient would owe the Energy Commission \$300 for the year (1.5% of \$100,000 = \$1500; 80% of \$1500 = \$1200; \$1500 - \$1200 = \$300).

- E. The Recipient may make an early buyout payment to the Energy Commission without a pre-payment penalty, as an alternative to making annual royalty payments for ten (10) years following the Agreement's end date. The payment must be in a lump sum amount equal to one and a half (1.5) times the amount of funds paid by the Energy Commission under the Agreement and made within five (5) years of the Agreement's end date. The payment amount due under the early buyout option will not be reduced by the percentage of match funds as described above.
- F. The Recipient may not make any sale of intellectual property for consideration other than fair market value. Such activity constitutes breach of this Agreement, and will obligate the Recipient to repay within sixty (60) days the early buyout amount due. In the event of breach, the Energy Commission may exercise all rights and remedies available to it under law and at equity.

- G. Royalty payments not made within fifteen (15) days of the due date will constitute breach of this Agreement. The payments will become debt obligations of the Recipient to the Energy Commission, due upon demand and bearing interest at the maximum interest rate allowed by law.
- H. The Recipient will maintain separate accounts within its financial and other records for the purpose of tracking components of sales and royalties due to the Energy Commission under this Agreement.
- I. Payments to the Energy Commission are subject to audit as provided for under the Recordkeeping, Cost Accounting, and Auditing section.
- J. The Recipient will include these royalty provisions in its agreements with all subcontractors who develop or assist with the development of intellectual property.

23. General Provisions

A. Governing Law

It is hereby understood and agreed that this Agreement shall be governed by the laws of the State of California as to interpretation and performance.

B. Independent Capacity

The Recipient, and the agents and employees of the Recipient, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of the State of California.

C. Assignment

Without the written consent of the Energy Commission in the form of a formal written amendment, this Agreement is not assignable or transferable by Recipient either in whole or in part.

D. Timeliness

Time is of the essence in this Agreement.

E. Unenforceable Provision

In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Agreement have force and effect and shall not be affected thereby.

F. Waiver

No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this Agreement shall be taken and construed as cumulative, that is, in addition to every other remedy provided therein or by law.

G. Assurances

The Energy Commission reserves the right to seek further written assurances from the Recipient and its team that the work of the project under this Agreement will be performed consistent with the terms of the Agreement.

H. Notification of Important Occurrences

Recipient shall promptly notify the Energy Commission of the occurrence of any of the following:

- i. A change of address.
- ii. The existence of any litigation or other legal proceeding affecting the project.
- iii. The occurrence of any casualty or other loss to project personnel, equipment or third parties.
- iv. Receipt of notice of any claim or potential claim against Recipient for patent, copyright, trademark, service mark and/or trade secret infringement that could affect the Energy Commission's rights.

I. Access to Sites and Records

The Energy Commission staff or its representatives shall have reasonable access to all project sites and to all records related to this Agreement.

J. Survival of Terms

It is understood and agreed that certain provisions shall survive the completion or termination date of this Agreement for any reason. The provisions include, but are not limited to:

- i. "Payments of Funds"
- ii. "Equipment"
- iii. "Notification of Important Occurrences"
- iv. "Termination"
- v. "Recordkeeping, Cost Accounting, and Auditing"
- vi. "Indemnification"
- vii. "Pre-Existing Intellectual Property, Independently Funded Intellectual Property, and Pre-existing Data"
- viii. "Intellectual Property"
- ix. "Royalty Payments to the Energy Commission"
- x. "Access to Sites and Records"

24. Certifications and Compliance

A. Federal, State & Local Laws

Recipient shall comply with all applicable federal, state and local laws, rules and regulations.

B. Nondiscrimination Statement of Compliance

During the performance of this Agreement, Recipient and its subcontractors shall not unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (40), marital status, and denial of family care leave. Recipient and its subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Recipient and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part of it as if set forth in full. Recipient and its subcontractors shall give written notice of their obligations under this section to labor organizations with which they have a collective bargaining or other Agreement.

The Recipient shall include the nondiscrimination and compliance provisions of this section in all subcontracts to perform work under this Agreement.

C. Drug Free Workplace Certification

By signing this Agreement, the Recipient hereby certifies under penalty of perjury under the laws of the State of California that the Recipient will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- i. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
- ii. Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b) to inform employees about all of the following:
 - a. The dangers of drug abuse in the workplace;
 - b. The person's or organization's policy of maintaining a drug-free workplace;
 - c. Any available counseling, rehabilitation, and employee assistance programs; and

- d. Penalties that may be imposed upon employees for drug abuse violations.
- iii. Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:
 - a. Will receive a copy of the company's drug-free policy statement;
 - b. Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both, and the Recipient may be ineligible for any future state awards if the Energy Commission determines that any of the following has occurred: 1) the Recipient has made false certification, or 2) violates the certification by failing to carry out the requirements as noted above.

D. National Labor Relations Board Certification

Recipient, by signing this Agreement, does swear under penalty of perjury that no more than one final unappealable finding of contempt of court by a Federal Court has been issued against the Recipient within the immediately preceding two year period because of the Recipient's failure to comply with an order of a Federal Court which orders the Recipient to comply with an order of the National Labor Relations Board.

E. Child Support Compliance Act (Applicable to California Employers)

For any agreement in excess of \$100,000, the Recipient acknowledges that:

- i. It recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- ii. To the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

F. Air or Water Pollution Violation

Under the state laws, the Recipient shall not be:

- i. In violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district;
- ii. Subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or

- iii. Finally determined to be in violation of provisions of federal law relating to air or water pollution.

G. **Americans with Disabilities Act**

By signing this Agreement, Recipient assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101, et seq.), which prohibits discrimination on the basis of disability, as well as applicable regulations and guidelines issued pursuant to the ADA.

H. **Union Activity**

By signing this Agreement, the Recipient hereby certifies that Recipient will not use grant funds for any expenses to assist, promote, or deter union organizing. Any Recipient that makes expenditures to assist, promote, or deter union organizing shall maintain records sufficient to show that state funds have not been used for those expenditures (Government Code Section 16645.2).

25. Definitions

- A. **Agreement Period** is the length of this Agreement between the Energy Commission and the Recipient. The Recipient's Project may coincide with or extend outside the Agreement Period.
- B. **Confidential Information** any data or information that is proprietary to the Disclosing Party, allowed to be kept confidential under the California Public Records Act (Government Code §6250 et seq.) or other applicable law, and not publicly known at the time of disclosure to the receiving party.
- C. **Copyrightable Work** means any copyrighted work as defined under U.S. copyright law to which the Recipient, a Subcontractor, or a Match Fund Partner has acquired title that is first created in the performance of the Scope of Work under this Agreement and is not a scholarly work.
- D. **Data** means information, regardless of the form or medium including, but not limited to drawings, lists, findings, computations, notes, diagrams, data files, statistical records and other research data.
- E. **Pre-existing Data** means Data possessed or owned by the Recipient or by a third party (including Subcontractors) that exists prior to the Agreement start date or developed during the Agreement without Commission or Match Funds.
- F. **Project-relevant Pre-existing Data** means Pre-existing Data used by Recipient or Subcontractors in the performance of the Scope of Work conducted under this Agreement
- G. **Project Data** means Data that is first produced in the performance of this Agreement by Recipient, a Subcontractor or a Match Funds partner. Project Data does not include a researcher's laboratory notebook, but may include the Data contained therein.

- H. **Deliverable Data** means Project Data that is identified in the Scope of Work and required to be delivered to the Commission.
- I. **Equipment** is defined as having a useful life of at least one year, having an acquisition unit cost of at least \$5,000, and purchased with Energy Commission funds. **Equipment** means any products, objects, machinery, apparatus, implements or tools purchased, used or constructed within the Project, including those products, objects, machinery, apparatus, implements or tools from which over thirty percent (30%) of the equipment is composed of Materials purchased for the Project. For purposes of determining depreciated value of equipment used in the Agreement, the Project shall terminate at the end of the normal useful life of the equipment purchased, funded and/or developed with Energy Commission funds. The Energy Commission may determine the normal useful life of such equipment.
- J. **Key Personnel** are employees of the Recipient who are both listed in the Agreement and critical to the outcome of the project. For example, they may have expertise in the particular field or have experience that is not available from another source. Replacing these individuals may affect the outcome of the project.
- K. **Independently Funded Intellectual Property** means Intellectual Property created, conceived, discovered, made, developed, altered, or reduced to practice by the Recipient or a third party during or after the Agreement term without Energy Commission or Match Funds, and any associated proprietary rights to these items that are obtained without Energy Commission or Match Funds, such as patent and copyright.
- L. **Intellectual Property** means inventions, technologies, designs, drawings, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, logos, and any associated proprietary rights to these items, such as patent and copyright, including and any upgrades or revisions to these items.
- M. **Licensed Product** means any product commercialized by a Licensee that embodies or utilizes Project Data, a Subject Invention, or Copyrightable Work.
- N. **Licensee** means the organization (or its affiliates, joint venture or sublicensee) that is granted commercial rights to Project Data, a Subject Invention or Copyrightable Work to develop any of these into a commercial product that is made available to the public in the marketplace or otherwise sold.
- O. **Load-serving entity** means a company or other organization that provides electricity to EPIC ratepayers.
- P. **Match Funds** means cash or in-kind (non-cash) contributions shown in the approved budget, Exhibit B, and provided by Recipient, Subcontractors, or other parties that will be used in performance of this Agreement.

- Q. **Match Fund Partner** means an entity providing Match Funds that does not receive any Commission funds.
- R. **Materials** means the substances used in constructing a finished object, commodity, device, article or product.
- S. **Non-cancellable Obligations** means allowable costs that have been properly budgeted in Exhibit B incurred through the date of termination, but cannot be reversed at the point of termination.
- T. **Ownership** means exclusive possession and control of all rights to property, including the right to use and transfer property.
- U. **Subcontractor** is the same as a Subrecipient and means an entity that is performing research and has received Agreement funds via a subaward arrangement appropriate for that entity from the Recipient's location awarded this grant Agreement. A Subcontractor may include not-for-profit and for-profit organizations, Federal laboratories, or any part of the CSU, such as a campus or the Lawrence Berkeley National Laboratory. This definition does not include vendors providing goods and services.
- V. **Key Subcontractor** is a Subcontractor that is critical to the outcome of the project. For example, the Subcontractor may have expertise in the particular field or have experience that is not available from another source. Replacing these entities may affect the outcome of the project.
- W. **Pre-existing Intellectual Property** means Intellectual Property that the Recipient or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or Match Funds, and any associated proprietary rights to these items that are obtained without Energy Commission or Match Funds, such as patent and copyright.
- X. **Products** means all tangible research products first made by Recipient, Subcontractors, or Match Fund Partners in the performance of this Agreement and specified for delivery to the Commission in the Scope of Work, but not a Subject Invention nor a Copyrightable Work.
- Y. **Project** refers to the entire effort undertaken and planned by the Recipient under this Agreement and consisting of the work co-funded in whole or in part by the Energy Commission.
- Z. **Project-relevant Pre-existing Intellectual Property** means Pre-existing Intellectual Property used by Recipient, Subcontractors, or Match Fund Partners in the performance of the Scope of Work conducted under this Agreement.
- AA. **Project-relevant Independently Funded Intellectual Property** means Independently Funded Intellectual Property used by Recipient, Subcontractors, or Match Fund Partners in the performance of the Scope of Work conducted under this Agreement.

- BB. **Report** means all required reports specified for delivery to the Commission in the Scope of Work.
- CC. **Sale, Sales, and Sold** mean the sale, license, lease, or other transfer of intellectual property.
- DD. **Sales Price** means the price at which intellectual property is sold, excluding normal returns and allowances such as sales tax.
- EE. **Subject Invention** means any patentable invention or discovery that is either:
- i. Conceived and first actually reduced to practice (actually reduced to practice or constructively reduced to practice by the filing of a patent application) in the performance of the Scope of Work;
 - ii. Conceived in the performance of the Scope of Work and first reduced to practice in the performance of the Scope of Work conducted under this Agreement or within forty-two (42) months after the completion of the Scope of Work;
 - iii. Conceived prior to the effective date of this Agreement or conceived without Energy Commission funds and reduced to practice in the performance of the Scope of Work, provided that such conception is not encumbered by any obligations owed to a third party other than the U.S. Government.
- FF. **Technology** refers to the general subject area where the product or innovation will be used. For example, solar thermal electric generation is a Technology area; direct steam generation is an innovation in this Technology area.
- GG. **Trade Secret** is any formula, plan, pattern, process, tool, mechanism, compound, procedure, production data, or compilation of information which is not patented and which is generally known only to certain individuals with a commercial concern and are using it to fabricate, produce or compound an article of trade or a service having commercial value and which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it.
- HH. **Vendor**. A dealer, distributor, merchant or other seller providing goods or services that are required for the performance of the Scope of Work. Vendors are not considered Subcontractors and are subject to the normal terms and conditions of Auxiliary's procurement process.
- II. **Key Vendor** is a Vendor that is critical to the outcome of the project. For example, the Vendor may have expertise in the particular field or have experience that is not available from another source. Replacing these entities may affect the outcome of the project.

26. Funds Spent in California and on California Based Entities

If this agreement resulted from a competitive solicitation (the "Solicitation"), then the Recipient submitted an application (the "Application") and the Solicitation and Application are incorporated into this Agreement by reference. In the event of a conflict, the documents take precedence in the following order:

- a. The Exhibits documents in this Agreement take precedence over the Solicitation (with the exception noted below) and the Application.
- b. The Solicitation takes precedence over the Application.

The exception to part a. is if the Solicitation contains definitions for "Funds Spent in California" or "California Based Entities" and its related definition of "substantially."

If the Solicitation contains any of these definitions, then the definitions in the Solicitation take precedence over the definitions below, which otherwise apply:

- c. "Funds Spent in California" means that: (1) funds under the "Direct Labor" category and all categories calculated based on direct labor (Prime and Subcontractor Labor Rates) are paid to individuals who pay California state income taxes on wages received for work performed under the agreement; and (2) business transactions (e.g., material and equipment purchases, leases, rentals, and contractual work) are entered into with a business located in California.

Airline ticket purchases for out of state travel and payments made to out-of-state workers are not considered funds "spent in California." However, funds spent by out-of-state workers in California (e.g., hotel and food) and airline travel originating and ending in California are considered funds "spent in California."

- d. "California Based Entity" means either of the following:
 1. A corporation or other business form organized for the transaction of business that has its headquarters in California and manufactures in California the product that qualifies for the incentive or award; or
 2. A corporation or other business form organized for the transaction of business that has an office for the transaction of

business in California and substantially manufactures in California the product that qualifies for the incentive or award, or substantially develops within California the research that qualifies for the incentive or award, as determined by the agency issuing the incentive or award.

During this Agreement, Recipient shall meet its promised expenditure of Funds Spent in California and funds spent on California Based Entities. The promised amount of each is determined in this Agreement (usually in the Agreement Budget) or Facility Operator's Application to the Solicitation, with the amount in the Agreement taking precedence in case of a conflict.

ATTACHMENT 6 - PART A

Confidential Products and Project-Relevant Pre-Existing and Independently Funded Intellectual Property

1. Instructions

Identification of Confidential Information

- **Prior to the effective date of the Agreement**, the Recipient must identify in Section 2 of this attachment any products (or information contained within products) that it considers to be confidential. If the Energy Commission agrees that the information is confidential, it will not disclose it except as provided in Section 19 (Confidentiality) of these terms and conditions.
- **During the Agreement**, if the Recipient develops additional information not originally anticipated as confidential, it must follow the procedures for a request for designation of confidential information specified in Title 20 California Code of Regulations (CCR) Section 2505.

The Energy Commission's Executive Director will make the confidentiality determination. Following this determination, the confidential information may be added to this attachment through a Letter of Agreement (see Section 6 (Amendments) and Attachment 2 (Sample Letter of Agreement)). The Energy Commission will not disclose information subject to an application for confidential designation except as provided in Section 19.

- **When submitting products containing confidential information**, the Recipient must mark each page of any document containing confidential information as "confidential" and present it in a sealed package to the Contracts, Grants, and Loans Office.

The Commission Agreement Manager may require the Recipient to submit a non-confidential version of the product, if it is feasible to separate the confidential information from the non-confidential information.

Identification of Project-Relevant Independently Funded and Pre-Existing Intellectual Property

- The Recipient must identify all project-relevant pre-existing intellectual property and project-relevant independently funded intellectual property in Section 3 of this attachment prior to the effective date of the Agreement, or within sixty (60) days of becoming aware that the property has been or will be used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement. This attachment may be amended by a Letter of Agreement (see Section 6 (Amendments) and Attachment 2 (Sample Letter of Agreement)).
 - **"Project-relevant pre-existing intellectual property" and "project-relevant independently funded intellectual property"** mean pre-existing and independently funded intellectual property used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement.
 - **"Pre-existing intellectual property"** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that the Recipient or a third party owned or possessed prior to the effective date of this Agreement and that have not been developed, altered, or reduced to practice with Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

- **“Independently funded intellectual property”** means: (a) inventions, technologies, designs, drawings, data, software, formulas, compositions, processes, techniques, works of authorship, trademarks, service marks, and logos that are created, conceived, discovered, made, developed, altered, or reduced to practice by the Recipient or a third party during or after the Agreement term without Energy Commission or match funds; and (b) associated proprietary rights to these items that are obtained without Energy Commission or match funds, such as patent and copyright.

“Works of authorship” does not include written products created for Agreement reporting and management purposes, such as reports, summaries, lists, letters, agendas, schedules, and invoices. The Commission owns such products regardless of their funding source.

- **Failure to identify project-relevant pre-existing or independently funded intellectual property** in this attachment may result in the property’s designation as “intellectual property” that is subject to licenses and royalties, as described in Sections 21 (Intellectual Property) and 22 (Royalty Payments to the Commission).

2. Confidential Products and/or Confidential Information Contained within Products

The Energy Commission designates the following products (or information contained within products) as confidential, in accordance with Title 20 California Code of Regulations Section 2505(c)(2)(B).

☒ There are no confidential Products or confidential information contained within Products.

3. Project-Relevant Pre-Existing Intellectual Property and Project-Relevant Independently Funded Intellectual Property

The Recipient has identified the following items as "project-relevant pre-existing intellectual property" and/or "project-relevant independently funded intellectual property," as defined in Sections 20 (Pre-Existing and Independently Funded Intellectual Property) and 25 (Definitions) of these terms and conditions. The Commission makes no ownership, license, or royalty claims to this property, and may only access it for the purposes described in Section 20.

☐ There is no project-relevant pre-existing intellectual property or project-relevant independently funded intellectual property.

Name/Title of Intellectual Property	LMP Price Forecast Model														
Type of Intellectual Property	<input checked="" type="checkbox"/> Project-relevant pre-existing intellectual property <input type="checkbox"/> Project-relevant independently funded intellectual property <table border="0"><tr><td><input type="checkbox"/> Invention</td><td><input type="checkbox"/> Process</td></tr><tr><td><input checked="" type="checkbox"/> Technology</td><td><input type="checkbox"/> Technique</td></tr><tr><td><input checked="" type="checkbox"/> Design</td><td><input type="checkbox"/> Work of Authorship</td></tr><tr><td><input type="checkbox"/> Drawing</td><td><input type="checkbox"/> Trademark/ Service mark</td></tr><tr><td><input type="checkbox"/> Data</td><td><input type="checkbox"/> Logo</td></tr><tr><td><input checked="" type="checkbox"/> Software</td><td></td></tr><tr><td><input checked="" type="checkbox"/> Formula</td><td></td></tr></table>	<input type="checkbox"/> Invention	<input type="checkbox"/> Process	<input checked="" type="checkbox"/> Technology	<input type="checkbox"/> Technique	<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Work of Authorship	<input type="checkbox"/> Drawing	<input type="checkbox"/> Trademark/ Service mark	<input type="checkbox"/> Data	<input type="checkbox"/> Logo	<input checked="" type="checkbox"/> Software		<input checked="" type="checkbox"/> Formula	
<input type="checkbox"/> Invention	<input type="checkbox"/> Process														
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<input type="checkbox"/> Drawing	<input type="checkbox"/> Trademark/ Service mark														
<input type="checkbox"/> Data	<input type="checkbox"/> Logo														
<input checked="" type="checkbox"/> Software															
<input checked="" type="checkbox"/> Formula															
Registered or Pending Intellectual Property (i.e., copyrights, patents, or trademarks that are registered or pending with the U.S. Copyright Office or the U.S. Patent and Trademark Office)	<input type="checkbox"/> Copyright <input type="checkbox"/> Patent <input type="checkbox"/> Trademark/ Service mark Name of owner: Number and date: <i>For pending applications</i> Name of applicant: Application number and date:														
Unregistered Intellectual Property	<input type="checkbox"/> Copyright <input type="checkbox"/> Trademark/ Service mark <input checked="" type="checkbox"/> Trade Secret Name of owner: The Energy Authority														
Description of how the property will be or has been used to support a premise, postulate, or conclusion referred to or expressed in any product under the Agreement	The LMP Price Forecast Model will be used to help make charging/discharging decisions and create bid curves for bidding the battery into the CAISO market. The LMP Price Forecast Model is valuable to The Energy Authority (TEA), because the trade secret has not been disclosed to others. TEA, among its other businesses, engages in electricity trading and resource management on behalf of its clients and exclusively serves municipal and state-owned utilities. One key element of providing														

	<p>value to its clients through energy trading and resource management is the use of price forecasts. TEA has invested heavily in talented quantitative analysts to develop this and other sophisticated models to provide its clients a competitive advantage in the market, which in turn provides TEA a competitive advantage in offering its services to those clients. Should competitors have access to TEA's tools to perform price forecasts they could offer these services to TEA's existing or prospective clients to the detriment of TEA and its owners.</p> <p>The LMP price forecast models are maintained and used in-house and are not distributed to TEA's clients or made available publicly. TEA employees also are required to sign non-compete arrangements so, should they leave TEA, they could not use their knowledge to assist TEA's competitors.</p>
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REDWOOD COAST Energy Authority

STAFF REPORT

Agenda Item # 6.1

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Lou Jacobson, Director of Demand Side Management
SUBJECT:	PG&E Energy Watch Master Services Agreement General Conditions

SUMMARY

The majority of RCEA's energy efficiency customer programs are funded through RCEA's Energy Watch Partnership with PG&E. The 2016-18 Energy Watch contract with PG&E is sunsetting, and efforts to negotiate and finalize 2019 contracts, budgets, and energy saving goals are advancing. Staff are currently focused on two specific documents, the 2019:

1. Master Services Agreement (MSA), and
2. The Contract Work Authorization (CWA).

The MSA sets the general terms and conditions of our Energy Watch contract. Staff have coordinated with RCEA's General Counsel to negotiate an updated MSA with PG&E. The attachment presents the MSA with RCEA's recommended revisions incorporated. RCEA staff submitted this version to PG&E and are currently waiting for their final response and approval.

Staff recommend that RCEA move to approve and execute the MSA in preparation for the execution of the CWA later in the calendar year. The CWA sets scope of services, budget and energy saving goals. RCEA staff currently expect that the CWA will be a change order that extends scoping from 2018 through 2019 while adjusting budget and energy saving goals downward. PG&E has reported that they intend to deliver RCEA staff an updated CWA in the coming weeks. Staff will coordinate with Counsel and seek approval in November or if necessary, December.

FINANCIAL IMPACTS

The execution of the MSA carries no immediate financial impact as it only sets general terms and conditions. The CWA will likely impact finances. Due to the current uncertainty, staff will report the financial impacts associated with the CWA when the terms are ready to be finalized.

RECOMMENDED ACTION

1. Approve PG&E Energy Watch Contract Master Service Agreement General Conditions and authorize Executive Director to execute any associated documents contingent on final review and approval of any revisions by RCEA legal counsel.

ATTACHMENTS

PG&E Energy Watch Contract Master Service Agreement General Conditions

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Each of the following documents is attached hereto and incorporated herein:

EXHIBIT 1	Prime Supplier Subcontracting Plan Instructions
EXHIBIT 1A	Prime Supplier Subcontracting Plan
EXHIBIT 2	PG&E's Supply Chain Responsibility Policy
EXHIBIT 2A	Policy Regarding Utilization of Small Business Concerns and Small Disadvantaged Business Concerns
EXHIBIT 3	Injury and Illness Prevention Program Compliance Certificate
EXHIBIT 4	PG&E Drug and Alcohol Abuse and Testing Policies
EXHIBIT 5	PG&E Contractor Document Retention and Production Requirements
EXHIBIT 5A	Document and Data List
EXHIBIT 6	Audit Rights
EXHIBIT B	Confidentiality and Data Security
EXHIBIT C	Non-Disclosure and Use of Information Agreement
EXHIBIT D	Customer Satisfaction

1. DEFINITIONS

- 1.1 **"Bidder"**: The entity submitting a bid Proposal to PG&E to perform Work under this Contract or a CWA.
- 1.2 **"Change Order"**: A revision or modification to the Contract reflected on a PG&E Field Order form or a PG&E Change Order form.
- 1.3 **"Contractor or Consultant"**: The entity or entities entering into this Contract with PG&E to perform the Work.
- 1.4 **"Contract"**: This executed master service agreement between PG&E and Contractor, including the cover page signed by each Party, each CWA, the Specific Conditions and these General Conditions, together with any and all attachments and exhibits, all of which together shall constitute the Contract.
- 1.5 **"CPUC"**: The California Public Utilities Commission.
- 1.6 **"Customer"**: PG&E's utility customers, both residential and commercial.
- 1.7 **"CWA"**: Contract Work Authorization. If specified in the Specific Conditions of this Contract, Work may be assigned to Contractor through CWAs which are signed by both PG&E and the Contractor. The terms and conditions of this Contract shall apply independently to each CWA executed by both Parties.
- 1.8 **"Day"**: Unless otherwise specified, reference to a "day" means a calendar day.
- 1.9 **"FERC"**: The United States Federal Energy Regulatory Commission.
- 1.10 **"Malicious Code"**: Collectively, any malicious or unauthorized code, scripts, routines or techniques (including without limitation any virus, spyware, ransomware or other malware) that is designed to erase data or programming, or infect, impair, modify, record, take control of, disrupt, damage, destroy, disable, shut down or permit or cause unauthorized access to or misuse of a computer system or any component thereof.
- 1.11 **"NERC"**: North American Electric Reliability Corporation, which enforces reliability standards with all users, owners and operators of the bulk power system in the United States.
- 1.12 **"Party" or "Parties"**: In the singular, PG&E or Contractor, and in the plural, both PG&E and Contractor.
- 1.13 **"PG&E"**: Pacific Gas and Electric Company, a California corporation.
- 1.14 **"Proposal"**: Bidder's firm bid quotation and package to perform Work under this Contract or a CWA.
- 1.15 **"Subcontract"**: An agreement between Contractor and Subcontractor or between Subcontractors at any level for a portion of the Work under this Contract.
- 1.16 **"Subcontractor"**: Party or parties entering into a Subcontract with Contractor or another Subcontractor to perform a portion of the Work covered by the Contract.
- 1.17 **"Work" or "Services"**: All services (including but not limited to professional, engineering, analytical and other consulting services), labor, supervision, materials, equipment, actions and other requirements to be performed and furnished by Contractor under this Contract.

2. PERFORMANCE OF THE WORK

- 2.1 **INDEPENDENT CONTRACTOR**: In assuming and performing the obligations of this Contract, Contractor is an independent contractor and shall not be eligible for any benefits which PG&E may provide its employees. All persons, if any, hired by Contractor shall be employees or Subcontractors of Contractor and shall not be construed as employees or agents of PG&E in any respect.
- 2.2 **NO GUARANTEE OF WORK: THIS IS NOT AN EXCLUSIVE CONTRACT. THIS CONTRACT DOES NOT GUARANTEE THE CONTRACTOR ANY WORK NOR IS THERE ANY GUARANTEE AS TO ANY VOLUME OR DURATION OF WORK.**
- 2.3 **PRIOR WORK**: Services performed by Contractor pursuant to PG&E's authorization, but before the execution of this Contract, shall be considered as having been performed subject to the provisions of this Contract.
- 2.4 **ADDITIONAL WORK OR CHANGES IN WORK**
 - 2.4.1 **PROCEDURE FOR ADDITIONAL WORK: BEFORE PROCEEDING WITH ANY WORK INVOLVING POSSIBLE CLAIMS FOR EXTRA COMPENSATION NOT SPECIFIED IN THE CONTRACT, CONTRACTOR SHALL SUBMIT IN WRITING A DETAILED ESTIMATE OF THE COST FOR SUCH WORK. For each identifiable task, key milestone and deliverable, Contractor shall state:**

(a) description of work to be performed, including extensions and changes; (b) estimated cost; and
(c) expected completion date.

2.4.2 APPROVAL NEEDED FOR ADDITIONAL WORK: Contractor shall not proceed with any such additional work prior to receiving written authorization or a Change Order issued to Contractor by PG&E. CONTRACTOR AGREES THAT ALL COSTS FOR ANY SUCH MODIFICATION OR CHANGE THAT IS PERFORMED BY CONTRACTOR WITHOUT PG&E'S PRIOR WRITTEN APPROVAL SHALL BE AT CONTRACTOR'S SOLE RISK AND EXPENSE.

2.4.3 PG&E CHANGES TO WORK: PG&E reserves the right to make such changes in Work, specifications, or level of effort, as may be necessary or desirable, and any difference in Contract price resulting from such changes shall be approved in writing by PG&E before the Work is begun.

2.5 TRAINING RECORDS: Contractor shall maintain records demonstrating that its personnel have completed training, as well as any associated assessments required by law, regulation, certifying organization, or PG&E, required to perform Work under this Contract. Contractor shall also maintain copies of certificates, licenses, and other materials demonstrating that its personnel are qualified to safely and correctly complete the Work. Training and qualification records must be provided to PG&E within two business days of request.

2.6 IMPORTANCE OF SAFETY: Contractor recognizes and agrees safety is of paramount importance in the performance of the Work. Contractor is responsible for performing the Work in a safe manner. Contractor shall plan and conduct the Work, and shall require all Subcontractors to perform their Work, in accordance with Contractor's safety program and with all applicable local, state and federal rules, regulations, codes, and ordinances to safeguard persons and property from injury. Contractor further agrees to provide necessary training to its employees and Subcontractors about the foregoing safety and health rules and standards. If PG&E at any time observe Contractor, or any of its Subcontractors, perform the Work in an unsafe manner, or in a manner that may, if continued, become unsafe, then PG&E shall have the right (but not the obligation) to require Contractor to stop the Work affected by the unsafe practice until Contractor has taken corrective action so the Work performance has been rendered safe.

2.7 LAWFUL DISPOSAL OF SAMPLED AND OTHER WASTE: If the Work requires Contractor to perform hazardous waste site investigations, the following shall apply:

2.7.1 PG&E will be responsible for disposal of onsite samples. Charges for disposal of samples taken offsite for testing are included in the Contractor's proposed rates.

2.7.2 Contractor shall lawfully dispose of all test samples after completion of the required tests, along with any residue or byproducts of the testing process. Contractor shall comply with all federal, state and local laws, rules, regulations, and/or ordinances applicable to the services to be performed, including but not limited to, to the extent applicable, the Code of Federal Regulations, Title 40, Part 260 *et seq.* and the California Health and Safety Code, Section 25, 100 *et seq.*, and the Title 22, California Code of Regulations, Section 66,000 *et seq.*

2.8 WARRANTY

2.8.1 GENERAL: Contractor warrants to PG&E the Work shall be performed with the degree of skill and care required by current, good and sound professional procedures and practices, and in conformance with generally accepted professional and industry standards prevailing at the time the Work is performed. This is to ensure the Work is correct and appropriate for the purposes contemplated herein and related specifications. Contractor shall use appropriate numbers of personnel with suitable training, education, experience and skill to perform the Work in accordance with the Contract requirements.

2.8.2 WORKMANSHIP. If applicable and in addition to the warranties implied in fact or in law, Contractor warrants the equipment, material and parts furnished by Contractor, whether or not manufactured by Contractor, shall be of the kind and quality described in the Contract, free of defects in workmanship, material, design, and title, shall be of good and merchantable quality, and shall be fit for its intended purpose. Contractor shall repair or replace at its expense any part of the Work that develops defects due to faulty material or workmanship within one year after being placed in operation by PG&E. Contractor shall at its expense repair or replace other work or equipment damaged as the result of the defects, or as a result of the repairing, and hold PG&E harmless from repair expenses. Neither acceptance nor payment by PG&E shall relieve Contractor from liability under the indemnity or any guarantees contained in or implied by this Contract.

- 2.9 SAFETY AND CUSTOMER SATISFACTION: Contractor shall comply with the requirements of **Exhibit A**, Escalated Complaints/Safety Incidents and **Exhibit D**, Customer Satisfaction, attached hereto and incorporated herein.

3. BILLING AND PAYMENT

- 3.1 LUMP SUM WORK: The following provisions shall apply to all Work performed on a lump sum basis.
- 3.1.1 INVOICE SUBMITTAL INSTRUCTIONS: Contractor shall submit a monthly invoice to PG&E for compensation earned in the preceding calendar month. Contractor shall submit invoices to PG&E in accordance with the requirements of this Section and with the instructions printed in the Contract or Contract Change Order. The Contractor shall include the Contract number and, if applicable, the Contract Work Authorization number, on the invoice.
 - 3.1.2 INVOICE DEFICIENCIES: If PG&E determines Contractor's invoice does not meet the invoicing requirements, PG&E will notify Contractor of the deficiencies or return the invoice to Contractor with noted deficiencies. Contractor shall provide such documents or information correcting such deficiencies, or for invoices returned to Contractor and resubmit a corrected invoice.
 - 3.1.3 Payment by PG&E to Consultant for Work performed on a lump sum basis will be monthly, in the full amount of the cost of the Work performed less any negotiated percentage withholding, computed in accordance with the terms of the Contract, and satisfactorily completed during each month. All payments will be made, subject to PG&E approval, within thirty (30) days after receipt of a correct invoice. Payment of the balance of the amount will occur at the end of the Contract after all Work is satisfactorily completed. FINAL INVOICE: The final invoice shall be marked "FINAL" and must be received within 60 days after completion of the Work. PG&E will not be liable for payment of any late invoices received by PG&E beyond the 60-day period.
 - 3.1.4 BILLING RATES AND CONFLICTS: Contractor's lump sum price(s) stated in the Contract fee schedule shall not change during the term of this Contract without prior written approval by PG&E. The lump sum price(s) shall be inclusive of all Contractor's overhead costs, administrative and general fees, and profit. To the extent such lump sum price(s), or any invoice or other billing instrument as provided for in this Article 3, "Billing and Payment", contains terms and conditions which are in addition to or in conflict with the terms and conditions in this Contract, whether Specific or General, those terms and conditions in the fee schedule, invoice, or other billing instrument shall be null and void.
- 3.2 TIME AND MATERIALS AND UNIT PRICE WORK: The following provisions shall apply to all Work performed on a time and materials or unit price basis.
- 3.2.1 INVOICE SUBMITTAL INSTRUCTIONS: Contractor shall submit invoices to PG&E in accordance with the requirements of this Section and with the instructions printed in the Contract or Contract Change Order. The Contractor shall include the Contract number and, if applicable, the Contract Work Authorization number or purchase order number, with purchase order line item number(s), on the invoice.
 - 3.2.2 MONTHLY INVOICE: Contractor shall submit a monthly invoice to PG&E for review and approval of compensation earned and reimbursable expenses incurred in the preceding calendar month. Each invoice shall be broken down by Contract tasks; for each task the invoice shall include the following information:
 - a) STATUS: Task description, estimated cost to complete, total cost incurred to date, percentage of Work completed and date completed.
 - b) LABOR: Employee name, employee labor classification, employee salary rate, number of hours spent, and billing rate.
 - c) REIMBURSABLE EXPENSES: Unit cost and quantity of each item of expense.
 - 3.2.3 BILLING RATES AND CONFLICTS: Contractor's billing rates or fees stated in the Contract fee schedule shall not change during the term of this Contract without prior written approval by PG&E. These billing rates and fees shall be inclusive of all Contractor's overhead costs, administrative and general fees, and profit. To the extent such fee schedule, or any invoice or other billing instrument as provided for in this Article 3, "Billing and Payment", contains terms and conditions which are in addition to or in conflict with the terms and conditions in this Contract, whether Specific or General, those terms and conditions in the fee schedule, invoice, or other billing instrument shall be null and void.

- a) Overtime hours shall be billed at straight-time rates, unless otherwise approved by PG&E prior to the use of overtime, and limited to those hours for which Contractor's employee is actually compensated. If applicable, Contractor's overhead cost shall not be applied to the premium portion of the overtime cost.
 - b) Individuals other than employees of Contractor (nonemployees) retained by Contractor, such as Subcontractors, outside Contractors, or agency personnel, shall not be billed as Contractor's employees and shall be shown separately on the invoice. Such nonemployees working in Contractor's established office under Contractor's direct supervision shall be billed to PG&E at the cost charged to Contractor multiplied by 1.05. All other nonemployees shall be billed at Contractor's actual, direct cost.
- 3.2.4 EXPENSES: All reimbursable expenses shall be reasonable, ordinary, and necessary and shall be billed at cost.
- 3.2.5 TRAVEL TIME AND COSTS: All air travel costs within or outside of the United States will be reimbursed only on a coach fare basis and all rental car costs will be reimbursed only on a subcompact rate basis. Travel time to and from the Work site shall be at Contractor's expense.
- 3.2.6 MILEAGE AND USE OF PERSONAL CAR: If Contractor uses its personal car to perform Work and such use is included as a reimbursable expense, normal commuting such as trips from home to first business stop and from the last business stop to home represents personal use of car and shall not be reimbursed. All other reimbursable mileage shall be at the current IRS rate.
- 3.2.7 SUPPORTING DOCUMENTATION: For each expense item over \$100, supporting data and documentation shall be furnished with the invoice. Copies of detailed expense reports to support travel costs shall be attached to the invoice. Although travel receipts need not be attached, Contractor shall retain them for the term of the audit period.
 - a) Each invoice shall be assembled such that attached supporting documentation placed in the order listed in the invoice, and each item of expense chargeable to PG&E shall be highlighted or clearly delineated.
- 3.2.8 INVOICE DEFICIENCIES: If PG&E determines Contractor's invoice does not meet the invoicing requirements, PG&E will notify Contractor of the deficiencies or return the invoice to Contractor with noted deficiencies. Contractor shall provide such documents or information correcting such deficiencies, or for invoices returned to Contractor, Contractor shall resubmit a corrected invoice.
- 3.2.9 FINAL INVOICE: The final invoice shall be marked "FINAL" and must be received within 60 days after completion of the Work. PG&E will not be liable for payment of any late invoices received by PG&E beyond the 60-day period.
- 3.2.10 UNIT PRICE BASIS: Invoices for Work performed on a unit price basis, Contractor shall attach a list stating the unit price item numbers, unit prices, quantities, dollar amounts and other information as required to identify the Work.
- 3.2.11 PG&E PAYMENT: Payment by PG&E to Contractor for Work performed on a time and materials or unit price basis will be monthly, in the full amount due for Work performed less any negotiated percentage withholding, computed in accordance with the terms of the Contract, and satisfactorily completed during each month including reimbursable expenses, if any. All payments will be made, subject to PG&E approval, within thirty (30) days after receipt of a correct, itemized invoice. Payment of any remaining balance of the amount due will occur at the end of the Contract after all Work is satisfactorily completed.
- 3.3 GENERAL INVOICE REQUIREMENTS: Invoices submitted for payment must be in accordance with the service contract order and include the service contract order number. All timelines for payment of invoices run from the date a correct invoice is received by PG&E's Accounts Payable Department and must be submitted and accepted by 6:00 PM on a business day are considered received that same day.
 - 3.3.1 ELECTRONIC INVOICES: Electronic invoices submitted through PG&E's electronic invoicing system and accepted by PG&E's Accounts Payable department **after** 6:00 PM may not be considered received until the next business day.
 - 3.3.2 PAPER INVOICES: Paper invoices must be submitted to PG&E's Accounts Payable department at the following address:

PG&E Accounts Payable
PO Box 7760
San Francisco, CA 94120-7760

INVOICES SUBMITTED TO ANY OTHER OFFICE, LOCATION OR ADDRESS, INCLUDING A LOCAL PG&E OFFICE OR THE DEPARTMENT IN CHARGE OF THE WORK, ARE **NOT** CONSIDERED RECEIVED FOR PAYMENT PURPOSES. The discount and net due date timelines for invoice payment **DO NOT BEGIN** until the receiving location has forwarded a correct invoice to PG&E's Accounts Payable department and received and accepted.

4. INTELLECTUAL PROPERTY

- 4.1 OWNERSHIP OF DELIVERABLES: PG&E shall own all data, reports, information, manuals, computer programs or other written, recorded, photographic or visual materials, or other deliverables including without limitation produced in the performance of this Contract. Contractor shall retain no interest, title or ownership including, but not limited to energy usage data and customer specific information provided by PG&E except as may otherwise be provided in the Contract.
- 4.2 PROPRIETARY RIGHTS: PG&E shall own all proprietary rights, including, but not limited to, exclusive patent and copyright rights, in and to any and all inventions, software, works of authorship, designs or improvements of equipment, tools or processes, including the items referenced in the Section titled "Ownership of Deliverables" (collectively, the "Developments"), conceived, developed, implemented, or produced by Contractor in the performance of this Contract, and Contractor shall retain no ownership, interest or title in or to them except as otherwise provided herein. Contractor agrees to assign and hereby assigns all its right, title and interest in and to the patents, copyrights and other intellectual property rights in the Developments and hereby agrees to fully cooperate and to do all things reasonably necessary to allow PG&E to claim sole ownership, including the execution of documents deemed necessary by PG&E.
- 4.3 USE AND REPRODUCTION RIGHTS: If and to the extent that Contractor retains any preexisting rights in any materials furnished hereunder, including Developments, Contractor hereby grants to PG&E the irrevocable, perpetual, non-exclusive, worldwide, royalty free right and license to (i) make, use, execute, reproduce, display, perform, distribute copies of, and prepare derivative works based upon such preexisting rights and derivative works thereof in connection with PG&E's business and (ii) authorize others to do any or all of the foregoing in connection with PG&E's business. Any claims of Contractor to proprietary rights in materials furnished hereunder must be expressly set forth in this Contract or shall have been previously disclosed to PG&E in writing.
- 4.4 COPYRIGHT REGISTRATION: Notice of PG&E copyright ownership shall be placed by Contractor on all reports, information or instructional manuals, computer programs or other written, recorded, photographic or visual materials or other deliverables to which PG&E has the right of such ownership as provided herein. Such notice shall be placed on the materials in a manner and location as to give reasonable notice of the claim of copyright, and shall consist of the copyright symbol or the word "Copyright" followed by the year in which the material is produced and the words "Pacific Gas and Electric Company". Application for copyright registration shall be the responsibility of PG&E.
- 4.5 ROYALTIES AND LICENSE FEES: Royalties, license fees or other charges for patents, copyrights and other intellectual property for designs, processes, technology, published or unpublished data, information or technical materials including, but not limited to, manuals, computer programs, or other deliverables furnished by Contractor, or for processes or methods employed by Contractor in performing the services, shall be included in the Contract price.
- 4.6 DELIVERY AND RETENTION OF RECORDS: To the extent PG&E does not otherwise specifically request delivery of records or results, Contractor agrees to retain all records and results of Work performed under this Contract for a period of not less than three years from the end of the Contract term. At PG&E's request Contractor will deliver a copy of any or all original field notes, investigative notes, tests, photographs, records, calculations, summaries, reports, and records produced and collected in the course of the Work performed under this Contract.
- 4.7 PUBLIC RELEASE OF RESULTS: PG&E acknowledges that Contractor is a public entity and is subject to public records disclosure laws. To the extent permitted by state law Contractor agrees not to release any results of the Work without first providing PG&E with the material sought to be released and a description of the publication for PG&E's prior approval. Contractor further agrees that no release shall present any material

findings not reasonably inferable from the data. Any public release shall acknowledge PG&E's sponsorship of the Work.

- 4.8 **THIRD PARTY LICENSES:** Contractor represents and warrants that it shall comply (and ensure that its personnel and subcontractors comply) with all third-party licenses, terms of use, policies and procedures that apply to or otherwise govern access to and/or use of any third-party materials made available by PG&E to Contractor under this Contract.
- 4.9 **PUBLIC TESTIMONY:** Contractor agrees, if requested by PG&E, Contractor shall provide testimony before any federal, state or local court, regulatory body or any other public agency to substantiate any Work performed or data, reports, or materials supplied to PG&E if and only if all Contractor costs for such testimony are fully paid by PG&E, and if and only if Contractor has the staffing able to provide such testimony.
- 4.10 **CONTRACTOR'S USE OF PG&E PROPERTY:** PG&E acknowledges that Contractor is a public entity and is subject to public records disclosure laws. To the extent permitted by state law, all records, reports, computer programs, written procedures and similar materials, documents or data, in whatever form, provided by PG&E for Contractor's use to perform Work shall remain PG&E's confidential information and property be returned to PG&E immediately upon completion of Contractor's use for the performance of the Work or earlier upon PG&E's request. Alternatively, Contractor may destroy such information, provided an officer of Contractor certifies the destruction in writing to PG&E.
- 4.11 **NO PUBLICITY:** Contractor shall not include PG&E's name, any reference to this Contract, or any reference to PG&E's purchase or use of any products or services provided by Contractor in Contractor's published customer list or in other publicity or advertisement, including internet, without the prior written consent of an officer of PG&E. The fact the Parties have entered into this Contract does not constitute, nor imply in any way, an endorsement of Contractor by PG&E, and Contractor will not state or imply that PG&E endorses, recommends, or vouches for Contractor in any form of written, verbal, or electronic advertisement, communication, or any other business development effort.

5. CONFIDENTIALITY AND DATA SECURITY

5.1 CONFIDENTIALITY:

- 5.1.1 PG&E acknowledges that Contractor is a public entity and is subject to public records disclosure laws. To the extent permitted by state law. Contractor shall not disclose certain confidential Customer, commercial or personal information ("Confidential Information") or otherwise make it available to any other person, including any affiliate of PG&E that produces energy or energy-related products or services, without the prior written approval of PG&E. "Confidential Information" shall mean:
- a) the Customer's account information and information relating to their facilities, equipment, processes, products, specifications, designs, records, data, software programs, Customer identities, marketing plans or manufacturing processes or products,
 - b) any technical, commercial, financial, or Customer information of PG&E obtained by Contractor in connection with this Contract, either during the Term or prior to the Term but in contemplation that Contractor might be providing the Work or services, including, but not limited to a Customer's energy usage and billing data, data, matters and practices concerning technology, ratemaking, personnel, business, marketing or manufacturing processes or products, which may be information owned by PG&E or by a third party and which may be in the custody of PG&E or third party and which constitutes valuable confidential and proprietary information and/or trade secrets belonging to PG&E, and/or third parties,
 - c) any such confidential information of any third party disclosing such confidential information to PG&E or Contractor in the course of such third party's employment, engagement, business, or other relationship with PG&E or its parent, subsidiary, or affiliated companies, and
 - d) PG&E Data as defined in **Exhibit B**, Confidentiality and Data Security.
- 5.1.2 The Requirements of **Exhibit B**, Confidentiality and Data Security, and **Exhibit C**, Non-Disclosure and Use of Information Agreement, attached, are hereby incorporated into the Contract. Contractor shall ensure that each of its employees and Subcontractors who will receive Confidential Information under this Contract first executes a copy of **Exhibit C**.

- 5.2 **SECURITY:** Based on Contractor's best knowledge, Contractor hereby represents, warrants, and covenants to PG&E that the Work, including any hardware, software, firmware, equipment and other deliverables, does not and will not contain or make available any Malicious Code. Without limiting any of PG&E's rights and remedies with respect thereto (all of which are expressly reserved), if Contractor detects or is made aware of Malicious Code in the Work, Contractor shall notify PG&E immediately, remove such Malicious Code, remediate the effects of such Malicious Code, and restore any lost or corrupt data if applicable. Notwithstanding the foregoing, PG&E shall hold Contractor harmless from and against any losses caused by damage to its equipment, systems and data from Malicious Code unintentionally introduced into PG&E's equipment, systems and data. PG&E hereby represents, warrants, and covenants to Contractor that any and all information, data, records, documents and associated software, if delivered from PG&E to Contractor, does not and will not contain or make available any Malicious Code. Without limiting any of Contractor's rights and remedies with respect thereto (all of which are expressly reserved), if PG&E detects or is made aware of Malicious Code in any information, data, records, documents and associated software delivered from PG&E to Contractor, PG&E shall notify Contractor immediately, remove such Malicious Code, remediate the effects of such Malicious Code, and restore any lost or corrupt data if applicable.

6. INDEMNIFICATION, WITHHOLDING AND LIMITATION OF LIABILITY

6.1 INDEMNIFICATION

- 6.1.1 To the extent permitted by law, Contractor shall indemnify, hold harmless and defend PG&E, its affiliates, subsidiaries, parent company, officers, managers, directors, agents, and employees, from and against all claims, demands, losses, damages, costs, expenses, and liability (legal, contractual, or otherwise), which arise from or are in any way connected with any: (i) injury to or death of persons, including but not limited to employees of PG&E or Contractor; (ii) injury to property or other interests of PG&E, Contractor, or any third party; (iii) violation of local, state, or federal common law, statute or regulation, including but not limited to environmental laws or regulations; (iv) strict liability imposed by any law or regulation; (v) a breach of its confidentiality obligations under Article 5.0; (vi) delay or failure to pay any Subcontractor, including but not limited to any demands for payment, invoices, or liens; or (vii) delay or failure to pay any employees, laborers, or other personnel of Contractor or any Subcontractor the compensation, monies, wages, benefits or other payment due or allegedly due; so long as such injury, violation, or strict liability (as set forth in (i) - (vii) above) arises from or is in any way connected with Contractor's performance of, or failure to perform, this Contract, however caused, except where caused by the active negligence, sole negligence, or willful misconduct of PG&E.
- 6.1.2 Contractor acknowledges that any claims, demands, losses, damages, costs, expenses, and liability that arise from or are in any way connected with the release or spill of any legally designated hazardous material or waste and arise from or is in any way connected with the Work performed under this Contract, are expressly within the scope of this indemnity. Likewise, the costs, expenses, and legal liability for environmental investigations, monitoring, containment, abatement, removal, repair, cleanup, restoration, remedial work, penalties, and fines arising from strict liability or the violation of any local, state, or federal law or regulation, attorney's fees, disbursements, and other response costs incurred as a result of such releases or spills are expressly within the scope of this indemnity.
- 6.1.3 Contractor shall, on PG&E's request, defend any action, claim, or suit asserting a claim which might be covered by this indemnity, using counsel acceptable to PG&E. Contractor shall pay all costs and expenses that may be incurred by PG&E in enforcing this indemnity, including reasonable attorney's fees.

- 6.2 **TAX WITHHOLDING:** Contractor represents and warrants that it will withhold all taxes, if any, which are required to be withheld under applicable law with respect to payments to persons hired by Contractor who perform services for PG&E. Contractor shall indemnify and hold PG&E harmless, on an after-tax basis, for any liability incurred by PG&E as a result of Contractor's failure to institute any such required withholding.
- 6.3 **INFRINGEMENT PROTECTION:** Contractor represents to PG&E that, to the best of Contractor's knowledge, the material to be prepared under this Contract will not infringe upon the copyright, patent or license, or otherwise violate the proprietary rights, including trade secret rights, of any person or entity. Contractor agrees to indemnify and hold PG&E, its parent company, subsidiaries and/or affiliates, harmless from and against any and all liabilities, costs and damages arising out of any such infringement, and from any suit, demand or claim made against PG&E, its parent company, subsidiaries and/or affiliates, alleging any such infringement or violation. In addition to the foregoing, if there is such a suit, demand or claim, Contractor agrees, as soon as possible, to either procure for PG&E the right to continue using the material, replace the material with non-

infringing material or modify it so it becomes non-infringing; provided, however that the replaced or modified material shall be equal to that contracted for hereunder and satisfactory to PG&E. Contractor further agrees to pay any judgment or reasonable settlement offer resulting from a suit, demand or claim, and pay any reasonable attorney's fees incurred by PG&E in defense against such suit.

- 6.4 LIMITATION OF LIABILITY: TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, NEITHER PARTY SHALL BE LIABLE UNDER ANY CIRCUMSTANCES, WHETHER IN CONTRACT, TORT, EQUITY, OR OTHERWISE, FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, PUNITIVE, OR EXEMPLARY DAMAGES, EVEN IF SUCH DAMAGES ARE FORESEEABLE, AND REGARDLESS OF WHETHER OR NOT PG&E HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR UNRECOVERED OVERHEAD AND, UNLESS EXPRESSLY AUTHORIZED IN ADVANCE IN WRITING AND SPECIFICALLY ASSUMED BY THE PARTIES, COMMITMENTS TO THIRD PARTIES, SUCH AS SUBCONTRACTS, RENTAL OR LEASE AGREEMENT(S), AND PERSONAL SERVICES CONTRACTS.

7. INSURANCE REQUIREMENTS

- 7.1 Contractor shall maintain the following insurance coverage. Contractor is also responsible for its Subcontractors maintaining sufficient limits of the appropriate insurance coverage.

7.1.1 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY

- 7.1.1.1 Workers' Compensation insurance or self-insurance indicating compliance with any applicable labor codes, acts, laws or statutes, state or federal, where Contractor performs Work.
- 7.1.1.2 Employers' Liability insurance shall not be less than \$1,000,000 for injury or death each accident.

7.1.2 GENERAL LIABILITY

- 7.1.2.1 Coverage shall be at least as broad as the Insurance Services Office (ISO) Commercial General Liability Coverage "occurrence" form, with no coverage deletions.
- 7.1.2.2 The limit shall not be less than \$1,000,000 each occurrence/\$2,000,000 aggregate for bodily injury, property damage and personal injury.
- 7.1.2.3 Coverage shall: a) By "Additional Insured" endorsement add as insureds PG&E, its affiliates, subsidiaries, and parent company, and PG&E's directors, officers, agents and employees with respect to liability arising out of or connected with the Work performed by or for the Contractor. (ISO Form CG2010 or equivalent is preferred). If the Commercial General Liability policy includes a "blanket endorsement by contract," the following language added to the certificate of insurance will satisfy PG&E's additional insured requirement: "PG&E, its affiliates, subsidiaries, and parent company, and PG&E's directors, officers, agents and employees with respect to liability arising out of the work performed by or for the Contractor are additional insureds under a blanket endorsement."; b) Be endorsed to specify that the Contractor's insurance is primary and that any insurance or self-insurance maintained by PG&E shall not contribute with it.

7.1.3 AUTO

- 7.1.3.1 Coverage shall be at least as broad as the Insurance Services Office (ISO) Business Auto Coverage form covering Automobile Liability, code 1 "any auto."
- 7.1.3.2 The limit shall not be less than \$1,000,000 each accident for bodily injury and property damage.

7.1.4 CYBER SECURITY AND PRIVACY LIABILITY INSURANCE.

- 7.1.4.1 Contractor shall obtain and maintain cyber risks insurance providing coverage for at least the following perils and losses: (a) unauthorized use of or access to a computer system containing or giving access to PG&E confidential information; (b) defense of any regulatory action involving a breach of privacy in connection with PG&E confidential information; (c) failure to protect PG&E confidential information from disclosure; and (d) costs of notifying affected individuals and providing credit monitoring for up to one year, whether or not required by applicable law.

- 7.1.4.2 The policy(s) shall have limits of liability of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. If any deductible is applicable, such deductible shall not exceed \$100,000, unless such increased deductible or retention is approved in advance by PG&E in writing.
- 7.1.4.3 PG&E, its affiliates, subsidiaries and parent company, and PG&E's directors, officers, agents and employees shall be named as additional insureds under this policy. If the policy includes a "blanket endorsement by contract," the following language added to the certificate of insurance will satisfy PG&E's additional insured requirement: "PG&E, its affiliates, subsidiaries, and parent company, and PG&E's directors, officers, agents and employees with respect to liability arising out of the work performed by or for the Contractor are additional insureds under a blanket endorsement."

7.2 INSURANCE DOCUMENTATION REQUIREMENTS

- 7.2.1 Contractor shall have all insurance in place before beginning any Work. Upon request, Contractor shall furnish PG&E with certificates of insurance and endorsements of all required insurance. Certificates of insurance and endorsements shall be signed and submitted by a person authorized by that insurer to issue certificates of insurance and endorsements on its behalf.
- 7.2.2 The insurer shall deliver notification to PG&E in accordance with the policy provisions if any of the above-described policies are cancelled before the stated expiration date.
- 7.2.3 PG&E may inspect the original policies or require complete certified copies at any time.
- 7.2.4 The minimum liability insurance requirements established in this Contract are not a representation by PG&E that the insurance limits are sufficient, nor do these requirements in any way limit Contractor's liability under this Contract.
- 7.2.5 Upon request, Contractor shall furnish PG&E the same evidence of insurance for its Subcontractors as PG&E requires of Contractor.

8. FORCE MAJEURE, CANCELLATION AND TERMINATION OF CONTRACT

- 8.1 FORCE MAJEURE: Neither PG&E nor Contractor shall be considered in default in the performance of its obligations under this Contract, except obligations to make payments hereunder for Work previously performed, to the extent that the performance of any such obligation is prevented or delayed by any cause, existing or future, which is beyond the reasonable control, and without the fault or negligence, of the affected Party. If either Party claims that performance of its obligations was prevented or delayed by any such cause, that Party shall promptly notify the other Party in writing and describe the circumstances preventing or delaying performance. The Party so claiming a cause-delayed performance shall endeavor, to the extent reasonable, to remove the obstacles which preclude performance.

8.2 CANCELLATION FOR CAUSE:

- 8.2.1 PG&E may, at its option, cancel or suspend, in whole or in part, this Contract or any one or more CWAs for cause, including but not limited to the following situations: (a) the failure, refusal or inability of Contractor to perform the Work in accordance with this Contract for any reason (except as specified in the section titled "Force Majeure"), following notice and an opportunity to cure and Contractor has failed to do so; provided, however, that safety or security violations may result in immediate cancellation; (b) Contractor has become insolvent, has failed to pay its bills, or has had checks for payment of its bills returned from suppliers and Subcontractors due to insufficient funds; (c) a legal action is placed against Contractor which, in PG&E's opinion, may interfere with the performance of the Work; or (d) in PG&E's opinion, the Work will not be completed in the specified time, PG&E has requested Contractor take action to accomplish the required progress and completion, and Contractor has failed to do so. PG&E will be the sole judge whether Contractor is substantially performing Work in accordance with this Contract.
- 8.2.2 If the Contract is cancelled for cause: (i) PG&E shall pay Contractor for services satisfactorily performed prior to the date of cancellation which are of benefit to PG&E, and (ii) Contractor shall be liable for additional costs to PG&E arising from cancellation. Contractor shall vacate PG&E's worksite but shall not remove material, plant, or equipment without the approval of PG&E. In addition to other remedies, PG&E may, at its option and without prejudice to its other rights, take over and complete all or part of the Work using Contractor's equipment and facilities at the PG&E worksite.

- 8.2.3 If a labor dispute or strike by Contractor's or its Subcontractors' employees threatens the progress or cost of Work, or PG&E's labor relations, or disrupts PG&E's operations, or results in a secondary boycott at PG&E's facilities, PG&E reserves the right to suspend or discontinue the Work of the Contractor or any Subcontractor, or cancel the Contract. This paragraph shall be applicable regardless of whether or not Contractor or any Subcontractor is directly involved in a labor dispute.
- 8.3 **SUSPENSION OR TERMINATION FOR PG&E'S REASONS:** PG&E may suspend or terminate, in whole or in part, the Contract or any one or more CWAs, without cause upon 60 days written notice to Contractor. Contractor shall mitigate its damages so as to minimize its claim, if any, against PG&E. If the Contract is terminated for PG&E's reasons, PG&E shall be liable to Contractor only for the compensation earned on the Work satisfactorily performed to the date of termination, plus costs reasonably incurred by Contractor in terminating its operation.
- 8.4 **CWA TERM AND TERMINATION:** The cancellation, suspension and termination provisions in this Section shall apply to individual CWAs. If PG&E cancels, suspends or terminates the Work under a particular CWA, or if a particular CWA expires, the remainder of this Contract shall not be affected. In addition, if the term of any one or more CWAs continues beyond the termination date of this Contract, the terms and conditions of this Contract shall continue to apply to those CWAs until final completion and acceptance of the Work.
- 8.5 **LIMITATIONS:**
- 8.5.1 In no event shall PG&E be liable for lost or anticipated profits or overhead on uncompleted portions of the Work. Contractor shall not enter into any agreements, commitments, or Subcontracts which would incur significant cancellation or termination costs without prior written approval of PG&E. Such written approval is a condition precedent to the payment of cancellation or termination charges by PG&E.
- 8.5.2 Before PG&E will release final payment, Contractor shall deliver to PG&E any and all reports, drawings, documents and deliverables prepared for PG&E before the effective date of cancellation or termination.
- 8.6 **ASSISTANCE UPON CANCELLATION, TERMINATION, OR EXPIRATION:** Commencing upon expiration, or upon notice to Contractor of cancellation or termination of a CWA or this Contract, and continuing for so long as PG&E may reasonably request, Contractor will provide reasonable assistance requested by PG&E to facilitate the orderly transfer of the Work and subject matter of the CWA or Agreement, respectively, as directed by PG&E. To the extent that compensation for such assistance is not already provided for by the CWA or Contract, PG&E and Contractor will negotiate reasonable compensation not to exceed Contractor's then-current, standard Hourly Rates for similar work.

9. REQUIREMENTS AND POLICIES

- 9.1 **PG&E'S SUPPLY CHAIN RESPONSIBILITY POLICY:** It is PG&E's policy that small and diverse businesses shall have the maximum practicable opportunity to participate in providing the goods and services purchased by PG&E. Small and diverse businesses include Small Business Enterprises ("**SBEs**"); Women, Minority, and Disabled Veteran Business Enterprises ("**WMDVBES**"); and Lesbian, Gay, Bisexual, and Transgender Business Enterprises ("**LGBTBES**").
- 9.1.1 Contractor agrees to comply, and to require all Subcontractors and sub-Subcontractors to comply, with PG&E's Supply Chain Responsibility Policy, **Exhibit 2**, attached hereto and incorporated herein. Contractor shall provide a copy of **Exhibit 2** to each prospective Subcontractor.
- 9.1.2 Contractor shall act in accordance with its completed Prime Supplier Subcontracting Plan, **Exhibit 1-A**, attached hereto and incorporated herein, in the performance of the Work and in the award of all Subcontracts.
- 9.1.3 In addition, if the Contract exceeds \$500,000 (\$1 million for construction contracts), Contractor shall comply with **Exhibit 2A**, Policy Regarding Utilization of Small Business Concerns and Small Disadvantaged Business Concerns, attached hereto and incorporated herein, and the Prime Supplier Subcontracting Plan must include provisions for implementing the requirements of **Exhibit 2A**.
- 9.1.4 Each Bidder's Proposal shall describe how Bidder will comply with the requirements of **Exhibit 2** if awarded the Work. The requirements of **Exhibit 2** and the successful Bidder's response, along with a completed, signed copy of **Exhibit 1-A**, will be incorporated into the Contract.

9.2 FEDERAL REQUIREMENTS

- 9.2.1 EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION REGULATIONS POLICY: During the performance of this Contract and to the extent they may be applicable, Contractor agrees to comply with all laws, orders, and regulations included by summary or reference in the following paragraphs:
- 9.2.2 Executive Order 11246, 41 CFR Part 60-1.4: Equal Opportunity Clause.
- 9.2.3 Executive Order 11246, 41 CFR Part 60-1.8: Nonsegregated Facilities.
- 9.2.4 Vietnam Era Veterans' Readjustment Assistance Act of 1974, 41 CFR Part 60-300.5.a: Equal Opportunity Clause. **Contractor and its Subcontractor(s) shall abide by the requirements of 41 CFR 60-300.5(a). This regulation prohibits discrimination against qualified protected veterans, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans.**
- 9.2.5 Section 503 of the Rehabilitation Act of 1973, 41 CFR Part 60-741.5.a: Equal Opportunity Clause. **Contractor and its Subcontractor(s) shall abide by the requirements of 41 CFR 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.**

- 9.3 EXECUTIVE ORDER 13496 – EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT. To the extent applicable, the employee notice requirements set forth in 29 C.F.R. Part 471, Appendix A to Subpart A are hereby incorporated by reference into this Contract.

- 9.4 CONTRACTOR SAFETY PROGRAM: Contractor represents and warrants that it will perform all applicable Work, and cause all Subcontractors to perform all applicable Work, in compliance with PG&E's Contractor Safety Program Standard Contract Requirements, as may be modified from time to time. The Contractor Safety Program Standard Contract Requirements can be located and downloaded at: www.pge.com/contractorsafety and are hereby incorporated by reference into this Contract. Contractor's failure to comply with the Contractor Safety Program Standard Contract Requirements shall be immediate grounds for termination for cause under this Contract. Notwithstanding the above, Contractor is the "controlling employer" as defined under CalOSHA and will remain responsible for all fines and liability arising from violation of the Contractor Safety Program Standard Contract Requirements and applicable law.

- 9.5 SUPPLIER CODE OF CONDUCT: CONTRACTOR, ITS SUBCONTRACTORS AND THEIR SUPPLIERS AT ALL TIERS, SHALL COMPLY WITH PG&E'S SUPPLIER CODE OF CONDUCT IN THE AWARD AND PERFORMANCE OF ALL CONTRACTS AND SUBCONTRACTS. The Supplier Code of Conduct requires that Contractor and each of its Subcontractors demonstrate a strong commitment to compliance, ethics, sustainability and supplier diversity as a foundation to successful business. Contractor must complete its Work for PG&E in full compliance with the Supplier Code of Conduct, as it may be modified from time to time. Contractor shall access, read and comply with PG&E's Supplier Code of Conduct and shall make it available to its Subcontractors and suppliers. The Supplier Code of Conduct is available at PG&E's website, www.PGE.com, at the link: http://www.pge.com/includes/docs/pdfs/b2b/purchasing/contractor_consultant_and_supplier_code.pdf

9.6 CONFLICT OF INTEREST AND BUSINESS ETHICS

- 9.6.1 REASONABLE CARE: Contractor shall exercise reasonable care and diligence to prevent any actions or conditions which could result in a conflict with PG&E's interest.
- 9.6.2 GIFTS: Contractor or its employees shall not offer or cause to be offered gifts, entertainment, payments, loans and/or other services, benefits or considerations of more than a nominal value to PG&E's employees, their families, vendors, Subcontractors and other third parties.
- 9.6.3 ACCURATE DOCUMENTATION: All financial statements, reports, billings, and other documents rendered shall properly reflect the facts about all activities and transactions handled for the account of PG&E.
- 9.6.4 NOTIFICATION: The Contractor shall immediately notify PG&E of any and all violations of clause 9.5 upon this clause upon becoming aware of such violation.

- 9.7 AVAILABILITY OF INFORMATION: Contractor shall keep accurate records and books of accounts, and shall preserve and make available such records and books of accounts, in accordance with the requirements of **Exhibit 6**, Audit Rights, attached hereto and incorporated herein.
- 9.8 INJURY AND ILLNESS PREVENTION PROGRAM: In the performance of the Work under this Contract, Contractor acknowledges that it has an effective Injury and Illness Prevention Program which meets the requirements of all applicable laws and regulations, including but not limited to Section 6401.7 of the California Labor Code. Contractor shall ensure that any Subcontractor hired by Contractor to perform any portion of the Work under this Contract shall also have an effective Injury and Illness Prevention Program. The person with the authority and responsibility for implementing and administering Contractor's Injury and Illness and Prevention Program shall execute the Compliance Certificate, **Exhibit 3**, attached hereto and incorporated herein.
- 9.9 PG&E DRUG AND ALCOHOL POLICY: PG&E is committed to maintain and promote job safety and health for all workers at its facilities. In addition, PG&E is determined to protect its employees, customers, and the general public while they are on PG&E property from any harm caused by illegal drug and alcohol use by non-PG&E personnel. To accomplish these objectives, PG&E has established a drug and alcohol policy for access to PG&E facilities by its Contractor and Subcontractor personnel. If any personnel of Contractor or its approved Subcontractors perform any Work at PG&E offices and/or other PG&E facilities, Contractor shall comply with PG&E's Drug and Alcohol Abuse and Testing Policies, attached hereto and incorporated as **Exhibit 4**.
- 9.10 DOCUMENT RETENTION AND PRODUCTION REQUIREMENTS: PG&E is committed to maintaining its documents and records so as to satisfy applicable legal, contractual and regulatory requirements and PG&E's on-going business needs. PG&E's requirement for document retention will provide and enable appropriate records management, retrieval and achieve a satisfactory level of security and privacy. Contractor agrees to comply with the requirements of **Exhibits 5 and 5A**, attached hereto and incorporated by reference, to the extent consistent with applicable state law.
- 9.11 CALIFORNIA HEALTH AND SAFETY CODE: The California Health and Safety Code requires businesses to provide warnings prior to exposing individuals to materials listed by the Governor as chemicals "known to the State of California to cause cancer, birth defects or reproductive harm." PG&E uses chemicals on the Governor's list at many of its facilities. In addition, many of these chemicals are present at non-PG&E-owned facilities and locations. Accordingly, in performing the Work or services contemplated under this Contract, Contractor, its employees, agents and Subcontractors may be exposed to chemicals on the Governor's list. Contractor is responsible for notifying its employees, agents, and Subcontractors that Work performed hereunder may result in exposures to chemicals on the Governor's list.
- 9.12 EXPORT CONTROLS. Contractor shall provide PG&E with information and assistance as may reasonably be required in connection with compliance with applicable import and export laws, including but not limited to, Manufacturer's Affidavits, Harmonized Tariff Schedules, Export Control Classification Numbers, and qualification information (e.g. origin) relevant to United States and foreign regulatory approvals for deliverables, products, and other materials furnished hereunder. Contractor shall make such information available to PG&E within five (5) business days following receipt of PG&E's written request.
- 9.13 WORK ON PG&E OR PG&E CUSTOMER PROPERTY: The following provisions shall apply to the extent that the Work under the Contract requires any Contractor or Subcontractor personnel (collectively, "Personnel") to have access to PG&E assets, premises, customer property, or logical access to PG&E data or systems (collectively, "Access").
- 9.13.1 CRIMINAL BACKGROUND CHECKS:
- a) Contractor warrants and represents that it will not assign any Personnel to work requiring Access unless Contractor has performed a criminal background check on each such individual (either at the time of hiring or during the course of employment). Prior to assigning work requiring Access to any Personnel with one or more criminal convictions during the last seven years, Contractor must consider the gravity of the individual's offense, the time since the conviction, the successful completion of parole/probation, the individual's age at the time of conviction, the number of convictions, and the stability of the individual, including favorable work history. Contractor shall also consider the relation of the offense to the nature of the work to be performed.
 - b) Notwithstanding the foregoing, in no event shall Contractor grant Access to an individual with one or more convictions for a Serious Offense(s), which is defined as violent and sex

offenses, crimes against children, domestic violence, fraud, theft (including but not limited to identity theft), embezzlement, all felonies during the last seven years, and/or two or more DUI's in the past three years.

- c) Contractor shall maintain documentation related to its criminal background check investigation for all Personnel requiring Access and make it available to PG&E for audit if requested pursuant to the audit provisions of this Contract.
- d) Contractor also agrees to notify PG&E if any of its Personnel requiring Access are charged with or convicted of a Serious Offense during the course of a PG&E assignment.

9.13.2 FITNESS FOR DUTY: Contractor shall ensure that its Personnel granted Access report to work fit for duty. Personnel with Access may not consume alcohol while on duty and/or be under the influence of drugs that impair their ability to work safely. PG&E expects each supplier to have policies in place that requires their employees report to work in a condition that allows them to perform the work safely. For example, employees should not be operating equipment under medication that creates drowsiness. As a federal contractor, PG&E does not recognize nor allow work to be completed under the influence of marijuana, whether or not it is used for medical reasons.

9.13.3 ELIGIBILITY FOR PG&E WORK: When assigning any Personnel to perform Work requiring Access, Contractor shall submit each person's full name and the last four digits of their social security number to PG&E at the following e-mail address: RecruitingOperations@pge.com. PG&E reserves the right to decline to accept any proposed Personnel, in which case Contractor shall promptly propose a replacement.

9.14 NERC REQUIREMENTS: Pursuant to a NERC directive, PG&E has implemented policies and procedures for the protection of facilities, systems, assets and information that are critical to the operation or support of the Bulk Electric System ("BES"). PG&E identifies these facilities, systems, assets and information in accordance with its internal utility procedures. If this Contract relates to BES Cyber Systems or Bulk Electric System Cyber System Information (as designated by PG&E), then Contractor shall comply with the requirements of Exhibit 7, NERC Requirements and Exhibit 7A, PG&E NERC CIP Program Non-Employee Attestation Form, each attached hereto and incorporated herein. Contractor represents and warrants that it has consulted with PG&E to determine whether Exhibit 7 is applicable to the Work under this Contract.

10. GENERAL PROVISIONS

10.1 AMENDMENTS, SUBCONTRACTS AND ASSIGNMENTS

10.1.1 AMENDMENT: No provision of the Contract will be deemed amended or waived by PG&E without prior written approval in the form of a signed Contract Change Order. No oral statement will modify or otherwise affect the terms and conditions set forth herein.

10.1.2 SUBCONTRACTS: Contractor shall not enter into Subcontracts and no Subcontractor shall be permitted to perform Work without the prior written approval of PG&E. PG&E's approval of any Subcontract shall not relieve Contractor of its obligations to PG&E under this Contract. Contractor's obligations under this Contract shall apply to any Subcontract, and Contractor shall be responsible to PG&E for any damages to PG&E arising out of Subcontracts not in accordance with this Contract. Nothing in the Contract or any subcontract shall create any direct contractual relations between a Subcontractor and PG&E.

10.1.3 ASSIGNMENT: Neither party may assign any of its rights, voluntarily or involuntarily, whether by operation of law or any other manner, or delegate any performance under this Contract, without the prior written consent of the other party. Any purported assignment or delegation of performance in violation of this provision is void. Subject to the foregoing, this Contract is binding upon and shall inure to the benefit of the successors and assigns of the parties

10.2 COMPLIANCE WITH LAWS: Contractor shall comply with all applicable federal, state and local laws, rules and regulations, and shall obtain all applicable licenses and permits for the conduct of its business and the performance of the Work called for in this Contract. Contractor shall comply with all environmental and endangered species requirements and shall conduct its operations in a manner that complies with applicable programs and permits. To the extent Contractor's work is subject to PG&E-specific environmental permits or programs, PG&E will provide Contractor with such permit or program requirements. Unless prohibited by law, Contractor shall hold PG&E harmless from any liability, fine or penalty incurred as a result of Contractor's failure to comply with applicable legal and regulatory requirements.

- 10.3 **REPORTING:** In accordance with Section 7912 of the California Public Utilities Code, Contractor agrees to report annually to PG&E the number of California residents employed by Contractor, calculated on a full-time or full-time equivalent basis, who are personally providing services to PG&E.
- 10.4 **CHOICE OF LAWS:** This Contract shall be construed and interpreted in accordance with the laws of the State of California, excluding any choice of law rules which may direct the application of the laws of another jurisdiction. Any controversy or claim arising out of or in any way relating to this Contract which cannot be amicably settled without court action shall be litigated in a California State Court of competent jurisdiction; or if jurisdiction over the action cannot be obtained in a California State Court, in a Federal Court of competent jurisdiction situated in the State of California.
- 10.5 **DISPUTE RESOLUTION**
- 10.5.1 **EXECUTIVE NEGOTIATIONS:** The Parties shall attempt in good faith to resolve any dispute arising out of or relating to this Contract promptly by negotiations between a vice president of PG&E or his or her designated representative and an executive of similar authority of Contractor. Either Party may give the other Party written notice of any dispute which has not been resolved at a working level. Within 20 days after delivery of such notice, the executives shall meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary to exchange information and to attempt to resolve the dispute.
- 10.5.2 **MEDIATION:** If the matter has not been resolved within 30 days of the first meeting of the executives, either Party may at any time thereafter request mediation by written notice to the other Party. The mediation shall be conducted by a mutually-agreeable mediator with experience mediating complex commercial disputes. If the matter has not been resolved with 60 days after the request for mediation, then either Party may initiate litigation.
- 10.5.3 Except as otherwise expressly provided in this Contract, each Party shall continue to perform its obligations under this Contract pending final resolution of any dispute arising out of or relating to this Contract.
- 10.5.4 **CONFIDENTIALITY OF DISPUTE RESOLUTION PROCESS:** All negotiations and any mediation conducted pursuant to this provision are confidential and shall be treated as compromise and settlement negotiations, to which Section 1119 of the California Evidence Code shall apply, and Section 1119 is incorporated herein by reference.
- 10.5.5 **PRELIMINARY INJUNCTION:** Notwithstanding the foregoing provisions, a Party may seek a preliminary injunction or other provisional judicial remedy if in its judgment such action is necessary to avoid irreparable damage or to preserve the status quo.
- 10.6 **HAZARDOUS MATERIALS:** The California Health and Safety Code requires businesses to provide warnings prior to exposing individuals to materials listed by the Governor as chemicals "known to the State of California to cause cancer, birth defects or reproductive harm." PG&E uses chemicals on the Governor's list at many of its facilities. In addition, many of these chemicals are present at non-PG&E-owned facilities and locations. Accordingly, in performing the Work or services contemplated under this Contract, Contractor, its employee, agents, and Subcontractors may be exposed to chemicals on the Governor's list. Contractor is responsible for notifying its employees, agents, and Subcontractors that Work performed hereunder may result in exposures to chemicals on the Governor's list.
- 10.7 **NON-WAIVER:** The waiver by either Party of any breach of any term, covenant or condition contained in this Contract, or any default in the performance of any obligations under this Contract, shall not be deemed to be a waiver of any other breach or default of the same or any other term, covenant, condition or obligation. Nor shall any waiver of any incident of breach or default constitute a continuing waiver of the same.
- 10.8 **CAPTIONS AND HEADINGS:** Section, paragraph, and other headings contained in this Contract are for reference purposes only and are in no way intended to describe, interpret, define, amplify, or limit the scope, extent or intent of this Contract or any provision.
- 10.9 **ENFORCEABILITY:** If any of the provisions, or application of any of the provisions, of this Contract are held to be illegal or invalid by a court of competent jurisdiction or arbitrator/mediator, PG&E and Contractor shall negotiate an equitable adjustment in the provisions of this Contract with a view toward effectuating the purpose of this Contract. The illegality or invalidity of any of the provisions, or application of any of the provisions, of this Contract will not affect the legality or enforceability of the remaining provisions or application of any of the provisions of the Contract.

- 10.10 INTEGRATION: This Contract constitutes the entire agreement and understanding between the Parties as to the subject matter of the Contract. It supersedes all prior or contemporaneous agreements, commitments, representations, writings, and discussions between Contractor and PG&E, whether oral or written, and has been induced by no representations, statements or agreements other than those expressed herein. Neither Contractor nor PG&E shall be bound by any prior or contemporaneous obligations, conditions, warranties or representations with respect to the subject matter of this Contract.
- 10.11 SURVIVAL: The provisions of this Contract which by their nature should survive expiration, cancellation or other termination of this Contract, including but not limited to provisions regarding warranty, indemnity, insurance, confidentiality, document retention, business ethics and availability of information, shall survive such expiration, cancellation or other termination.

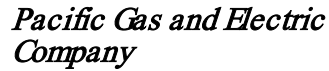
EXHIBIT 1

PRIME SUPPLIER SUBCONTRACTING PLAN INSTRUCTIONS

Contractor shall provide a signed Prime Supplier Subcontracting Plan (Exhibit 1A) describing Contractor's planned utilization of Subcontractors and Suppliers. The first line on the form is completed as a sample. Line by Line instructions follow. Respond "N/A" for anything that is not applicable.

- (1) Provide the complete name of the Subcontractor or Supplier. Do not abbreviate - please spell out any acronyms.
- (2) Provide the California Contractor's License Number of each Subcontractor or Supplier (if applicable).
- (2a) Provide the Expiration Date of the Subcontractor or Supplier's California Contractor's License.
- (3) Indicate whether Subcontractor or Supplier is signatory to a labor union by responding "Yes" or "No."
- (4) Provide CPUC Clearinghouse Verification Order Number (VON) of Subcontractor's or Supplier as listed in the CPUC Clearinghouse Database (if applicable). To locate the VON, diversity status, or to find potential subcontractors, access the following site:
 - CPUC Clearinghouse Database: <https://sch.thesupplierclearinghouse.com/frontend/searchcertifieddirectory.asp>
- (5) Provide Small Business number of Subcontractor or Supplier (if applicable). To determine status or to find potential subcontractors, access the following sites:
 - California Department of General Services (DGS): <http://www.dgs.ca.gov/pd/Programs/OSDS.aspx>
 - U.S. Small Business Administration (SBA): <https://www.sba.gov/contracting/getting-started-contractor/qualifying-small-business>
- (6) Provide the Small Business Code of Subcontractor or Supplier (if applicable). See Small Business Code List in Exhibit 1A.
- (7) Provide a description of the work to be performed or major materials to be supplied by the Subcontractor or Supplier.
- (7a) Indicate whether the work to be performed by each Subcontractor or Supplier includes excavation by responding "Yes" or "No." Refer to [Section 4216 of the California Government Code](#) for the definition of "excavation."
- (8) Indicate the Gold Shovel Status for each Subcontractor or Supplier by responding as appropriate:
 - "N/A" for Subcontractor or Supplier who will not perform excavation work.
 - "Active" for Subcontractor or Supplier with an active Gold Shovel Certification.
 - "Inactive" for Subcontractor or Supplier that does not have current Gold Shovel Certification. Attach an explanation to Exhibit 1A indicating when Contractor anticipates Subcontractor or Supplier will obtain Gold Shovel Certification.

To determine status or to find potential subcontractors, access the following site: <http://www.goldshovelstandard.com>
- (9) Indicate whether each Subcontractor or Supplier will be performing low, medium, or high risk work by responding "Low", "Med", or "High". Refer to PG&E's Contractor Safety Program Contract Requirements at <http://www.pge.com/contractorsafety> for risk definitions.
- (10) Provide ISNworld (ISN) Identification Number of each Subcontractor or Supplier performing medium to high risk work.
 - Respond "N/A" for any Subcontractor or Supplier performing low risk work.
 - Respond "None" if Subcontractor or Supplier has not completed ISN prequalification. Attach an explanation to Exhibit 1A explaining when Contractor anticipates Subcontractor or Supplier prequalification will be complete.
- (10a) Indicate whether Subcontractor or Supplier performing medium to high risk work is Prequalified in ISN by responding "Yes" or "No." Respond "N/A" for each Subcontractor or Supplier performing low risk work.
 - To determine prequalification status or to find potential subcontractors, access the following site: https://www.pge.com/en_US/for-our-business-partners/purchasing-program/suppliers/suppliers.page
- (11) Provide the estimated amount to be paid to each Subcontractor or Supplier.
- (12) Provide the total estimated amount to be paid to all Subcontractors and Suppliers.
- (13) Provide the total estimated amount to be paid to the Prime Contractor or Supplier for work to be self-performed.
- (14) Provide the total bid value in U.S. Dollars for all work to be performed.
- (15) Provide the total estimated amount to be paid to all CPUC Clearinghouse Subcontractors and Suppliers with a VON.
- (16) Provide the total estimated amount to be paid to all Small Business Subcontractors and Suppliers.



The information provided on this form may form the basis of a Statement of Record, against which PG&E may conduct an audit or review to ensure compliance.

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EXHIBIT 2

PG&E'S SUPPLY CHAIN RESPONSIBILITY POLICY

PG&E is committed to supply chain responsibility, including supplier diversity, sustainability, and ethical supply chain practices.

- PG&E's Supplier Diversity Program, launched in 1981, aims to provide diverse suppliers with economic opportunities to supply products and services to PG&E.
- The Supplier Sustainability Program, launched in 2007, encourages supplier responsibility, excellence and innovation.
- Promoting an ethical supply chain means that ethical supplier performance, including a supplier's efforts in each of the following areas, is an important consideration in supplier selection: health and safety, labor issues, human rights, ethical business conduct, and conflicts of interest.

SUPPLIER AND ITS SUBCONTRACTORS OF ALL TIERS MUST COMPLY WITH PG&E'S SUPPLY CHAIN RESPONSIBILITY POLICY IN THE AWARD OF ALL SUBCONTRACTS. This Policy requires that small and diverse businesses shall have the maximum practicable opportunity to participate in the performance of work, including Small Business Enterprises ("**SBEs**"); Women, Minority, and Disabled Veteran Business Enterprises ("**WMDVBes**"); and Lesbian, Gay, Bisexual, and Transgender Business Enterprises ("**LGBTBs**")

In order to be considered for this Contract, the Supplier must comply with the following requirements:

1. Supplier shall provide a copy of this Exhibit 2 to each prospective Subcontractor.
2. Supplier shall provide a separate signed Prime Supplier Subcontracting Plan (Exhibit 1A). Supplier shall also describe its Supply Chain Responsibility efforts and planned outreach to small, diverse businesses.
3. Qualifying Subcontractors must be certified as follows:
 - a. Small Business Enterprises must be registered as a small business with a state or federal agency (e.g. California Department of General Services or Small Business Administration);
 - b. Women-, minority-, and lesbian, gay, bisexual and transgender-owned businesses must be certified by the California Public Utilities Commission's Supplier Clearinghouse; and
 - c. Service disabled veteran-owned businesses must be certified by the California Department of General Services.
4. No later than the 10th of each month, Supplier shall submit its Subcontracting spend with small and diverse Subcontractors using PG&E's electronic reporting system located at the following address: <https://cvmas10.cvmsolutions.com/pge/default.asp>. To establish a User ID for use in the reporting system, Supplier shall submit a request via email to the following e-mail address: PVB1@pge.com.
5. For contracts exceeding \$500,000 (or \$1 million for construction), Suppliers must comply with the Policy Regarding Utilization of Small Business Concerns and Small Disadvantaged Business Concerns, as described in Exhibit 2A. The Prime Supplier Subcontracting Plan for these contracts must include provisions for implementing the terms of this Exhibit 2.

EXHIBIT 2A
POLICY REGARDING UTILIZATION OF SMALL BUSINESS CONCERNS AND
SMALL DISADVANTAGED BUSINESS CONCERNS

The following policy of the United States shall be adhered to in the performance of this Contract:

- a) It is the policy of the United States that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in performing contracts let by any Federal Agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals.
- b) Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of Contractor's compliance with this clause.
- c) As used in this Contract, the term "small business concern" shall mean a small business as defined in Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern (1) which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily business operations are controlled by one or more of such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirement of 13 CFR Part 124. Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other minorities, or any other individual found to be disadvantaged by the Administration pursuant to Section 8(a) of the Small Business Act. Contractor shall presume that socially and economically disadvantaged entities also include Indian Tribes and Native Hawaiian Organizations.
- d) Contractor acting in good faith may rely on written representations by its subcontractors regarding their status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.¹

¹ Notwithstanding this provision of the federal statute, all WMDVBE subcontractors must be verified pursuant to the procedures prescribed in Section 2 of CPUC General Order 156, as such procedures may be amended periodically.

EXHIBIT 3

INJURY AND ILLNESS PREVENTION PROGRAM Compliance Certificate

The undersigned is an authorized representative of _____
(Contractor) and hereby certifies to PG&E as follows:

1. Contractor has an effective Injury and Illness Prevention Program which meets the requirements of all applicable laws and regulations, including but not limited to Section 6401.7 of the California Labor Code, and any Subcontractor hired by Contractor to perform any portion of the Work under this Contract has an effective Injury and Illness Prevention Program; and
2. The undersigned is the person with the authority and responsibility for implementing and administering Contractor's Injury and Illness Prevention Program.

IN WITNESS WHEREOF, the undersigned has executed this Compliance Certificate.

By: _____

Name: _____

Title: _____

Date Signed: _____

EXHIBIT 4

PG&E DRUG AND ALCOHOL ABUSE AND TESTING POLICIES

I. PG&E POLICY

- 1.0 PREFACE: PG&E is committed to maintain and promote job safety and health for all workers at its facilities. In addition, PG&E is determined to protect its employees, customers, and the general public while they are on PG&E property from any harm caused by illegal drug and alcohol use by non-PG&E personnel. To accomplish these objectives, PG&E has established the following drug and alcohol policy for access to PG&E facilities by its Contractor and Subcontractor personnel.
- 2.0 COVERAGE: This policy applies to the personnel of all PG&E Contractors and Subcontractors performing any work or services at PG&E offices and/or any other PG&E facilities.
- 3.0 POLICY: PG&E may deny access to, or remove from, its facilities the personnel of any Contractor or Subcontractor, who PG&E has reasonable grounds to believe has:
- 3.1 Engaged in alcohol abuse or illegal drug activity which in any way impairs PG&E's ability to maintain safe work facilities, to protect the health and well-being of PG&E employees, customers, and the general public, and to promote the public's confidence in PG&E's service and operations; or
 - 3.2 Been found guilty, pled guilty, or pled nolo contendere to a charge of sale or distribution of any illegal drug or controlled substance as defined under Federal or California law within the past five years, unless the criminal record was later expunged or sealed by a court order.
- 4.0 PROHIBITED ACTIVITIES: The following activities are prohibited at all facilities owned or leased by PG&E:
- 4.1 Possessing, furnishing, selling, offering, purchasing, using or being under the influence of illegal drugs or other controlled substances as defined under Federal or California law;
 - 4.2 Possessing, furnishing, selling, offering, or using alcoholic beverage, or being under the influence of alcohol.
- 5.0 ACTIONS: Where reasonable cause exists that paragraph 4 of this policy has been violated, the Contractor or Subcontractor must inform the PG&E representative responsible for the Contract. The Contractor or Subcontractor is also expected to take any or all of the following actions to the fullest extent they are permitted under governing collective bargaining agreements and/or its applicable security and human resources policies.
- 5.1 Search the individual, his or her vehicle, locker, storage area, and personal effects;
 - 5.2 Require the individual to undergo a medical examination to determine their fitness for duty. Such examination shall include obtaining a urine and/or blood specimen for drug or alcohol analysis unless the examining physician deems such tests to be inappropriate;
 - 5.3 Take any other appropriate action to determine if there has been a violation of paragraph 4. Refusal to comply with a request made under this paragraph shall be grounds for denying access to, or immediate removal from, any PG&E facility.
- 6.0 PERMISSION TO RE-ENTER: Any individual who has been denied access to, or removed from, PG&E facilities or violating this policy may obtain permission to enter or reenter provided the individual establishes, to the satisfaction of his or her employer and PG&E, that the previous activity which formed the basis for denying access or removal has been corrected and his or her future conduct will conform with this policy. PG&E retains the right of final approval for the entry or reentry of any individual previously denied access to or removed from PG&E facilities.

II. U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS FOR DRUG AND ALCOHOL TESTING OF COMMERCIAL MOTOR VEHICLE DRIVERS AND OF NATURAL GAS PIPELINE WORKERS

- 1.0 Contractor agrees that, to the extent it may be applicable to this Contract, Contractor shall comply with the U.S. Department of Transportation's (DOT) regulations for (i) commercial motor vehicle drivers, 49 CFR 382, Controlled Substances and Alcohol Use and Testing and (ii) work on gas, hazardous liquid and carbon dioxide pipelines, and liquefied natural gas pipelines, 49 CFR Parts 192, 193 or 195, Control of Drug Use in Natural Gas, Liquefied Natural Gas and Hazardous Pipeline Operations. Contractor shall establish and maintain a drug and alcohol testing program for its employees consistent with 49 CFR Part 40, Procedures for Transportation Workplace Drug Testing Programs and 49 CFR 199, Drug and Alcohol Testing, as applicable. Contractor shall ensure that any Subcontractor hired by Contractor to perform any portion of the Work under this Contract that is regulated by 49 CFR 192, 193, 195 or 382 shall also have a drug and alcohol testing program that complies with applicable DOT requirements.
- 2.0 PG&E's duly authorized representatives, the CPUC, DOT and appropriate agencies shall have, during the term of the Contract and for two years thereafter, access at all reasonable times to Contractor's drug and alcohol testing program records for the purpose of monitoring compliance with DOT regulations. Contractor shall ensure that any Subcontractor hired by Contractor to perform any portion of the Work regulated by 49 CFR Part 192, 193, 195 or 382 under this Contract shall also provide access to its drug and alcohol testing program records to PG&E's authorized representatives, the CPUC, DOT and appropriate agencies for the purpose of monitoring compliance with DOT regulations. Failure to comply with this requirement may, at PG&E's option, result in cancellation or termination of existing contracts and the loss of opportunity to bid on future contracts.

EXHIBIT 5

PG&E CONTRACTOR DOCUMENT RETENTION AND PRODUCTION REQUIREMENTS

1. Contractor agrees to retain all documents and data, whether paper or electronic, created, collected or received for PG&E in the course of performing the Work or furnishing the materials under the Contract, including without limitation, documents, data, plans, drawings, diagrams, investigative notes, field notes, tests, photographs, records, calculations, summaries, and reports; provided that Contractor is not required to retain (i) draft versions of final written documents such as reports, presentations, or other written deliverables and (ii) documents that are inconsequential or ancillary to performance and documentation of the project or its deliverables as follows:
 - ☐ a. the documents and data specified in Exhibit 5A to this Contract and/or in individual work authorizations (CWA) under this Contract; or
 - ☐ b. all documents and data, whether paper or electronic, created, collected or received for PG&E in the course of performing the Work or furnishing the materials under the Contract.
- If neither Section 1(a) or Section 1(b) is checked, Section 1(b) shall apply. If Section 1(a) is checked, but documents and data are not specified in Exhibit 5A, or in a subsequently issued CWA, Section 1(b) shall apply. Collectively, the information shall hereinafter be referred to as "PG&E Contractor Documents."
2. Contractor shall store PG&E Contractor Documents in a secure and organized manner. All PG&E Contractor Documents shall be in legible form, whether paper or electronic. In managing and administering PG&E Contractor Documents, Contractor will comply with the requirements of "The Generally Accepted Recordkeeping Principles[®]" (see www.arma.org), or with modified requirements approved in writing by PG&E, or as State law dictates.
3. Upon completion of the Work or furnishing of the materials under the Contract, or upon completion of the Work or furnishing of the materials under each CWA under the Contract ("Work Completion Date"), PG&E will specify which of PG&E Contractor Documents must be transmitted by Contractor to PG&E ("PG&E Records"), provided however, unless otherwise agreed by PG&E:
 - a. Contractor shall transmit to PG&E, or provide PG&E access to, PG&E Records on request within ten (10) business days or sooner if needed (without limitation) for regulatory, CPUC, safety, audit and/or litigation requirements; RCEA will take all reasonable actions possible to ensure the prompt delivery of PG&E Records as applicable to this sub-section of Exhibit 5.
 - b. PG&E may specify that PG&E Records be delivered to PG&E on a regular basis prior to the Work Completion Date;
 - c. With respect to PG&E Contractor Documents not transmitted to PG&E as PG&E Records, Contractor shall retain all such documents for a minimum of twenty four (24) months after the Work Completion Date ("Post-Termination Retention Period"). During the Post-Termination Retention Period, PG&E Contractor Documents shall be retained by Contractor at no additional cost to PG&E until disposed of in accordance with Section 6 below. To the extent PG&E requests Contractor to retain PG&E Contractor Documents after the Post-Termination Retention Period, the parties will mutually agree on the terms and conditions of such additional retention;
 - d. If PG&E Records are kept in electronic form, the following formats are acceptable for transmission to PG&E: (i) PDF, CAD or TIFF for drawings and diagrams and (ii) PDF for all other documents. If PG&E Records transmitted to PG&E consist of data in a proprietary format, Contractor shall make available to PG&E the proprietary tools or software necessary to access the data including after the transfer of the data to PG&E. This Section 3.d. shall not abrogate Contractor's obligation to produce PG&E Records in an alternative format (e.g., a native format) if set forth elsewhere in the Contract, in which case Contractor shall produce PG&E Records in each of the formats requested.
4. PG&E Contractor Documents shall be treated as confidential and shall not be disclosed to others unless Contractor is required to produce such documents pursuant to legal or regulatory requirements, in which case Contractor shall give PG&E maximum practicable advance notice prior to any production.
5. Contractor shall maintain a system for back-up of electronic PG&E Contractor Documents (e.g., files or databases) so they will be preserved for retrieval in the event that the originals are lost or destroyed.
6. If PG&E directs Contractor to dispose of PG&E Contractor Documents, Contractor shall do so, to the extent consistent with state law, in a confidential and secure manner, whether the format is electronic or paper. Proof of destruction of PG&E Contractor Documents shall be submitted to PG&E upon request.
7. If PG&E provides paper documents to Contractor in order to convert them to digital electronic format, Contractor shall return both the paper documents and the documents converted to digital electronic format to PG&E.
8. Contractor is responsible for ensuring that its Subcontractors regardless of tier comply with the obligations of Contractor where set forth in this Exhibit 5.

9. The terms and conditions of this Exhibit 5, including Exhibit 5A if attached, shall survive the termination of this Contract.

Exhibit 5A

Document and Data List

If Section 1(a) of Exhibit 5 is checked, Contractor agrees that in connection with this Contract or CWA, as applicable, the following PG&E Contractor Documents will be created, received and/or maintained by Contractor:

**[Insert list of all specific PG&E Contractor Documents
required under this Contract (CWA)]**

EXHIBIT 6

AUDIT RIGHTS

1. ACCURACY OF RECORDS.

- 1.1 Contractor shall keep accurate records and books of accounts showing the items and costs billed under this Contract, as well as cost data supporting the Contract proposal and/or other representations, including detailed supporting cost data for assumptions and calculation of indirect cost rates specified in the Contract. Contractor shall also maintain nonfinancial documentation and records related to Work performed hereunder but not delivered to PG&E.
- 1.2 Contractor's books and records must provide sufficient detail to verify the charges shall include, without limitation, the following:
 - Payroll records (hours, employee name, employee classification, multiplier breakdown, etc.) that account for total time worked under the Contract;
 - Canceled payroll checks or signed receipts for cash payroll;
 - Invoices (including all back-up details) for purchases, receiving and issuing documents, and all inventory records for Contractor's stock or capital items;
 - Paid invoices and canceled checks for purchased materials, Subcontractor, and third-party charges;
 - Records relating to air freight and ground transportation, including but not limited to handling, hauling, and disposing of materials/equipment; and
 - Accurate, auditable records of gifts and entertainment to individual PG&E personnel.

2. AVAILABILITY OF RECORDS. Contractor shall preserve and make available its records and books of accounts, both manual and those which are in machine readable form (collectively, "Records"), for a period of three years from the date of final payment under this Contract. If this Contract is terminated, Contractor's Records shall be preserved and made available for a period of three years from the date of termination or of any resulting final settlement, whichever is later. Records which relate to litigation or the settlement of claims arising out of the performance of this Contract, or costs and expenses of this Contract to which exception has been taken by PG&E, shall be retained until such appeals, litigations, claims, or exceptions have been concluded.
3. AUDIT. Upon reasonable notice, PG&E or its representatives shall have the right to audit, without restrictions and at no additional cost to PG&E, at any time during normal business hours, the items and costs described in this Section, including without limitation, all fees and direct and indirect costs incurred by Contractor and billed to PG&E, to verify the rates and costs billed to PG&E hereunder are as represented by Contractor. PG&E may use recognized statistical sampling methods to determine an estimate of the total amount, if any, of PG&E overpayments or underpayments to Contractor.
4. OVERPAYMENTS. Contractor shall refund to PG&E any payments to Contractor which are not in accordance with Contract terms or are not supported by Contractor Records or other valid evidence.
5. ERRORS/IRREGULARITIES. If errors, irregularities, inaccuracies, mistakes or the like ("Errors") are discovered by audit or other means and PG&E relied upon such Errors in accepting the rates, the affected rates shall be adjusted accordingly, with such adjustment retroactive to the effective date of the Contract and any overpayments refunded to PG&E.
6. MISREPRESENTATION OF COST OR PRICING DATA. If any price, including profit or fee, negotiated in connection with this Contract, or any cost reimbursable under this Contract, was increased by any significant amount because Contractor or a Subcontractor misrepresented cost or pricing data in negotiations, the price or cost shall be reduced accordingly. This provision also applies to any future change order or modification to this Contract which involves the submission of cost or pricing data. The knowing misrepresentation of cost or pricing data by Contractor shall be considered a material breach of this Contract.
7. TRANSACTION COSTS. If an audit determines that Contractor overcharged PG&E or if Contractor knowingly submits overcharges or misrepresents cost or pricing data in any amount, Contractor agrees to reimburse PG&E both the amount of the overcharges plus PG&E's associated transaction costs, including but not limited to costs associated with the discovery and determination of the overcharge amount, the discovery of misrepresented cost or pricing data, and the quantification of any resulting overcharges.
8. INTEREST ON OVERPAYMENTS. If PG&E makes an overpayment to Contractor as a result of Contractor over billings, Contractor shall be liable to PG&E for interest on the amount of such overpayment to be computed (1) for the period beginning on the date the overpayment was made to Contractor and ending on the date Contractor repays the amount of such overpayment to PG&E, and (2) at a rate equal to the prime rate charged by the Bank of America, NT&SA, San Francisco, California.
9. SUBCONTRACTS. Contractor shall include the requirements of this Exhibit in each Subcontract.

EXHIBIT B

CONFIDENTIALITY AND DATA SECURITY

1. In addition to the requirements set out in Section 5, Confidentiality, of these General Conditions, Contractor shall comply with the following additional terms of this Exhibit B (Confidentiality and Data Security) regarding the handling of Confidential Information and PG&E Data from PG&E or its Customers as consistent with applicable state law.

2. **NON-DISCLOSURE AGREEMENTS:** Contractor shall have all of its employees, Subcontractors, and Subcontractor employees who will perform Work or services under this Contract sign a non-disclosure agreement in the form attached hereto as Exhibit C (Non-disclosure and Use of Information Agreement ["NDA"]). Prior to starting said Work or services, Contractor shall promptly furnish the original signed non-disclosure agreements to PG&E.

3. **SECURITY MEASURES:** Contractor shall take "Security Measures" with the handling of Confidential Information to ensure that the Confidential Information will not be compromised and shall be kept secure. Security Measures shall mean industry standards and techniques, physical and logical, including but not limited to:

- a. written policies regarding information security, disaster recovery, third-party assurance auditing, penetration testing,
- b. password protected workstations at Contractor's premises, any premises where Work or services are being performed and any premises of any person who has access to such Confidential Information,
- c. encryption of Confidential Information, and
- d. measures to safeguard against the unauthorized access, destruction, use, alteration or disclosure of any such Confidential Information including, but not limited to, restriction of physical access to such data and information, implementation of logical access controls, sanitization or destruction of media, including hard drives, and establishment of an information security program that at all times is in compliance with the industry requirements of ISO 27001.

4. **COMPLIANCE AND MONITORING:** Contractor shall comply with security policies relating to the handling of Confidential Information.

- a. Prior to PG&E's first transfer of Confidential Information to Contractor, Contractor shall provide PG&E with documentation satisfactory to PG&E that it has undertaken Security Measures.
- b. Contractor and PG&E agree to meet periodically, if requested by PG&E, to evaluate Contractor's Security Measures and to discuss, in good faith, means by which the Parties can enhance such protection, if necessary.
- c. Contractor shall update its Security Measures, including procedures, practices, policies and controls so as to keep current with industry standards, including but not limited to NIST and NERC/CIP, as applicable.
- d. PG&E reserves the right to perform onsite security assessments to verify the implementation and ongoing operation and maintenance of security controls. At least annually, Contractor shall assist PG&E in obtaining a copy of any report that documents Contractor's Security Measures.
- e. In the event, PG&E determines Contractor has not complied with Security Measures, PG&E shall provide written notice to Contractor describing the deficiencies. Contractor shall then have sixty (60) calendar days to cure. If Contractor has not cured the deficiencies within sixty (60) calendar days, PG&E may cancel this Contract for cause in accordance with Section 8.2 of these General Conditions.

5. PG&E DATA: PG&E Data shall mean:

- a. all data or information provided by or on behalf of PG&E, including, but not limited to, personally identifiable information relating to, of, or concerning, or provided by or on behalf of any Customers,
- b. all data or information input, transferred, uploaded, migrated, or otherwise sent by or on behalf of PG&E to Contractor as PG&E may approve of in advance and in writing (in each instance),
- c. account numbers, forecasts, and other similar information disclosed to or otherwise made available to Contractor by or on behalf of PG&E and Customers, and
- d. all data provided by PG&E's licensors, including any and all survey responses, feedback, and reports, as well as information entered by PG&E, Contractor or Subcontractor, and Participating Customers through the Program.

6. SECURITY OF PG&E DATA: Contractor agrees that Contractor's collection, management and use of PG&E Data during the Term shall comply with these security requirements and all applicable laws, regulations, directives, and ordinances.

- a. Vendor Security Review: Before receiving any PG&E Data, Contractor shall undergo PG&E's Vendor Security Review process. Contractor may receive PG&E Data if Contractor receives a risk rating of 3, 2 or 1 from PG&E at the conclusion of the PG&E Vendor Security Review process. If Contractor receives a risk rating of 4 or 5 from PG&E, Contractor may not receive PG&E Data until such time Contractor receives a risk rating of 3, 2 or 1.

7. USE OF PG&E DATA:

- a. License: PG&E may provide PG&E Data to Contractor to perform its obligations hereunder. Subject to the terms of the Contract, PG&E grants Contractor a personal, non-exclusive, non-assignable, non-transferable limited license to use the PG&E Data solely for the limited purpose of performing the Work or services during the Term, but not otherwise.
- b. Limited Use of PG&E Data: Contractor agrees that PG&E Data will not be (a) used by Contractor for any purpose other than that of performing Contractor's obligations under this Contract, (b) disclosed, sold, assigned, leased or otherwise disposed of or made available to third parties by Contractor, (c) commercially exploited by or on behalf of Contractor, nor (d) provided or made available to any other party without written authorization, subject to these General Conditions and Exhibit B, Confidentiality and Data Security, and Exhibit C, Non-Disclosure and Use of Information Agreement.
- c. Application Development: Contractor agrees that it will not engage in any application development without or until it has demonstrated compliance with the provisions of these General Conditions and Exhibit B and Exhibit C.

8. SECURITY BREACH: Contractor shall immediately notify PG&E in writing of any unauthorized access or disclosure of Confidential Information and/or PG&E Data.

- a. Contractor shall take reasonable measures within its control to immediately stop the unauthorized access or disclosure of Confidential Information and/or PG&E Data to prevent recurrence and to return to PG&E any copies.
- b. Contractor shall provide PG&E (i) a brief summary of the issue, facts and status of Contractor's investigation; (ii) the potential number of individuals affected by the security breach; (iii) the Confidential Information and/or PG&E Data that may be implicated by the security breach; and (iv) any other information pertinent to PG&E's understanding of the security breach and the exposure or potential exposure of Confidential Information and/or PG&E Data.
- c. Contractor shall investigate such breach or potential breach, and shall inform PG&E, in writing, of the results of such investigation, and assist PG&E (at Contractor's sole cost and expense) in maintaining the confidentiality of such Confidential Information and/or PG&E Data. Contractor agrees to provide, at Contractor's sole cost and expense, appropriate data security

monitoring services for all potentially affected persons for one (1) year following the breach or potential breach, subject to PG&E's prior approval.

d. If requested in advance and in writing by PG&E, Contractor will notify the potentially affected persons regarding such breach or potential breach within a reasonable time period determined by PG&E and in a form as specifically approved in writing by PG&E. In addition, in no event shall Contractor issue or permit to be issues any public statements regarding the security breach involving Confidential Information and/or PG&E Data unless PG&E requests Contractor to do so in writing.

9. **RIGHT TO SEEK INJUNCTION:** Contractor agrees that any breach of this Exhibit B (Confidentiality and Data Security) would constitute irreparable harm and significant injury to PG&E. Accordingly, and in addition to PG&E's right to seek damages and any other available remedies at law or in equity in accordance with this Contract, Contractor agrees that PG&E will have the right to obtain, from any competent civil court, immediate temporary or preliminary injunctive relief enjoining any breach or threatened breach of this Contract, involving the alleged unauthorized access, disclosure or use of any Confidential Information and/or PG&E Data. Contractor hereby waives any and all objections to the right of such court to grant such relief, including, but not limited to, objections of improper jurisdiction or forum non convenience.

10. **CPUC and IOU DISCLOSURE:** Notwithstanding anything to the contrary contained herein, but without limiting the general applicability of the foregoing, Contractor understands, agrees and acknowledges as follows.

a. PG&E hereby reserves the right in its sole and absolute discretion to disclose any and all terms of this Contract and all exhibits, attachments, and any other documents related thereto to the California Public Utilities Commission (CPUC), and that the CPUC may reproduce, copy, in whole or in part or otherwise disclose the Contract to the public.

b. PG&E may be required, or may deem it to be in the best interest of the Program, to disclose to other IOUs certain Program information (excluding any pricing information).

11. **SUBPOENAS:** In the event that a court or other governmental authority of competent jurisdiction, including the CPUC, issues an order, subpoena or other lawful process requiring the disclosure by Contractor of the Confidential Information and/or PG&E Data provided by PG&E, Contractor shall notify PG&E immediately upon receipt thereof to facilitate PG&E's efforts to prevent such disclosure, or otherwise preserve the proprietary or confidential nature of the Confidential Information and/or PG&E Data. If PG&E is unsuccessful at preventing the disclosure or otherwise preserving the proprietary or confidential nature of the Confidential Information and/or PG&E Data, or has notified Contractor in writing that it will take no action to prevent disclosure or otherwise preserve the proprietary or confidential nature of such Confidential Information and/or PG&E Data, then Contractor shall not be in violation of this Agreement if it complies with an order of such court or governmental authority to disclose such Confidential Information and/or PG&E Data.

EXHIBIT C

NON-DISCLOSURE AND USE OF INFORMATION AGREEMENT ("NDA")

THIS AGREEMENT is by and between _____ ("Company"), _____, ("Undersigned") authorized employee of Company (together, Company and Undersigned are referred to as the "Recipient"), and PACIFIC GAS AND ELECTRIC COMPANY ("PG&E") on the date set forth below. Undersigned and Company agree as follows:

1. The Recipient acknowledges that in the course of performing services or work for PG&E, the Recipient will be given access to certain Confidential Information, which includes (a) the Customer's account information and information relating to their facilities, equipment, processes, products, specifications, designs, records, data, software programs, Customer identities, marketing plans or manufacturing processes or products, (b) any technical, commercial, financial, or Customer information of PG&E obtained by Contractor in connection with this Contract, either during the Term or prior to the Term but in contemplation that Contractor might be providing the Work or services, including, but not limited to a Customer's energy usage and billing data, data, matters and practices concerning technology, ratemaking, personnel, business, marketing or manufacturing processes or products, which may be information owned by PG&E or by a third party and which may be in the custody of PG&E or third party and which constitutes valuable confidential and proprietary information and or trade secrets belonging to PG&E, and/or third parties, (c) any such confidential information of any third party disclosing such confidential information to PG&E or Contractor in the course of such third party's employment, engagement, business, or other relationship with PG&E or its parent, subsidiary, or affiliated companies and (d) PG&E Data as defined in Exhibit B, Confidentiality and Data Security (collectively, "Confidential Information").

2. In consideration of being made privy to such Confidential Information, and of the contracting for the Recipient's professional services by PG&E, the Recipient hereby shall hold the same in strict confidence, and not disclose it, or otherwise make it available, to any person or third party (including but not limited to any affiliate of PG&E that produces energy or energy-related products or services) as consistent with applicable state law, without the prior written consent of PG&E. The Recipient agrees that all such Confidential Information:

- a. Shall be used only for the purpose of providing Work or services for PG&E; and
- b. Shall not be reproduced, copied, in whole or in part, in any form, except as specifically authorized and in conformance with PG&E's instructions when necessary for the purposes set forth in (a) above; and
- c. Shall, together with any copies, reproductions or other records thereof, in any form, and all information and materials developed by Undersigned there from, be returned to PG&E when no longer needed for the performance of Undersigned's Work or services for PG&E.

3. The Recipient hereby agrees that any third parties owning any Confidential Information are express third party beneficiaries of this Agreement.

4. The Recipient hereby acknowledges and agrees that because (a) an award of money damages is inadequate for any breach of this Agreement by the Recipient or any of its representatives and (b) any breach causes PG&E irreparable harm, that for any violation or threatened violation of any provision of this Agreement, in addition to any remedy PG&E may have at law, PG&E is entitled to equitable relief, including injunctive relief and specific performance, without proof of actual damages.

5. This Agreement shall be governed by and interpreted in accordance with the laws of The State of California, without regard to its conflict of laws principles.

UNDERSIGNED

CONTRACTOR

By: _____

Company Name: _____

Name: _____

Authorized Agent: _____

Title: _____

Name: _____

Company: _____

Title: _____

Date: _____

Date: _____

EXHIBIT D

CUSTOMER SATISFACTION

Contractors and/ or its Subcontractors (thereinafter "Contractor") Actions & Responsibilities:

Contractor shall perform their obligations under the Contract in order to ensure that all PG&E Customers have a positive experience, including but not limited to those who participate in the Program.

1. Contractor shall locate, recruit, train and oversee the personnel and resources required and provide them with materials, training, processes and procedures to assure consistent, high quality and well documented implementation of the Program.

2. Contractor agrees to maintain sufficient staffing levels to cause all Work to be performed within the time frames specified in the Contract and applicable Statement of Work. Contractor shall assign experienced personnel qualified at the appropriate level of expertise required to perform the Work so assigned. Contractor guarantees the performance of Performing Entities (Suppliers, Sub-Suppliers, Contractors, Subcontractor, Consultants, etc.) performing any part of Contractor's obligations hereunder, and any breach of this Contract by Contractor's personnel constitutes a breach by Contractor. All personnel shall be subject to the direction, supervision, and control of Contractor. Contractor agrees that Contractor is solely responsible for any acts or omissions of Performing Entities while performing Work.

3. Contractor shall respect the rights of the general public, and PG&E Customers, at all times. Contractor shall at all times to be courteous to all PG&E Customers affected by the Work performed under this Contract as well as all members of the general public. Contractor shall ensure that the its conduct of the employees is of a professional manner, and shall not allow its employees to smoke, play radios, use profanity, use abusive language, or display gestures which could be interpreted by the PG&E Customer or the general public as offensive or obscene.

4. Conflicts between the general public and PG&E Customers and the Contractor shall be avoided to the greatest extent possible. If, in the opinion of the PG&E Program Manager, the Contractor or its employees is unsatisfactory or unfit, the PG&E Program Manager will notify Contractor and Contractor will work to resolve the issue..

5. Due to the ongoing relationship between PG&E and its Customer, Contractor shall perform all Work in a timely, conscientious and businesslike fashion with a minimum of delays and disputes. Contractor shall resolve any disputes with Customers in accordance with the provisions of Section 6.0 of the Specific Conditions. TIME IS OF THE ESSENCE UNDER THIS CONTRACT.

6. Cleaning Up: With respect to its operation, Contractor shall maintain all worksites and related structures, equipment, and facilities in a clean, orderly condition during progress of the Work and clean up debris to the reasonable satisfaction of PG&E and Customer. Any unused or leftover materials, garbage and debris shall be promptly removed from Customer's site by Contractor and disposed of at Contractor's expense.

7. Contractor shall abide by all local, state, and federal laws and regulations, including but not limited to Permit and EVA.

8. Contractor shall ensure that an adult (18 years or older) representative of the Customer, must be present at all times during which the Contractor is on the Customer's premises or in a Customer's home where a minor is present. The absence of an adult at a Customer's home shall constitute a Customer "CGI (Cannot Get In)". In such a case, Contractor shall not begin Work. Instead, Contractor shall leave Customer's Home immediately. If an adult is initially present at a Customer's premises but leaves after Contractor has begun Work, Contractor shall cease Work immediately and vacate the premises.



REDWOOD COAST **Energy**Authority

STAFF REPORT **Agenda Item # 8.1**

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Richard Engel, Director of Power Resources
SUBJECT:	Energy Risk Management Plan Quarterly Report

SUMMARY

Staff of The Energy Authority (TEA) and RCEA will provide a comprehensive Energy Risk Management quarterly program update for July through September.

RECOMMENDED ACTION

Accept Energy Risk Management Plan quarterly report.

ATTACHMENTS

Risk Management Plan Quarterly Report slide presentation.



Redwood Coast Energy Authority

Quarterly Risk Update

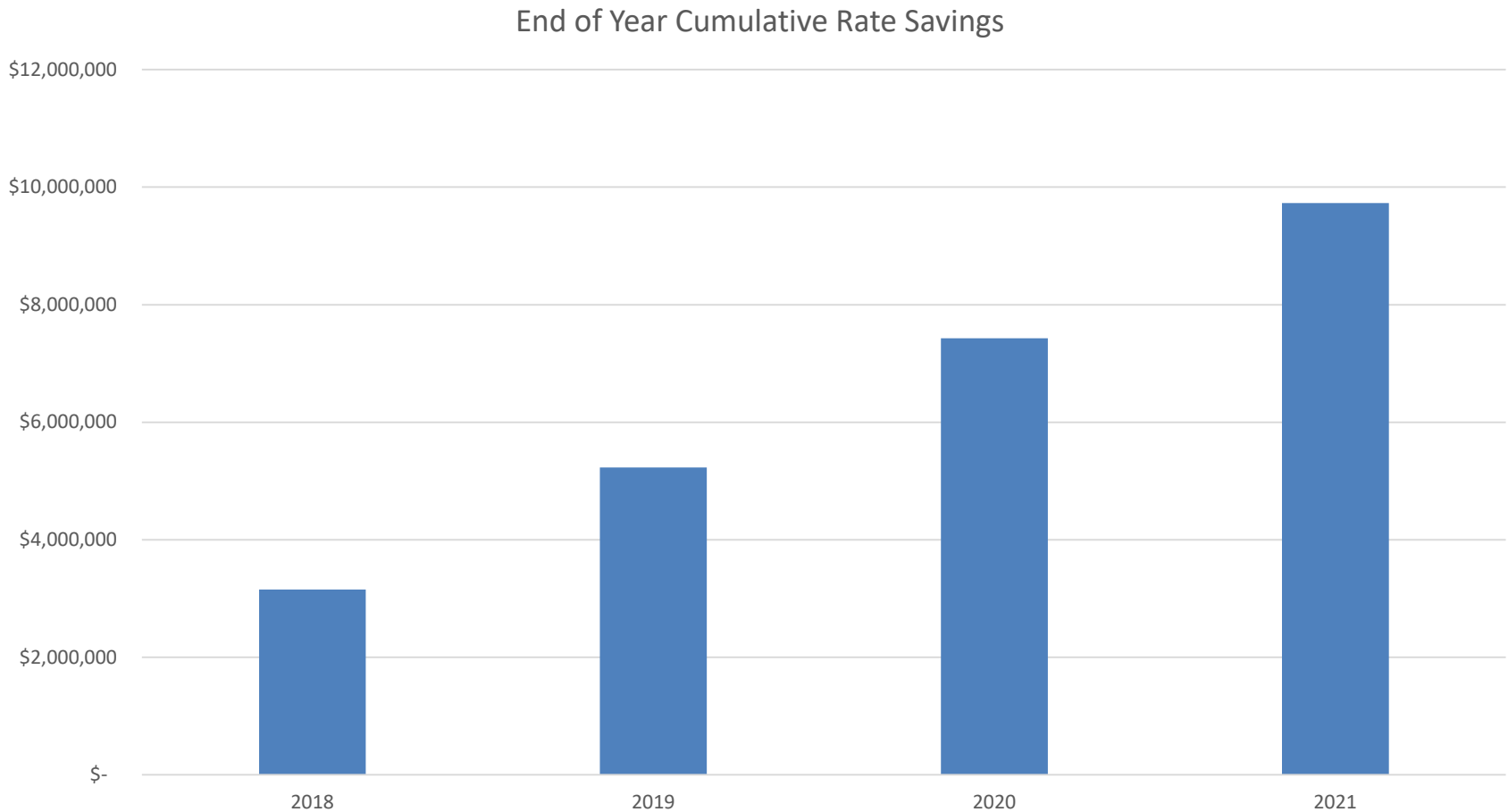
Presented to RCEA Board of Directors

October 15, 2018

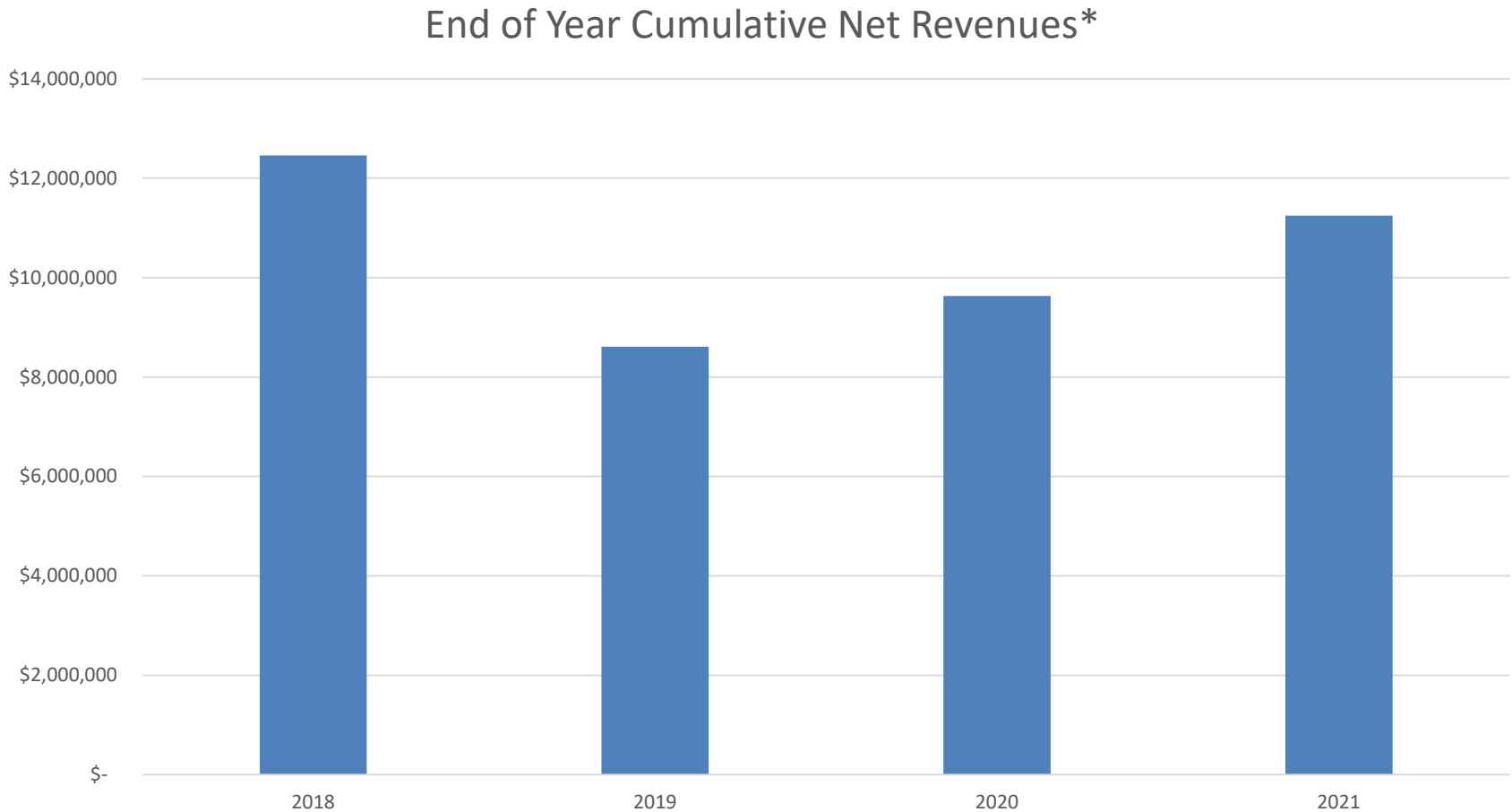
Key Takeaways

- Today's presentation provides an updated financial outlook and is informational only.
- Unfortunately, approval of the Alternative Proposed Decision in PCIA proceeding on October 11 will have negative financial consequences for RCEA
- RCEA will be able to continue offering benefits to Humboldt County. However, program goals will likely need to be revisited, and potentially, reprioritized
- The material change provision in the HRC contract is forecasted to trigger in 2019 through the balance of the agreement
- Staff will work with the Board to provide additional analysis in November to help inform a refreshed discussion of program goals and objectives.

Current Outlook for Rate Savings and Reserve Goals



Current Outlook for Rate Savings and Reserve Goals



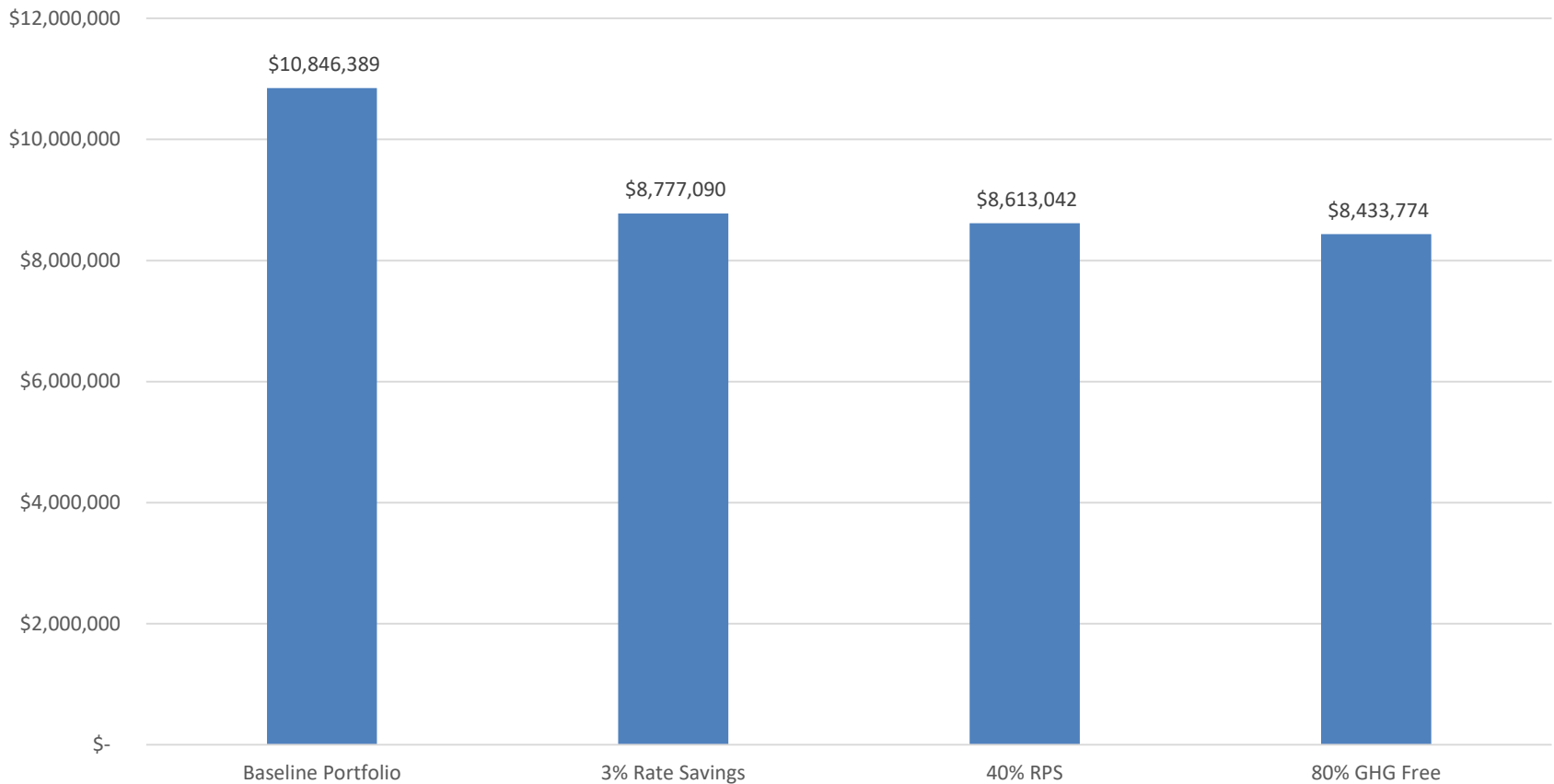
***Accrual basis. Cash basis is approximately \$4 million lower.**

67

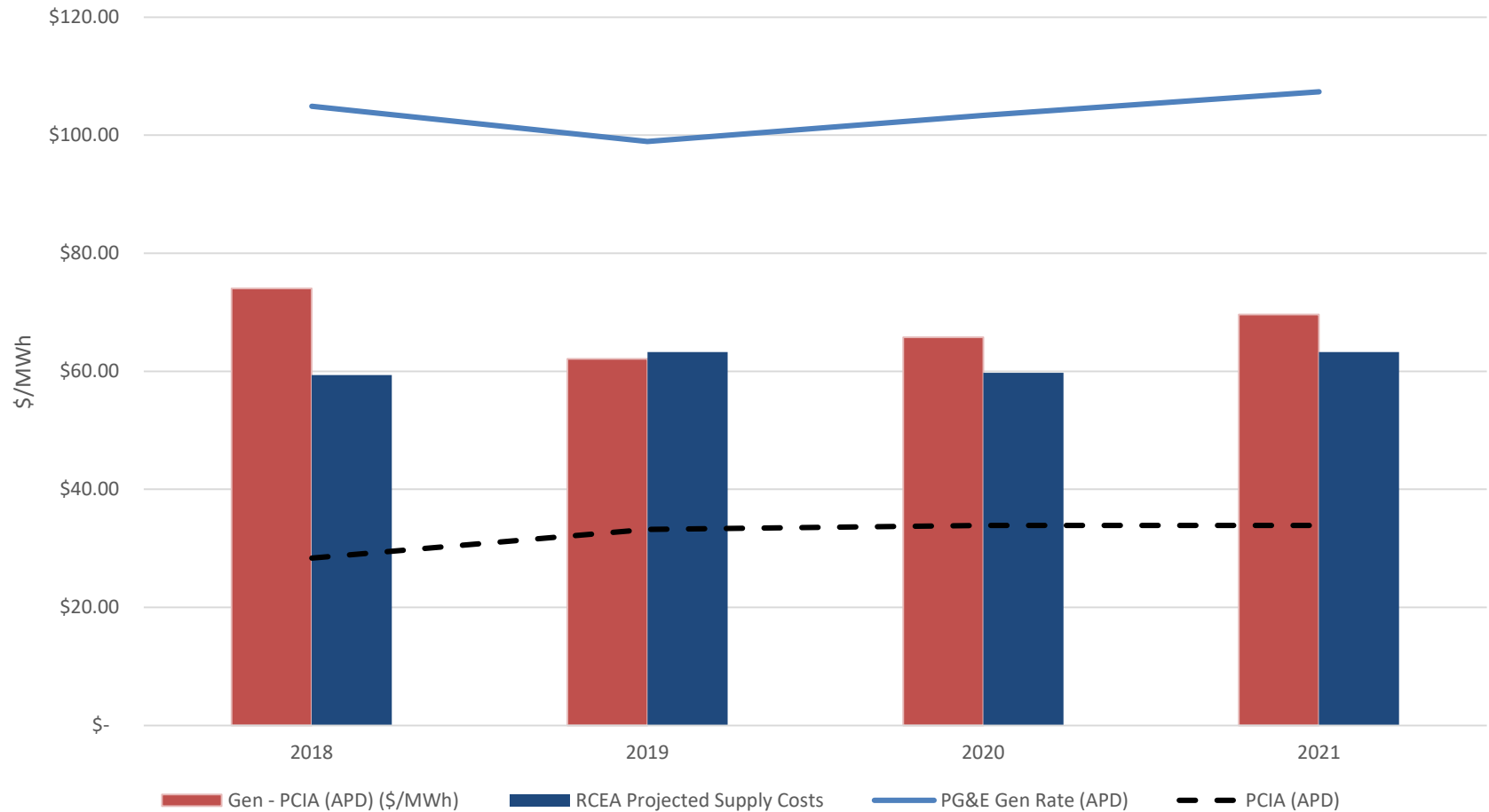
2019 Headroom – Current Forecast

Continuation of 2018 Portfolio Goals + HRC Biomass Contract

Forecast End of 2019 Cumulative Net Revenue



Forecasted Rates

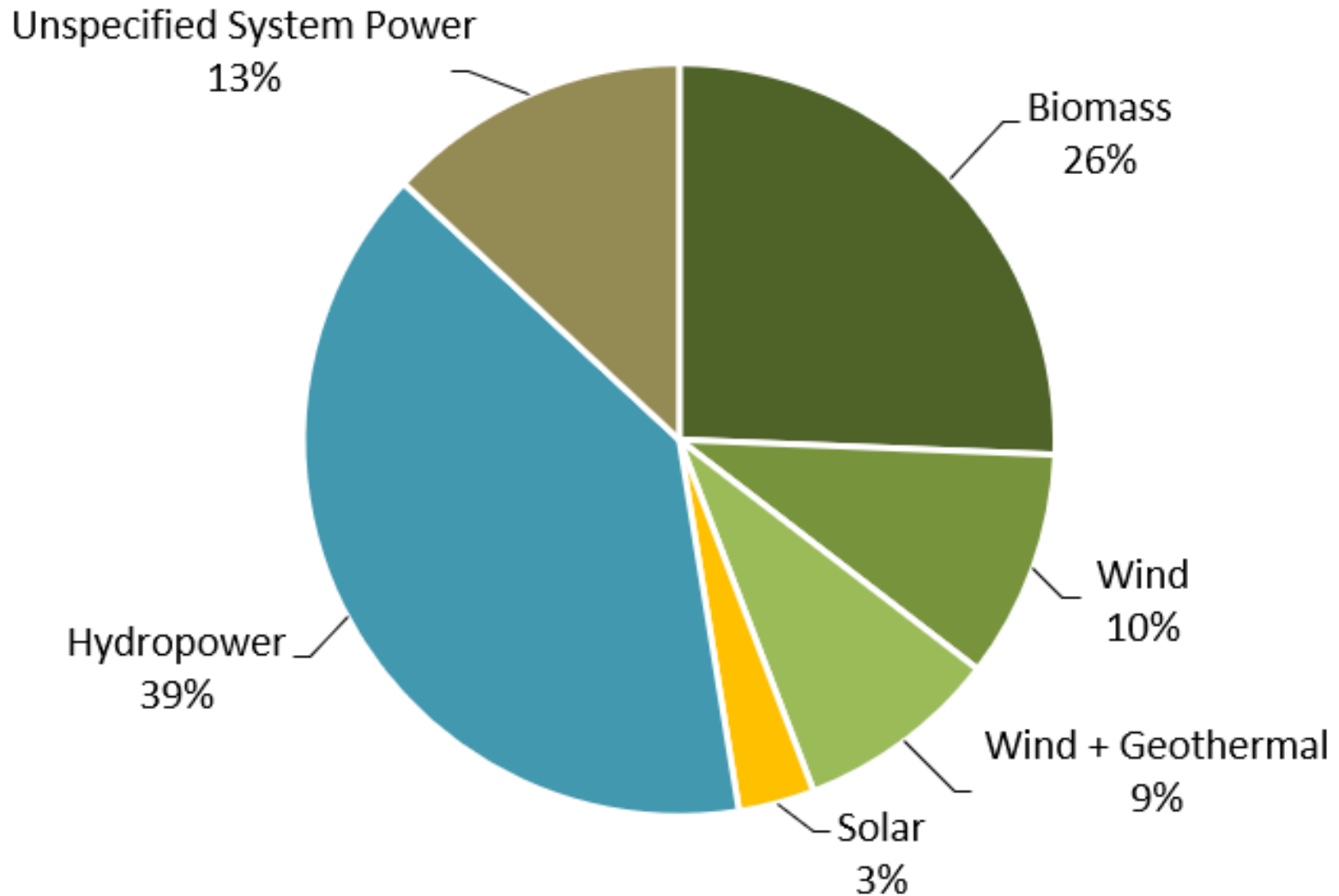


Questions?

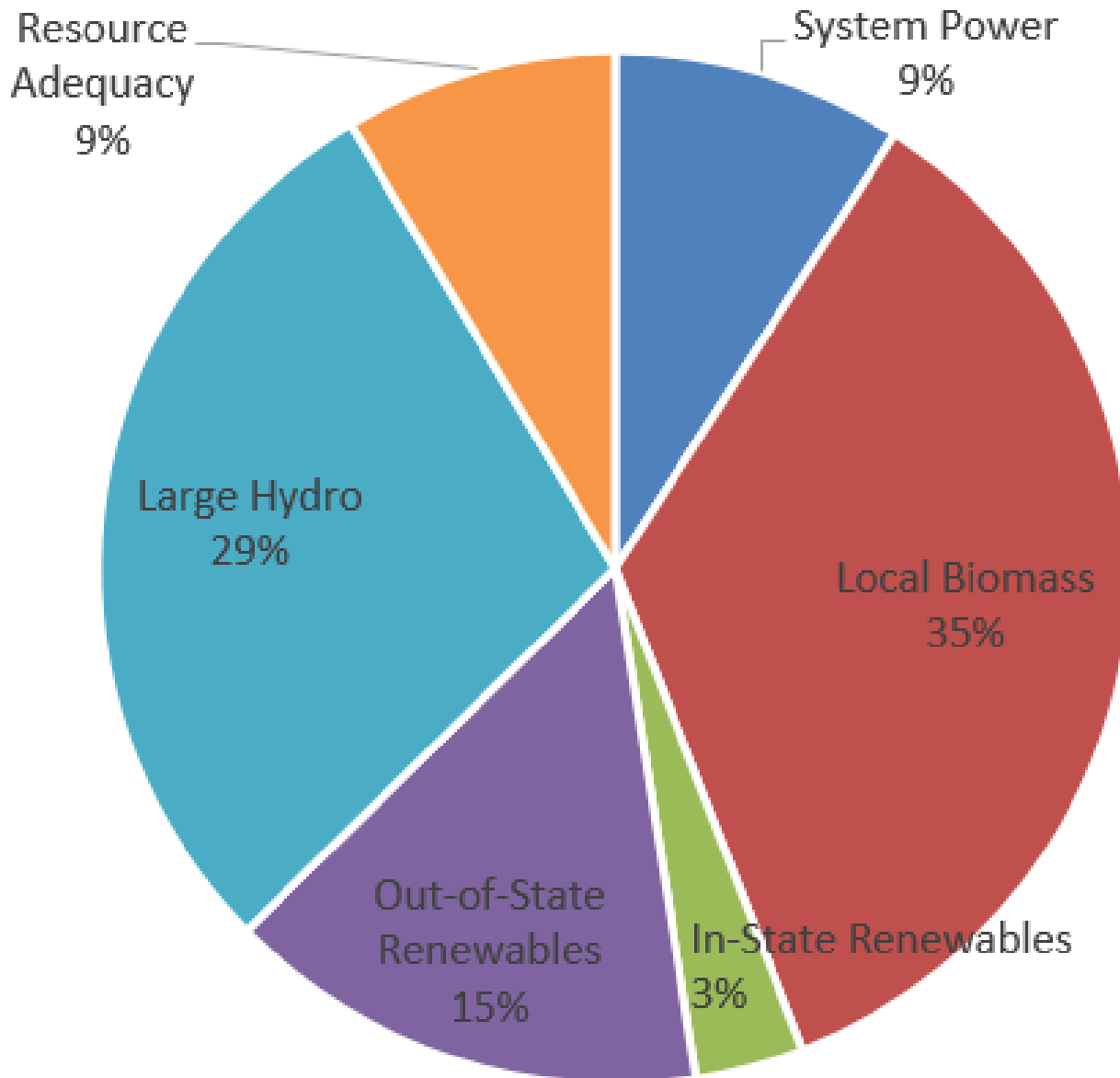
Staff's Current Risk Management Activities

- Staff are working with TEA on the second annual update to RCEA's Risk Management Policy. We will bring the updated policy to the Board for review and approval in December.
- Renewable power procurement initiatives – to be presented to Board today in conceptual form
 - Renewable power solicitation
 - Feed-in tariff
- Staff will develop a comprehensive integrated resource plan in the coming months, broader in scope than the CPUC-compliant IRP delivered earlier this year.
- The following slides provide information on our 2018 portfolio and procurement costs, in response to recent inquiries from Board members and the public.

RCEA 2018 Power Projected Power Mix



RCEA 2018 Projected Energy Product Costs



Comparative Costs of Energy Resources

Based on U.S. and international data

Resource	Cost Range (\$/MWh)
Solar Photovoltaic – utility scale	\$43-\$53
Solar Photovoltaic – rooftop commercial/industrial	\$85-\$194
Solar Photovoltaic – rooftop residential	\$187-\$319
Wind	\$30-\$60
Biomass	\$55-\$114*
Natural Gas – combined cycle	\$42-\$78

* For comparison, RCEA's publicly disclosed contract prices from biomass power are \$65 and \$83/MWh. Other RCEA power prices are proprietary.

Source: Lazard's Levelized Cost of Energy Analysis – Version 11.0

<https://www.lazard.com/media/450337/lazard-levelized-cost-of-energy-version-110.pdf> ⁷⁴



STAFF REPORT
Agenda Item # 8.2

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Richard Engel, Director of Power Resources Allison Campbell, Power Resources Manager
SUBJECT:	Renewable Power Solicitation

SUMMARY

RCEA's initial power procurement strategy for our Community Choice Energy (CCE) program has been to meet the majority of our state-mandated Renewable Portfolio Standard (RPS) requirements through short- to medium-term local biomass contracts and short-term purchases from non-local resources. This approach has allowed us to focus on building financial reserves.

This strategy cannot be maintained indefinitely. California's SB 350 requires that all load-serving entities, including CCEs, begin to procure at least 65% of their RPS power under long-term contracts of 10 years minimum duration, or from generating resources owned by the load-serving entity, by 2021. Furthermore, SB 100 ("The 100 Percent Clean Energy Act of 2018"), signed by the governor on September 10, calls for an aggressive increase in RPS requirements, with a target of 60% RPS by 2030.

As a result of the long-term contracting requirement of SB 350 and increased renewables requirement under SB 100, RCEA is now seeking to add to its renewable energy portfolio. Since program launch, staff have been approached by numerous renewable energy developers proposing projects to add to RCEA's renewable energy portfolio through long-term contracts that could potentially fulfill both the SB 350 and SB 100 mandates.

As new renewable projects can take several years to bring online, and recognizing that other load-serving entities face the same procurement requirements, RCEA is seeking to enter one or more contracts over the next few months, both for prudent planning and financial competitiveness reasons. RCEA's projected long-term contract requirements starting in 2021 are shown in the table on the following page.

(continued next page)

Renewable Portfolio Standard Requirements by Year

	2021	2022	2023	2024	2025	2026	2027
RPS Requirement per SB100 as % of total portfolio	35%	38%	40%	42%	45%	49%	52%
Long term RPS contracts required per SB 350 as % of total portfolio	23%	25%	26%	27%	29%	32%	34%
RCEA projected retail sales (GWh)*	647	646	643	639	638	634	631
RPS power required to be under long-term contracts (GWh)	148	159	169	174	188	201	213

*source: California Energy Commission Integrated Energy Policy Report, Form 1.1c. These projected load values are used here for general indicative purposes. The decline in projected retail sales accounts for behind the meter solar and energy efficiency improvements. Staff and consultants will re-assess RCEA's projected load prior to issuing the proposed solicitation.

Legal counsel has advised that, in order to provide fairness and ensure RCEA gets best value for its CCE procurement budget, all long-term contracting for power resources should be done through open and competitive solicitations. Staff have therefore begun the process of developing such a solicitation. This report outlines the proposed solicitation for Board review and comment.

Staff propose a solicitation that would seek to procure renewable energy from any or all of the following resource types:

- Solar photovoltaic
- Wind
- Small (RPS-eligible) Hydropower

Biomass procurement is not proposed for the solicitation, as we are currently fulfilling the Board's biomass procurement. One of the current biomass contracts will expire in 2019 with an option for renewal in 12-month increments, while the other contract will expire in 2022. Renewal of the contract expiring in 2019 will be brought to the Board for consideration in an upcoming meeting.

The table on the following page summarizes the Board's procurement objectives for each renewable resource type, as reflected in the CCE program guidelines adopted in September 2016 (attached). Based on the Board's goals for new resource development, but recognizing the economic and regulatory hurdles to developing some types of new projects, staff recommends setting different priorities for new vs. existing resource types, as shown in the table below. Similarly, staff recognizes the Board's desire to invest in local projects and proposes setting priority on local projects differently by resource type, as shown.

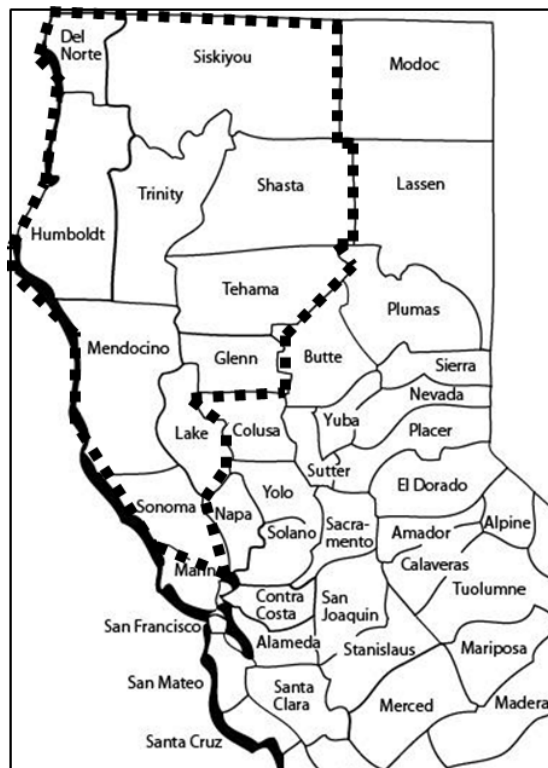
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Proposed Criteria by Resource Type

Resource type	Procurement goal per 2016 Board guidelines	Estimated annual volume (GWh)	Local preference	New vs existing facility
Wind	up to 50 MW	150	Strong preference for local	Strong preference for new
Solar	15 MW by 2022	25	Strong preference for local	Strong preference for new
Hydro	2 MW	15	Northern California OK	Existing OK

Location: The solicitation will make it clear that RCEA strongly prefers projects built within Humboldt County and will use scoring criteria to reflect this. All projects would be required to be located in northwestern California. The map below proposes to limit this area to Humboldt County, counties adjacent to Humboldt County, and counties adjacent in turn to those counties.

Proposed Project Procurement Area



Project size: Staff propose allowing developers to offer projects at varying sizes, subject to RCEA's overall renewable energy procurement goals and the following minimum system sizes:

- Wind: 20 MW
- Solar: 5 MW
- Hydro: 1 MW

Energy storage: The proposed solicitation will not seek energy storage proposals, as RCEA has already committed to the ACV airport microgrid project, which is expected to fulfill RCEA's statutory energy storage requirement for the foreseeable future.

FINANCIAL IMPACTS

The recommended actions presented to the Board in this report would not have any financial impact other than staff time to continue development of the proposed solicitation. Potential financial impacts of the solicitation itself will be analyzed by staff and consultants and presented to the Board along with the solicitation materials at an upcoming meeting. Staff expects offers from developers to show per-MWh cost premiums associated with:

- projects developed locally, as compared with projects built in locations more accessible to labor and material markets
- new projects, as compared to existing projects
- smaller scale projects
- projects with shorter term contracts

A key part of developing the solicitation will be production of a scoring rubric that appropriately weighs these tradeoffs, keeping in mind the values expressed by the Board in its CCE program guidelines adopted in 2016, and further input received from the Board in discussing the current proposal.

RECOMMENDED ACTION

1. Provide comments on staff's proposal to develop and issue a renewable power solicitation.
2. Authorize staff to develop all solicitation materials and bring these back to the Board for review and approval.

ATTACHMENTS

Community Choice Energy Program Guidelines (*Adopted 9/19/16, revised 5/21/18*)

GUIDELINES FOR THE REDWOOD COAST ENERGY AUTHORITY COMMUNITY ENERGY PROGRAM LAUNCH-PERIOD STRATEGY AND TARGETS



*Adopted September 19, 2016
Revised May 21, 2018, Resolution 2018-6*

OVERVIEW & GOALS

The Redwood Coast Energy Authority (RCEA) is proceeding with the launch of a community choice energy program scheduled to commence service to customers in May of 2017. Based on the groundwork established by the RePower Humboldt strategic plan for developing local renewable energy, in June of 2015 the RCEA Board of Directors voted to proceed with developing a community choice energy program for Humboldt County with the following core goal:

Maximize the use of local renewable energy while providing competitive rates to customers.

In addition to this over-arching goal, the program will be designed to pursue the following aspirations and community benefits:

- Environmental Quality
- Local Control and the Ability to Pursue Local Priorities
- Economic Development
- Energy Independence
- Customer Rate-savings, Choice, and Community Programs

Implementing a community choice energy (CCE) program that furthers these goals will be an ongoing and evolving process. Outlined below are targets and objectives for the initial launch phase of the program during years 1-5 of operation. These targets and objectives will have to be adaptively managed based on market conditions and local considerations, but will be used as a guiding framework for the development of RCEA's CCE Program Implementation Plan, power procurement strategy, and the development of local generation projects and programs.

FINANCIAL TARGETS

- A target of approximately 5% of the available program annual budget will be allocated to customer rate savings (based on parity with PG&E generation rates and with PG&E PCIA fees factored in). This equates to a total customer rate savings that averages at least \$2 million per year over the first 5 years, for a targeted total cumulative customer rate savings of at least \$10 million over the first 5 years of operation.
- The program will target building a rate-stabilization/reserve/contingency fund of \$35 million by the end of year five under projected market conditions. The program will be designed to target a minimum reserve of at least \$10 million even under adverse market conditions.
- Over the first 5 years, the program will aim to retain and/or redirect \$100 million dollars or more of rate-payer dollars back into Humboldt County when taking into consideration local power-procurement, customer rate-savings, local-program spending, and allocations toward building the reserve/contingency fund.

POWER OBJECTIVES

- At least 5% more renewable energy (as defined by state law) than PG&E's power mix.
- At least 5% lower greenhouse gas emission rate than PG&E mix.
- Maximize the use of local renewable energy to the extent technically and economically feasible and prudent.
- Strongly support energy efficiency and conservation as core strategies toward achieving the program's environmental, economic, and community goals.

GENERATION PORTFOLIO TARGETS

Existing Local Biomass

- Issue a Request for Offers targeting power purchase agreements with 1-2 existing facilities.
- Structure overall biomass procurement strategy around local waste-management and forest restoration priorities and needs.
- Include environmental, community, and economic considerations in selection process.
- Contingent on price and market conditions, contract for a target of around 20MW of local biomass energy (about 15% of the total RCEA power portfolio).

Existing Local Small Hydroelectric

- Pursue contracting with a target of 2MW of existing local small hydro.
- Ensure that any contracts are structured to support and prioritize the operators' water-management and environmental quality objectives.

New Local Solar Power

- ***Feed-in-tariff power procurement program for small generators***
 - <1MW small/medium renewable generators (solar and other technologies)
 - Eligible projects are designed primarily for wholesale power production (not focused on meeting on-site energy loads).
 - Standardized, upfront purchase price, projected to be in the range of \$80-100/MWh to facilitate project financing.
 - Standardized, upfront, and straightforward contract terms and duration to facilitate project financing.
 - Initial power portfolio allocation to the feed-in-tariff program will be targeted at 6MW.
- ***Utility-scale Solar***

In parallel to the feed-in-tariff program RCEA will pursue the development of additional wholesale-generation solar projects, which could be developed by RCEA and/or third parties in pursuit of overall power portfolio solar content targets:

 - Initial target of 5MW of new local wholesale solar online before the end of 2018.
 - Launch-phase target of 15MW of utility-scale/wholesale solar online by the end of year 5 of operations.
 - Focus project development on underutilized/idle public and industrial sites to limit impacts related to other beneficial uses such as agriculture, economic development, habitat, and open space.

Additional Power Resources

To meet and balance over-arching objectives for rates, renewable energy %, and greenhouse gas emissions as well as to match power generation availability to customer loads demands, the launch-period portfolio will incorporate the following additional power sources:

- Renewable generation projects--wind, solar, geothermal, etc--located outside the County.
- California and/or Pacific Northwest hydroelectric power (which is renewable and emissions-free, but cannot be counted toward CA state renewable portfolio standard requirements). This will not include any power from the Klamath River dams.
- Unspecified "system power" from the CAISO power market pool (while power from the pool is not traceable to any specific generator, in northern CA this power is predominantly generation from natural gas and large hydro power facilities).

Future/Long-term Generation

- ***New Local On-shore Wind Generation***
 - Assess the possibility for up to 50MW of local on-shore wind energy generation.
 - The most viable site for local on-shore wind is Bear River Ridge west of Rio Dell and South of Ferndale.
 - While there are other possible sites in the area, Bear River Ridge has the best wind resource in the County (it is one of the top wind resource areas in the state), Bear River Ridge property owners are willing and interested in developing a wind project, and there was considerable environmental and technical study and evaluation previously conducted which, if utilized, would reduce the development costs and timelines of a potential project.
- ***New Local Small-scale Hydroelectric***
 - Evaluate options for the development of new small-scale hydroelectric that would be compatible with environmental and cultural priorities.

- **Offshore Wind Energy**
 - While not yet deployed in California, offshore wind energy generation is an established technology. The wind resource off of the Samoa Peninsula coastline is one of the best in North America, and the on-shore infrastructure on the peninsula appears well-suited to accommodate offshore wind development.
 - During the initial 5-year launch-phase of Program, RCEA will allocate resources to moving forward with community and stakeholder engagement, site selection, environmental review, and project scoping.
- **Wave Energy**
 - Wave energy technology is in an early stage of development. During the program launch phase, RCEA will build on the previous WaveConnent and CalWave projects to explore and evaluate opportunities for local wave-energy research, development, and pilot-deployment.

PROGRAMS

Enhanced Solar Net-Energy-Metering (rate-based program)

- Self-generation power credited to customer's bill at retail rate plus \$0.01/kWh (+5-10% above base retail generation rate).
- Excess generation credits roll-over from year to year and never expire.
- Excess generation credits can be cashed-out for full retail value.

100% Renewable Energy Option (rate-based program)

- Voluntary opt-up option for premium price (based on actual cost of service).
- Large hydro and system power components of base RCEA power mix replaced with renewable energy (non-local solar, wind, geothermal, etc).
- Evaluate 100% solar and/or 100% local renewable options in the near-term (in or after 2018, after launch and ramp-up of operations).

Programs budget target of an initial allocation of up to \$1,000,000 per year for:

- **Solar and Energy-storage Technical Assistance**
Program emphasis will be on public-agency and community facilities, especially critical infrastructure such as water/wastewater treatment and emergency response.
- **Electric Vehicles and Charging Infrastructure**
Supporting the adoption of electric vehicles provides multiple benefits aligned with CCE Program goals: significant reductions in greenhouse gas emission compared to petroleum-powered vehicles; lower \$/mile fuel costs compared to petroleum vehicles, increasing CCE customer-load base, and providing a flexible electricity demand load that has the future potential to be managed to support the integration of renewable energy.
- **Energy Efficiency, Fuel Switching, and Conservation**
New programs that support and enhance the existing programs offered by RCEA, PG&E, the Redwood Community Action Agency, and others.
- **Match funding for State, Federal, and Foundation Energy Grants**
The majority of grant funding opportunities require some level of local match funding, so tagging/reserving a flexible component of the CCE program budget to be available as-needed for use as energy-related grant match funding will support bringing resources into Humboldt County to pursue our community energy goals.



REDWOOD COAST Energy Authority

STAFF REPORT Agenda Item # 8.3

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Mahayla Slackerelli, Account Services Manager
SUBJECT:	Feed-In Tariff Concept Presentation

SUMMARY

Feed-In Tariff Board Goals

In 2016, the Board of Directors adopted a Feed-in Tariff (FIT) as a goal in the guidelines for the Community Choice Energy (CCE) program. A FIT was included in the guidelines to encourage the development of individual renewable energy projects of one megawatt or less. This program-level design includes a target of six megawatts of capacity. Market intelligence suggests a price of \$90 per megawatt-hour would entice developers to build community-scale renewables locally.

Feed-In Tariff Structures

FITs are a policy mechanism to accelerate small-scale wholesale generation. FIT programs offer power purchase agreements (PPA) at fixed terms, often at above market rates. This mechanism allows developers to acquire financing and build qualified renewable generation projects with confidence in receiving set rates over the contract period. FIT contracts are typically 20 years or longer. This standardized contract instrument minimizes administrative resources invested in local generation procurement.

FIT programs have been employed by several load-serving entities regionally and elsewhere. The two oldest CCE programs in California, MCE and Sonoma Clean Power (SCP), both employ FITs to procure a prescribed amount of community-scale renewable energy. While the two CCE programs have structured their FITs differently, they have both successfully completed several local projects. As a result of their FITs, MCE has 15 projects under contract and SCP is in partnership with six projects. Investor owned utilities, like Pacific Gas and Electric (PG&E), and municipal utilities, like Sacramento Municipal Utility District (SMUD), have also used FIT mechanisms. The PG&E FIT, ReMAT, employed a beneficial pricing mechanism discussed below; however, that

program is no longer in operation due to non-compliance with the Public Utility Regulatory Policies Act. The Energy Authority is currently researching RCEA's potential liability under this legislation.

Pricing

The FIT's baseline price will likely determine the success of this procurement mechanism. Staff consulted with qualified vendors, including local developers, to gather market intelligence for a baseline rate. This research suggests that \$90/MWh would attract developers. This price is consistent with current baseline rates for FITs in the region. While the FIT program is open to all sources of renewable energy generation, these price estimates were based on the most likely technology, solar.

There has been some discussion of narrowing the scope of project locations for land use considerations. These limits would seek to protect open space, agricultural lands, and land that could be better used for other purposes. Considering the small capacity this FIT is seeking to fill, it is reasonable to constrain land options. However, the FIT's baseline price may need to increase to accommodate additional project expenses incurred under these requirements, for example remediation costs of developing on contaminated land.

Another crucial feature for program enrollment is market adjusting pricing. While staff has endeavored to propose a baseline rate that will interest developers and minimize costs, the true market price cannot be forecasted. Staff recommends market adjusting pricing as has been used in some other FITs; if, at the initial price, the program is under enrolled, after a prescribed interval the price would increase. Conversely, if there were a large interest in the program indicating that the price is too high, it would decrease. A price floor and ceiling of \$80/MWh and \$100/MWh would be included to minimize risk for all stakeholders. Staff recommends a \$2.5/MWh change for price adjustments occurring every two months as needed. While staff has included a price floor of \$80/MWh, the price of energy could only practically drop to \$82.50/MWh in the event of high enrollment, given current project design. Please see Attachment A for a market adjusting pricing flow chart, Attachment B for hypothetical market adjusting scenario and Attachment C for the lowest price scenario. While it was in operation, PG&E's ReMAT program employed market adjusting pricing to significant advantage. This mechanism decreased the price for variable resources, like solar, considerably. Market adjusting pricing would allow RCEA to refine the FIT baseline price to the advantage of all stakeholders.

Potential Features

The FIT is designed to support community values. One way of further incentivizing desirable project characteristics in the FIT is offering adders to the base rate. Popular

adders include projects sited on the built-environment or specifically Environmental Protection Agency specified brownfields, small projects to encourage infill and projects using local labor. For example, SCP offers a \$10/MWh adder for projects built by a local business. Once the adders are selected, further analysis will be required to determine the appropriate price increase.

While researching other FITs, the importance of including a mechanism that exclusively encourages serious applicants became clear. Other programs have accomplished this by only providing a short window for applicants to arrange an interconnection agreement with PG&E before being removed from the queue, or by requiring deposits and evidence of site control before accepting the application. Requiring the developers to reach specified project milestones would be another safeguard for project completion. In addition, a mechanism for limiting the capacity that a single developer claims is crucial if the program's goals include supplier diversity. Please see attachment D for a list of mechanisms for ensuring serious applicants.

Next Steps

With Board approval, staff will further develop the FIT program policy. Staff will create a tariff specifying programmatic details, a standardized PPA and an application for developers. Once complete, staff will bring back materials for final Board approval.

FINANCIAL IMPACTS

The recommended actions presented to the Board in this report would not have any financial impact other than staff time to continue development of the proposed tariff.

Looking further ahead to tariff implementation, if RCEA offers a baseline rate at the suggested amount of \$90 MWh, six megawatts over the course of a 20-year contract would cost \$275,000 above market rates. For the purposes of this analysis, the assumed market rate for renewable electricity is \$50/MWh. Please see Attachment E for financial estimates at \$90/MWh at other capacity levels. If market adjusting pricing decreases the baseline rate as far as possible to \$82.5/MWh, which is the lowest it could practically drop, six megawatts over the course of a 20-year contract would cost \$186,000 above market energy rates. Given the present capacity and pricing recommendations even if the program was fully subscribed, indicating the price is too high, the price would only drop to \$82.50/MWh. Please see Attachment C for representation of this scenario. If the rate is set at the top end, \$100/MWh, the subsidy would be \$340,000 over the contract period. Please see Attachment F for ceiling and floor price estimates at other capacity levels.

RECOMMENDED ACTION

Provide staff with feedback on the proposed FIT design.

Direct staff to draft materials for project implementation and bring them back for Board approval.

ATTACHMENTS:

Attachment A: Flow chart of RCEA's proposed market adjusting pricing FIT mechanism.

Attachment B: Hypothetical market pricing scenario.

Attachment C: Market pricing scenario resulting in the lowest possible prices.

Attachment D: Table of mechanisms for ensuring serious FIT applicants from the University of California, Los Angeles's study Best Practices for Implementing a Feed-in Tariff Program.

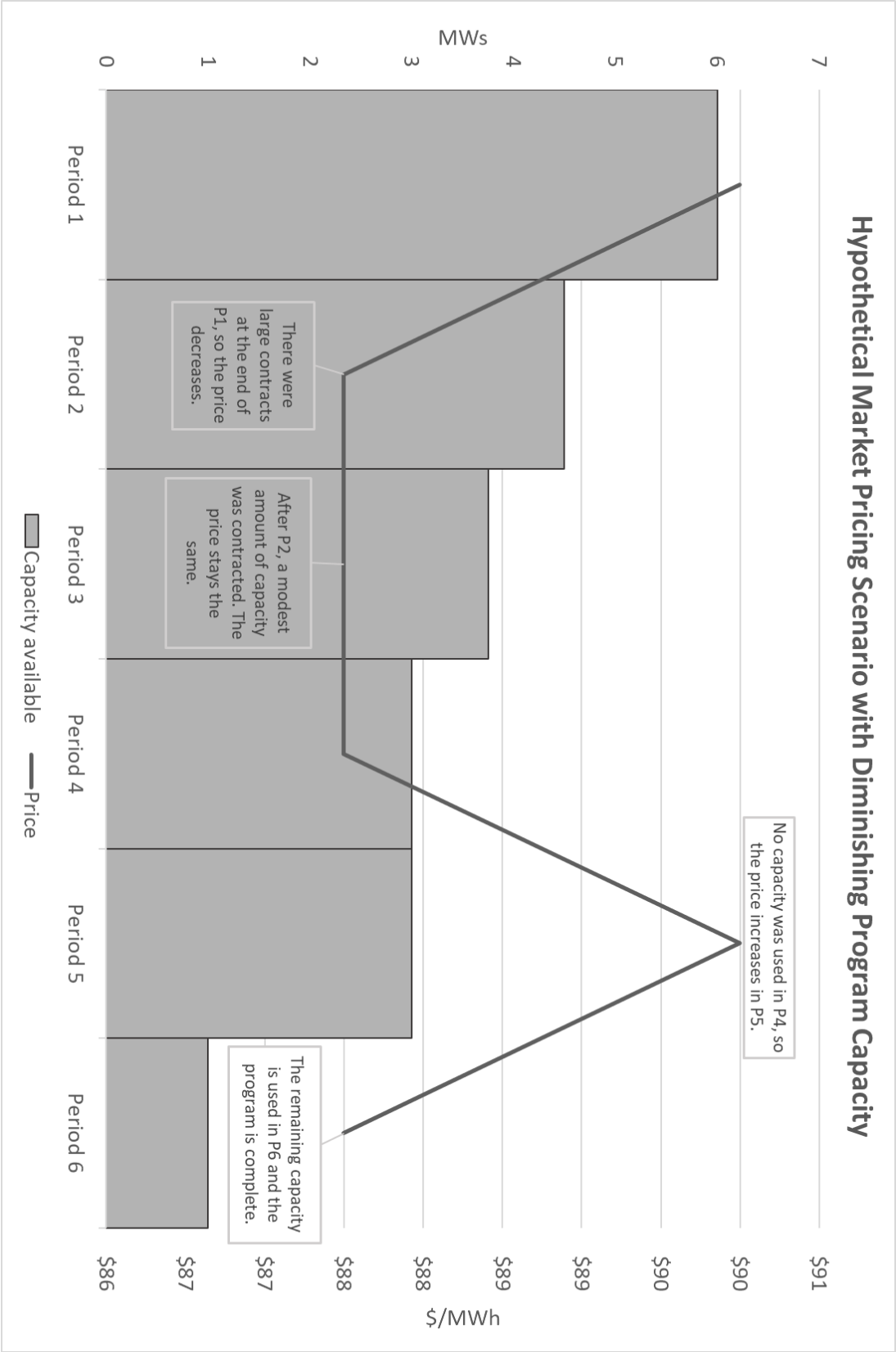
<https://luskin.ucla.edu/sites/default/files/Best%20Practices%20for%20Implementing%20a%20Feed%20in%20Tariff%20Program.pdf>

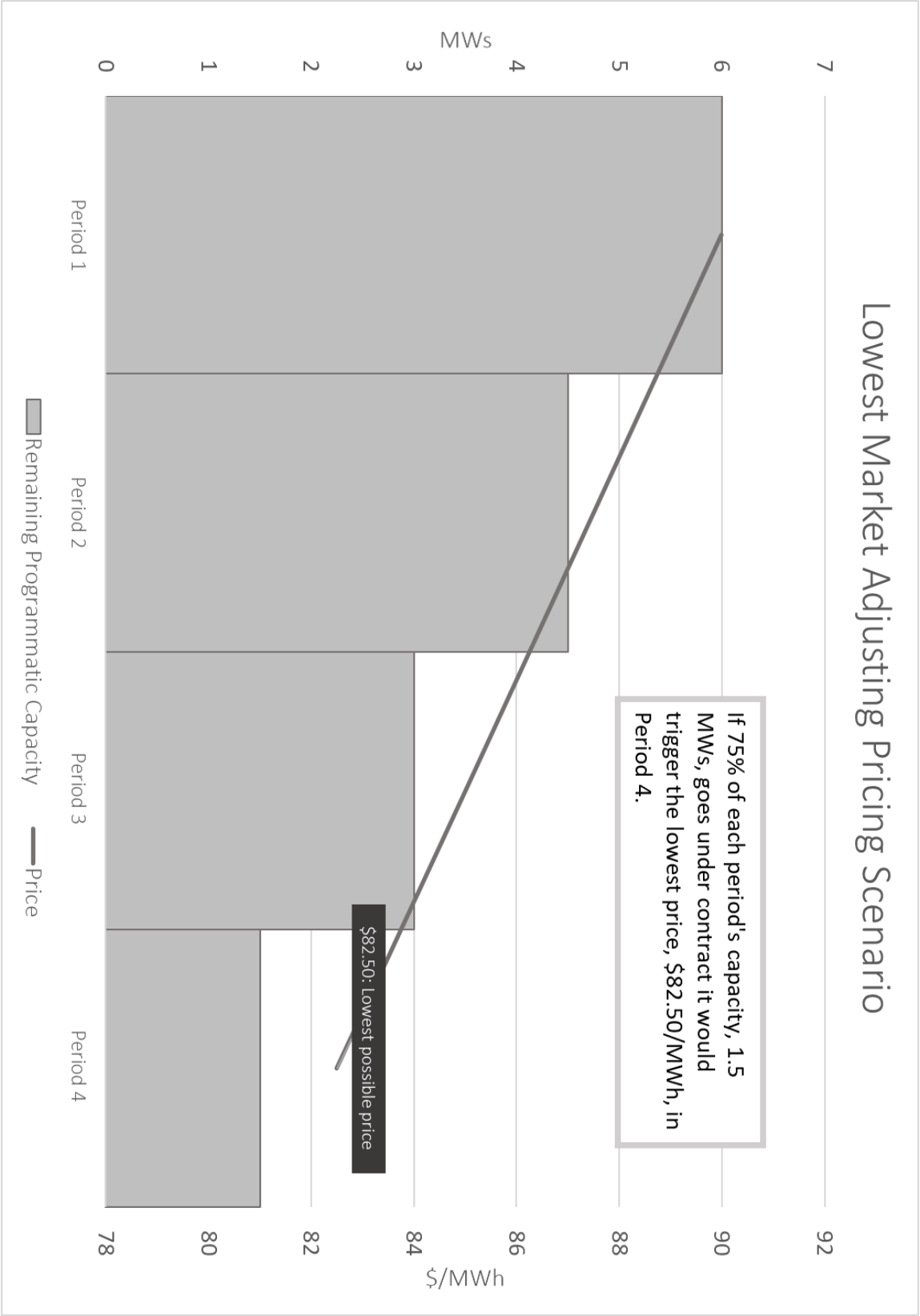
Attachment E: Program costs at \$90/MWh over a range of capacities.

Attachment F: Program costs at \$80/MWh and \$100/MWh over a range of capacities.

FIT Market Adjusting Pricing

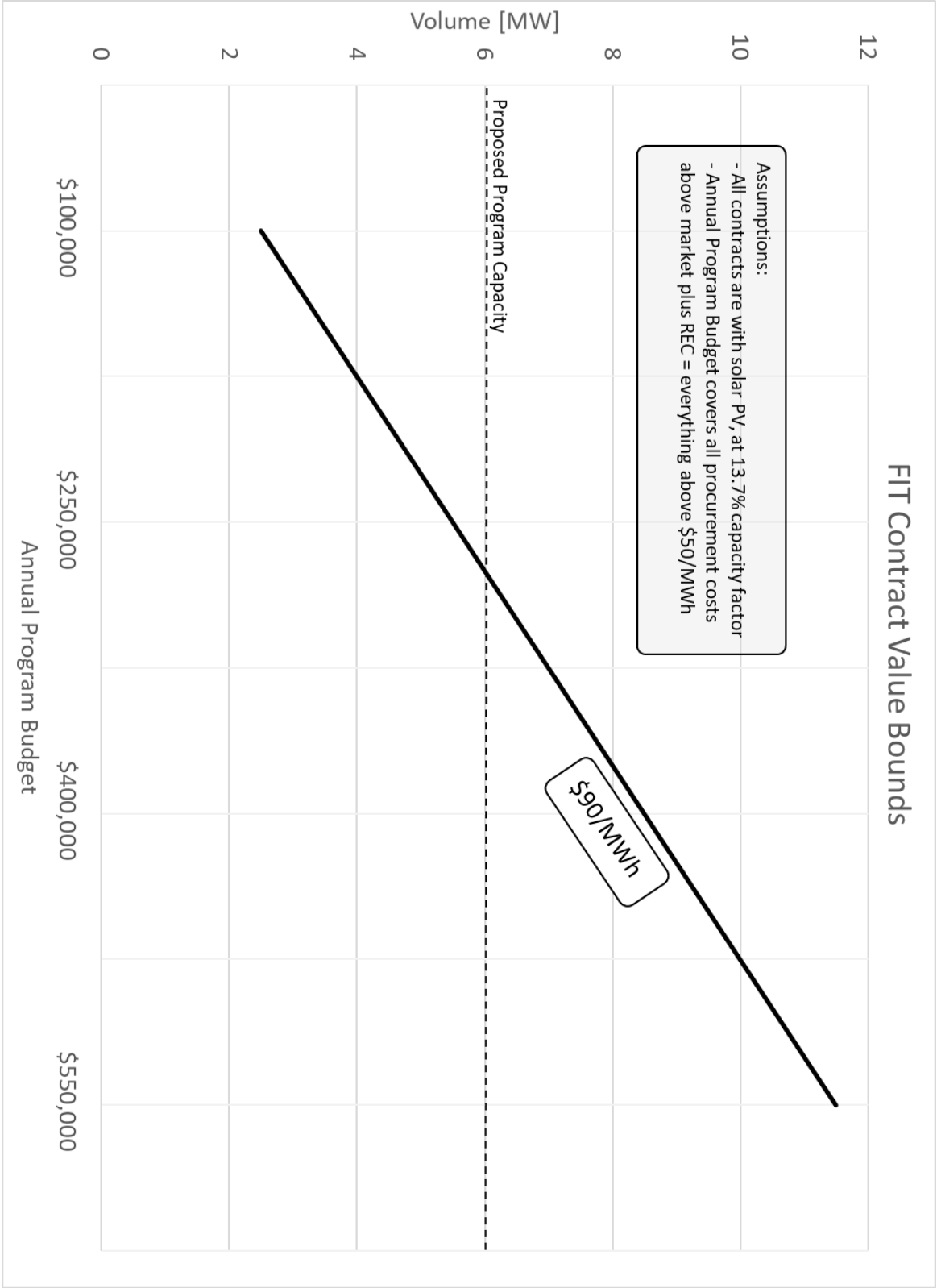


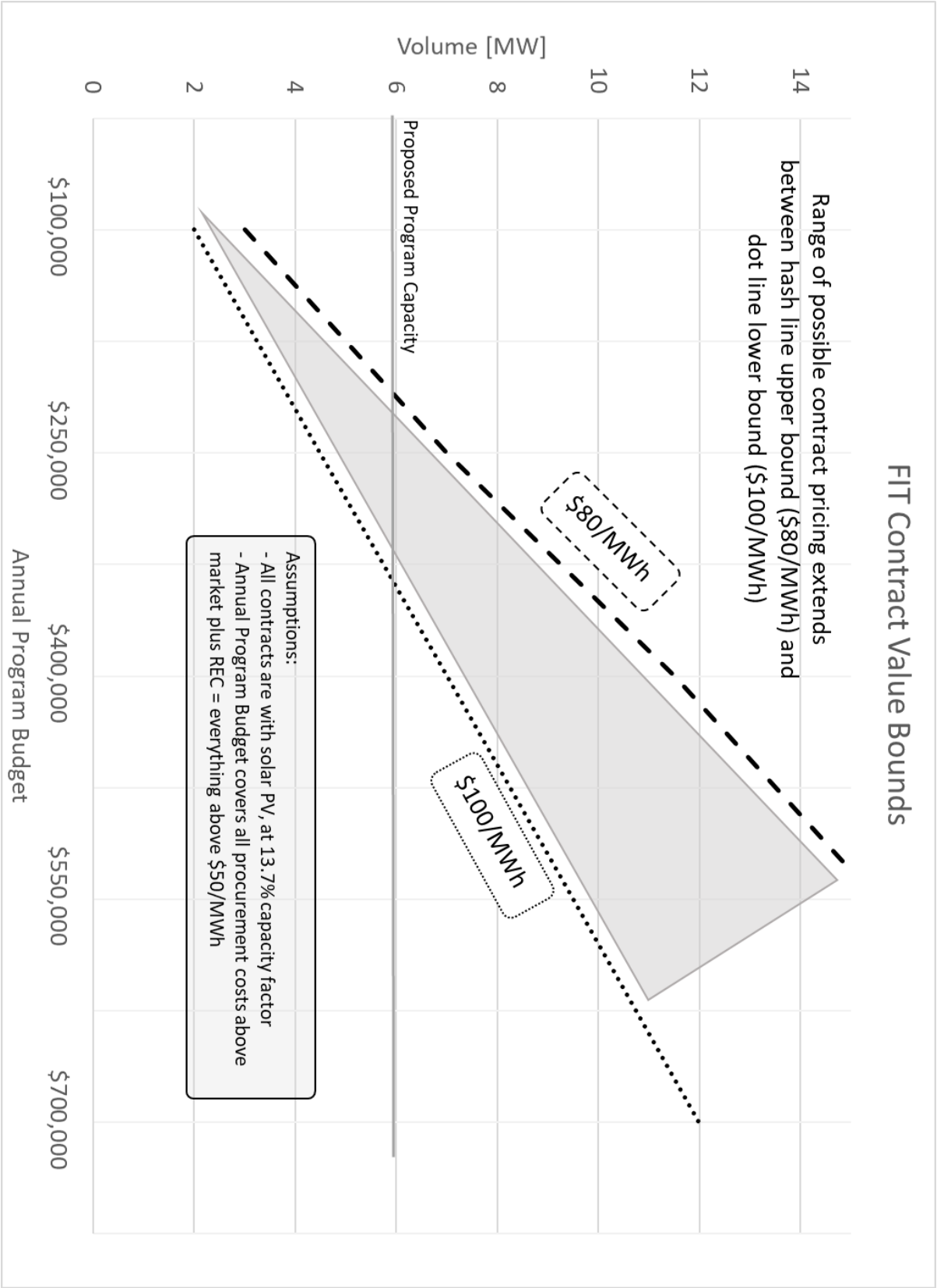




Attachment D: Mechanisms for Ensuring Serious FIT Applicants

Jurisdiction	Fee	Deposit	Milestones
Ontario microFIT	None Required	None Required	Commercial Operation 12 months from Conditional Offer
Ontario FIT	Application fee of \$0.50 per kW up to \$5,000 (non- refundable)	Application security of \$20 per kW for Solar PV in cash or letter of credit (refundable with performance)	Commercial Operation 3 years from contract date
Vermont SPEED	Administrative fee of \$200 Due upon winning lottery queue selection (non- refundable)	Deposit of \$10 per kW of installed capacity (refundable)	Commissioned within three years of contract date
Sacramento (SMUD)	Interconnection Review fee of \$1,400 (refundable if not offered a queue position)	Reservation Deposit of \$20 per kW (refundable if not offered a queue position)	Commercial operation by end of 2012
Gainesville Solar FIT	Processing Fee \$500 for <10kW, \$1,200 for > 10kW (non- refundable)	Reservation deposit of \$30 per kW (refundable)	3 milestones 1 year to put into operation
San Antonio CPS Energy	Application Fee of \$200 (non-refundable)	I/C Evaluation fee of \$10 per kW (refundable if application is rejected)	Commercial Operation within 270 days







REDWOOD COAST Energy Authority

STAFF REPORT Agenda Item # 9.1

AGENDA DATE:	October 15, 2018
TO:	Board of Directors
PREPARED BY:	Matthew Marshall, Executive Director
SUBJECT:	Executive Director Updates

SUMMARY

Offshore Wind Project Update

An oral update on the Offshore Wind Project's Bureau of Ocean Energy Management (BOEM) lease application, and a report on September's BOEM California Intergovernmental Task Force meeting in Sacramento will be provided at the meeting. RCEA's lease request is available on our website at: <https://redwoodenergy.org/offshore-wind-energy/>

Potter Valley Project Update

At the April RCEA Board meeting the Board directed staff to look into what role RCEA might have regarding the future of the Potter Valley Hydroelectric Project on the Eel River, which PG&E (the current owner) is intending to sell. RCEA was subsequently contacted by PG&E's representatives as a prospective purchaser of the project, and RCEA has entered into a non-disclosure agreement with PG&E to be able to review confidential/proprietary information about the project that is being made available to prospective buyers. The non-confidential project summary is attached. Staff is currently reviewing this information and will provide a report to the Board and a future meeting.

Energy Action Month

October is national "Energy Action Month;" a brief report on related outreach activities will be provided at the meeting.

STAFF RECOMMENDATION

N/A – information only.

Attachment:

1. Non-Confidential Summary - 9.2 MW Potter Valley Hydroelectric and Water Supply Project

NON-CONFIDENTIAL SUMMARY

9.2 MW POTTER VALLEY HYDROELECTRIC AND WATER SUPPLY PROJECT



SEPTEMBER 2018

BODINGTON & COMPANY

Investment Bankers to the Electric Power Industry

50 California Street, Suite 630 • San Francisco, CA 94111

Disclosure Statement

*This Non-Confidential Summary (Summary) has been prepared by Bodington & Company (B&Co) solely for the purpose of providing information to potential purchasers (Buyers or a Buyer) of a hydroelectric and water supply project near Potter Valley, CA, (Potter Valley Project or Project) that is currently owned by Pacific Gas and Electric Company (PG&E). This Summary, furnished by B&Co on behalf of PG&E, concerns the sale of the Project to a Buyer (the Proposed Transaction). No recipient may solicit, directly or indirectly, whether through an agent or otherwise, the participation of another party in a transaction concerning the Proposed Transaction without the prior written approval of B&Co.

Nature of Information

While the information contained herein is believed to be accurate, B&Co has not conducted any investigation with respect to such information with regard to the Proposed Transaction, and each of PG&E and B&Co expressly disclaims any and all liability for representations, expressed or implied, contained in, or for omissions from, this Summary or any other written or oral communications transmitted to any Buyer in the course of its evaluation of the Project. Only those particular representations and warranties that may be made by PG&E in a definitive written purchase or funding or development agreement, when and if one is executed, and subject to such limitations and restrictions as may be specified in such agreement, shall have any legal effect. Except where otherwise indicated, this Summary speaks as of the date hereof. In furnishing this Summary, neither PG&E nor B&Co undertakes any obligation to update any of the information contained herein. This Summary does not purport to contain all information that may be required to evaluate the Proposed Transaction, and each Buyer should conduct its own investigation and analysis before making a decision concerning the Proposed Transaction. This Summary and certain of the other information which has been or will be provided contain summaries of certain documents. These summaries are not complete and are qualified in their entirety by reference to the complete text of such documents, which are, have been or will be made available to Buyers.

Forward-Looking Statements

This Summary includes certain forward-looking statements, estimates and projections provided by PG&E and B&Co with respect to the Project's estimated future performance. Such forward-looking statements, estimates and projections reflect significant assumptions and judgments by PG&E and B&Co concerning anticipated results. These assumptions and judgments may or may not prove to be correct, and there can be no assurance that any projected results are attainable or will be realized. These forward-looking statements relate to future events and financial performance, and involve known and unknown risks, uncertainties and other factors that may cause actual results, performance, achievements or industry conditions to be materially different from any expressed or implied by such forward-looking statements. These risks, uncertainties and other factors include, but are not limited to: uncertainties relating to the operation of equipment, changes in environmental and energy regulation, failure of counterparties to perform contracts, changes in financial and market conditions, and terrorist incidents. Neither PG&E nor B&Co assumes responsibility for verifying any of such statements, estimates and projections, and neither PG&E nor B&Co makes any representations or warranties as to their accuracy or completeness.

Securities Matters

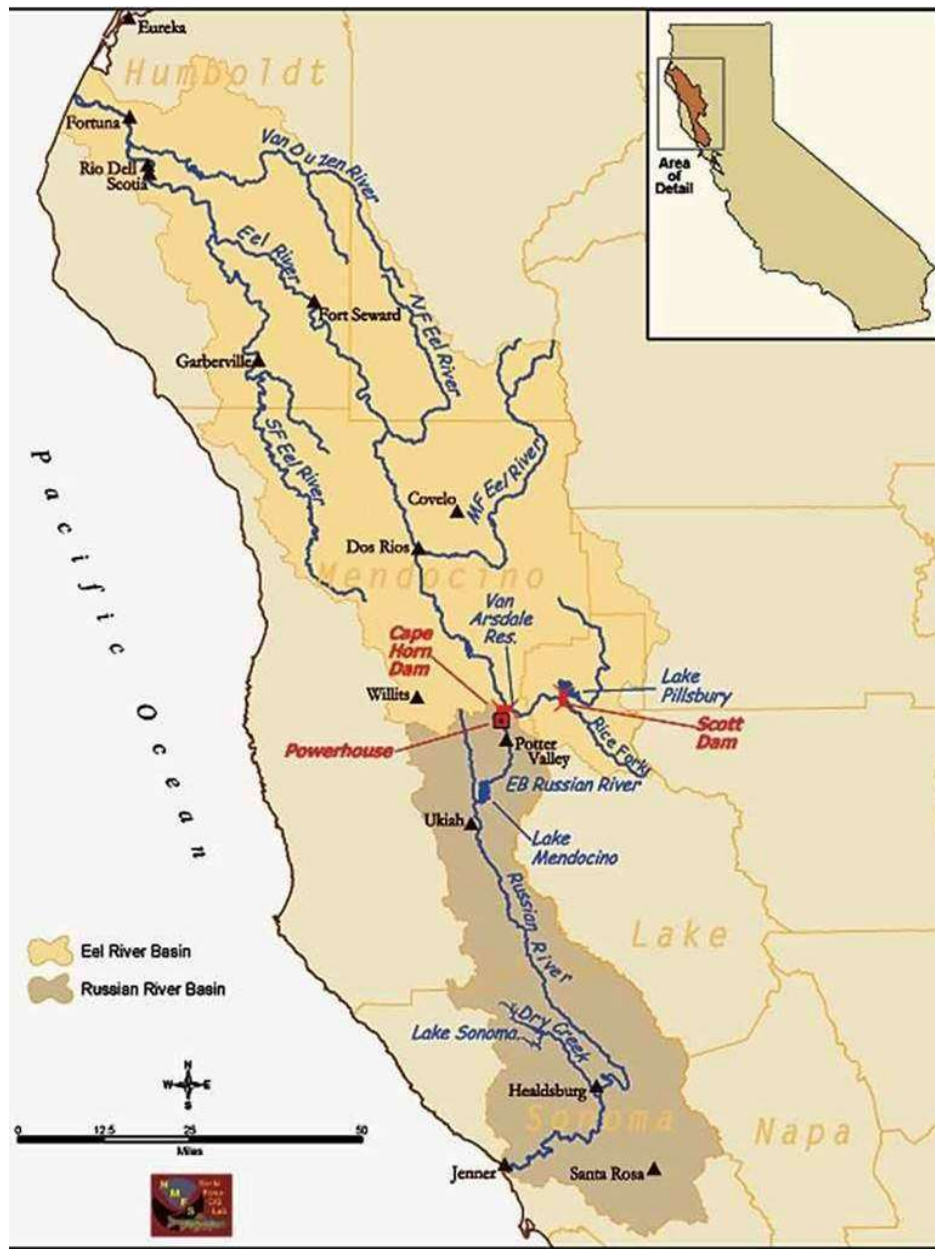
This Summary does not constitute an offer to sell the Project or solicitation of an offer to buy the Project in any jurisdiction in which it is unlawful to make such offer or solicitation. The Proposed Transaction

has not been registered under the Securities Act of 1933, as amended (the “Securities Act”), or the securities laws of any state or other jurisdiction, nor is such registration contemplated. There is no public market for the Project, and no such market is expected to develop in the future. No securities commission or regulatory authority has in any way opined upon the merits of the Project or the accuracy or adequacy of this Summary or the materials contained herein. This Summary is not, and under no circumstances shall be construed as, a prospectus, a public offering or an offering Summary as defined under applicable securities laws and shall not form the basis of any contract. The distribution of this Summary in certain jurisdictions may be restricted by law and, accordingly, recipients of this Summary represent that they are able to receive this Summary without contravention of any unfulfilled registration requirements or other legal restrictions or requirements in the jurisdiction in which they reside or conduct business.

By accepting and accessing this Summary and the other information that has been or will be provided, or any of it, each Buyer agrees to be bound by the foregoing limitations and conditions.

1.0 Introduction

This Non-Confidential Summary (Summary) describes the Potter Valley hydroelectric and water supply project (Potter Valley Project or Project). The Project is located in Northern California. The Project stores Main Stem Eel River water at Lake Pillsbury behind Scott Dam, diverts water from the Main Stem Eel River at Van Arsdale Reservoir behind Cape Horn Dam, sends the water through a tunnel and penstock to a hydroelectric powerhouse in Potter Valley, and then discharges the water into the East Branch Russian River. A photo of Lake Pillsbury appears on the cover of this Summary and a location schematic of key facilities and watersheds appears below.



1.1 Summary of Project & Investment Considerations

The Potter Valley Project, originally developed and owned by Snow Mountain Water and Power Company, began operation in 1910. PG&E purchased Snow Mountain and the Project in 1930. PG&E has owned and operated the Project since that time.

- **Water Resource:** The Project's water resource is the headwaters of the Main Stem Eel River in northern California. As shown in the schematic on the previous page, the Project diverts water from the Main Stem Eel River Basin and discharges it into the Russian River Basin. That discharge yields substantial irrigation, consumptive water and environmental benefits within the Russian River Basin.
- **Facilities:** Key facilities include Lake Pillsbury, Scott Dam on Lake Pillsbury, Van Arsdale Reservoir, Cape Horn Dam with fish ladder to Van Arsdale Reservoir, a 300 cubic feet per second (cfs) diversion structure and fish screen located on Van Arsdale Reservoir, a 2 mile tunnel and penstock leading to a 9.2 megawatt (MW) powerhouse in Potter Valley with tailrace discharge into the East Branch Russian River. Scott Dam and Cape Horn Dam are under the jurisdiction of FERC's Division of Dam Safety and Inspections (DDSI) and California's Department of Water Resources Division of Safety of Dams (DSOD). Both dams are routinely inspected by DDSI, DSOD, PG&E and independent consultants. Both dams are well maintained, in good condition, and in full compliance with DDSI and DSOD requirements.
- **FERC License:** The existing Federal Energy Regulatory Commission License (FERC License) for the Project expires April 14, 2022. PG&E initiated relicensing of the Project on April 6, 2017, when it filed a Notice of Intent (NOI) and Pre-Application Document (PAD) with the FERC. Since that time, several milestones in the FERC process have been achieved and PG&E is now in the study implementation phase of relicensing. The final license application is due to FERC prior to April 14, 2020.
- **Operations:** While operations have been reliable, actual water supply and electric generation are substantially affected by weather conditions and stream flow requirements (primarily for the protection of Chinook salmon and steelhead in the Eel River) that are prescribed by the Project's FERC License. Prior to 2007, the Project diverted an average of approximately 160,000 acre-feet (acre-ft) per year (yr). Under changed regulatory requirements of a 2004 license amendment implemented beginning in 2007, diversions decreased to between 70,000 and 75,000 acre-ft/yr. Electric energy generation for 2007 through 2017 averaged approximately 19.9 gigawatt hours (GWh) per year.
- **Real Estate:** PG&E owns approximately 5,798 acres of mostly-timbered land plus approximately 1,648 acres of submerged land that are associated with the Project. Approximately 1,833 acres of that total will be transferred to third parties in connection with PG&E's Land Conservation Commitment, leaving a net of approximately 5,613 acres associated with the Project. There are approximately 2,234 acres of land within the FERC Project boundary. PG&E maintains various recreational facilities on Lake Pillsbury and Van Arsdale Reservoir as required by the Project's FERC License. In addition, several Conservation Easements are under negotiation. All property associated with the Project will be subject to the terms of Conservation Easements to be held by Mendocino Land Trust. These terms provide for all actions necessary to operate and maintain the Project.

Over many years, PG&E has evaluated various options concerning the future of the Project for the benefit of its electric ratepayers. That effort, and years-long discussions with stakeholders, led to PG&E's May 10, 2018 written and public announcement that it intended to auction the Project but was open to discussions with any local, county or state governmental entity that had an interest in possibly transferring the Project to a local or regional entity as a possible alternative to the auction. The Mendocino County Inland Water and Power Commission did express such interest, met with PG&E on August 17, 2018 and then decided to participate in the auction rather than pursue a bilateral negotiation.

1.2 Proposed Transaction

Although Potter Valley Project's primary value to PG&E is for power generation, it also yields substantial irrigation, consumptive water and environmental benefits within the Russian River Basin. Presently, only Potter Valley Irrigation District (PVID) pays for the water supply benefits received. The Project is PG&E's only hydroelectric resource in the Coast Range of California. To benefit its electric ratepayers, PG&E plans to sell the Project to one or more Buyers (the Proposed Transaction). While the specific terms of sale may take many forms, key terms of the Proposed Transaction include:

- Sale to Buyer(s) of all real property including approximately 5,613 acres of land.
- Sale to Buyer(s) of all personal property including water storage, water impoundment, water diversion, water conveyance and related facilities, supplies, books and records.
- Transfer to Buyer(s) of the existing FERC License.
- Transfer to Buyer(s) of all materials associated with, and responsibility for, renewing the FERC License.
- Assignment to Buyer(s) of the contract with PVID.
- Assignment to Buyer(s) of Conservation Easements that are expected to be completed in advance of Project transfer.
- Transfer or assignment to Buyer(s) of all other Project-related easements, permits and agreements including PG&E's water rights related to the Project.
- Terms shall be consistent with an As-Is, Where-Is, Including-All-Faults sale. PG&E does plan to provide customary and limited representations, warranties and indemnities to Buyer(s).
- Cash by wire transfer on close. PG&E does not plan to provide any financing to Buyer(s).
- PG&E does not plan to execute a power purchase agreement with Buyer(s). Buyer(s) may offer to sell the Project's electric generation to PG&E pursuant to a solicitation approved by the California Public Utilities Commission (CPUC).
- Closing of the sale will be subject to CPUC approval of the sale and FERC approval of the transfer of the FERC license.

PG&E encourages proposals that are both creative and effective.

1.2.1 Information Memorandum, Model & Virtual Data Room

This Summary and all other communications concerning the Proposed Transaction are subject to the terms of the Disclosure Statement. Upon execution of a Non-Disclosure Agreement, B&Co will provide a Confidential Information Memorandum, Excel model and access to a virtual data room concerning the Project.

1.2.2 Schedule

Discussions with potential Buyers begin during September 2018.
Negotiation, regulatory approval and closing as soon as practical.

1.2.3 Contact

PG&E is the primary contact concerning this transaction and PG&E can be contacted at:

Mr. Michael Schonherr, GMS2@pge.com
PG&E, Power Generation
245 Market Street, [1136]
PO Box 770000
San Francisco, CA 94177
Telephone: 415-973-2812

PG&E has retained B&Co to provide transaction and related assistance, and B&Co can be contacted as below. B&Co is a member of the Financial Industry Regulatory Authority (“FINRA”).

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