

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION

New Agreement EPC-15-092 (To be completed by CGL Office)

Division	Agreement Manager:	MS-	Phone
ERDD	David Weightman	51	916-327-1631

Recipient's Legal Name	Federal ID Number
Tomorrow Water dba BKT United	26-1700965

Title of Project
Low Energy Biofiltration System with Low Backwash Rate for Groundwater Contaminant Removal

Term and Amount	Start Date	End Date	Amount
	6/30/2016	3/31/2020	\$ 1,722,072

**Business Meeting Information**
 ARFVTP agreements under \$75K delegated to Executive Director.

Proposed Business Meeting Date	6/14/2016	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
--------------------------------	-----------	----------------------------------	--

Business Meeting Presenter	David Weightman	Time Needed:	5 minutes
----------------------------	-----------------	--------------	-----------

Please select one list serve. EPIC (Electric Program Investment Charge)

**Agenda Item Subject and Description**

- a. TOMORROW WATER, DBA BKT UNITED
- i. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Proposed resolution finding that based on the lead agency City of Barstow's 2012 Environmental Checklist, Initial Study, Mitigated Negative Declaration (MND), and Mitigation Monitoring Program (MMP), the City's 2013 Amended Mitigated Negative Declaration (Amended MND), and the City's 2013 Resolution approving and adopting the Amended MND, the work under the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered.
- ii. Proposed resolution approving Agreement EPC-15-092 with Tomorrow Water dba BKT United for a \$1,722,072 grant to fund a full-scale demonstration project of an energy-saving biofiltration system for treatment of groundwater contaminated with nitrate and perchlorate and to confirm the energy and water savings achievable using this technology. The demonstration site is in the City of Barstow.
- (EPIC funding) Contact: David Weightman (Staff Presentation: 5 minutes)

**California Environmental Quality Act (CEQA) Compliance**

1. Is Agreement considered a "Project" under CEQA?  
 Yes (skip to question 2)  No (complete the following (PRC 21065 and 14 CCR 15378)):  
 Explain why Agreement is not considered a "Project":  
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because
2. If Agreement is considered a "Project" under CEQA:  
 a) Agreement **IS** exempt. (Attach draft NOE)  
 Statutory Exemption. List PRC and/or CCR section number: \_\_\_\_\_  
 Categorical Exemption. List CCR section number: \_\_\_\_\_  
 Common Sense Exemption. 14 CCR 15061 (b) (3)  
 Explain reason why Agreement is exempt under the above section:
- b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)  
 Check all that apply  
 Initial Study  Environmental Impact Report  
 Negative Declaration  Statement of Overriding Considerations  
 Mitigated Negative Declaration

**List all subcontractors (major and minor) and equipment vendors:** (attach additional sheets as necessary)

**GRANT REQUEST FORM (GRF)**

CEC-270 (Revised 10/2015)

CALIFORNIA ENERGY COMMISSION



Legal Company Name:	Budget
Kana Engineering Group, Inc	\$ 477,123 (CEC), \$100,000 (match)
MWH	\$ 99,000 (CEC), \$ 15,000 (match)
Khalil Kairouz Consulting	\$ 20,000 (CEC), \$ 5,000 (match)
Eurofins Eaton Analytical	\$ 49,860 (CEC), \$ 49,860 (match)
TBD – Reinforced Steel Contractor	\$ 10,900

List all key partners: (attach additional sheets as necessary)
Legal Company Name:
City of Barstow

Budget Information			
Funding Source	Funding Year of Appropriation	Budget List No.	Amount
EPIC	14-15	301.001B	\$1,722,072
			\$
R&D Program Area: EERO: IAW		TOTAL:	\$1,722,072
Explanation for "Other" selection			
Reimbursement Contract #:	Federal Agreement #:		

Recipient's Administrator/ Officer				Recipient's Project Manager			
Name:	James Kim			Name:	Joon Min		
Address:	1225 N Patt St			Address:	1225 N Patt St		
City, State, Zip:	Anaheim, CA 92801-2550			City, State, Zip:	Anaheim, CA 92801-2550		
Phone:	714 578-0676 /	Fax:	714-578-5963	Phone:	714-578-0676 /	Fax:	714-578-5963
E-Mail:	jsk@BKT21.com			E-Mail:	jhm@bkt21.com		

Selection Process Used	
<input checked="" type="checkbox"/> Competitive Solicitation	Solicitation #: GFO-15-317
<input type="checkbox"/> First Come First Served Solicitation	

The following items should be attached to this GRF			
1. Exhibit A, Scope of Work	<input checked="" type="checkbox"/>	Attached	<input checked="" type="checkbox"/>
2. Exhibit B, Budget Detail	<input checked="" type="checkbox"/>	Attached	<input checked="" type="checkbox"/>
3. CEC 105, Questionnaire for Identifying Conflicts	<input checked="" type="checkbox"/>	Attached	<input checked="" type="checkbox"/>
4. Recipient Resolution	<input checked="" type="checkbox"/>	N/A	<input type="checkbox"/>
5. CEQA Documentation	<input type="checkbox"/>	N/A	<input checked="" type="checkbox"/>

_____	_____	_____	_____	_____	_____
<b>Agreement Manager</b>	<b>Date</b>	<b>Office Manager</b>	<b>Date</b>	<b>Deputy Director</b>	<b>Date</b>

# Exhibit A Scope of Work

## I. TASK ACRONYM/TERM LISTS

### A. Task List

Task #	CPR <sup>1</sup>	Task Name
1		General Project Tasks
2		Prepare BBF System Design with Specifications and a Test Plan for Conditional Acceptance
3	X	Fabricate Biofilter Vessels and Procure Filtration and Disinfection Units
4	X	Perform Construction Activities, Install, and Commission Biofilter Vessels
5		Operate and Validate Biofilter System Performance for Meeting Regulatory Standards
6	X	Monitor Energy Use Savings and Water Quality Improvements
7		Evaluation of Project Benefits
8		Technology/Knowledge Transfer Activities
9		Production Readiness Plan

### B. Acronym/Term List

Acronym/Term	Meaning
BBF	BKT Biofiltration
BBF System	BBF Vessel along with Ancillary Equipment (i.e. pump, analyzer, compressor, tank, etc.)
BKT	Tomorrow Water dba BKT United - Recipient
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CPR	Critical Project Review
Energy Commission	California Energy Commission
FBR	Fluidized Bed Reactor
SWRCB	California State Water Resources Control Board

<sup>1</sup> 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.

## Exhibit A Scope of Work

Acronym/Term	Meaning
BBF	BKT Biofiltration
BBF System	BBF Vessel along with Ancillary Equipment (i.e. pump, analyzer, compressor, tank, etc.)
BKT	Tomorrow Water dba BKT United - Recipient
TAC	Technical Advisory Committee

# Exhibit A

## Scope of Work

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

#### A. Purpose of Agreement

The purpose of this Agreement is to fund a full-scale demonstration project of BKT's biofiltration system (BBF), an energy-saving biofilter for the treatment of groundwater contaminated with nitrate and perchlorate. The project will demonstrate the energy savings of the BBF over conventional biological contaminated water treatment methods/technologies while integrating the BBF with filtration and disinfection units to obtain regulatory approval from the SWRCB for the use of biofiltration in producing drinking water. By meeting these standards, the BBF system would be able to create potable water supply for local residents.

#### B. Problem/ Solution Statement

##### Problem

Contaminated groundwater containing nitrates and/or perchlorate is a potential water supply resource for California: However, treatment is currently dominated by ion exchange, a process that generates a concentrated brine stream that requires costly off-site disposal. As such, ion-exchange technology is unsuitable for small, inland sites that account for the majority of contaminated aquifers in the State. A second treatment alternative is the fluidized bed reactor (FBR) which does not generate a brine stream but its energy consumption is significantly higher than ion exchange. In the face of one of the most severe droughts in California history, long term water conservation efforts that are cost-effective and provide low-energy treatment options for contaminated groundwater resources are urgently needed.

##### Solution

This project will offer a low-energy treatment option suitable for inland sites to generate potable water supply via the decontamination of polluted water to comply with the Maximum Contaminant Levels (MCLs) for Drinking Water<sup>2</sup>. The proposed system generates no hazardous brine stream, and has low operating and maintenance costs, while using nearly 70% less energy than the leading biological treatment system (FBR) used in the current market, based on the life cycle cost analysis in the feasibility study prepared by URS (now AECOM) and reported to the City of Barstow.

#### C. Goals and Objectives of the Agreement

##### Agreement Goals

The goals of this Agreement are to:

- Test and demonstrate low-energy treatment of nitrate and perchlorate contaminated groundwater that is an alternative to ion-exchange or FBR systems that can be used to clean the water to meet California's Title 22 Drinking water standards.
- Share conclusions from the results of the project with utility managers who can benefit from use of this innovative treatment system.

---

<sup>2</sup> California Regulations Related to Drinking Water, Division 4, Chapter 15, Article 4. Section 64431. Requires Public water systems shall comply with the primary Maximum Contaminant Levels (MCLs) in table 64431-A as specified in this article.

## **Exhibit A Scope of Work**

**Ratepayer Benefits:**<sup>3</sup> This Agreement will benefit the ratepayer by lowering costs and energy demand associated with treatment of nitrate and perchlorate contaminated groundwater. In addition, the development of new wells will almost certainly be necessary to secure drinking water for California. The resurrection of existing wells abandoned due to contamination offers energy and cost savings by circumventing the drilling and construction needed to build the infrastructure for new wells.

**Technological Advancement and Breakthroughs:**<sup>4</sup> This Agreement will facilitate technological advancement and help overcome barriers to achieving the State of California's statutory energy and water saving goals. Providing low-energy contaminated water treatment options will reduce the energy demand associated with both the treatment and the transport of water and, in some cases, brine disposal. Restoring impaired local groundwater resources mitigates the need to pump and transfer potable water over long distances as currently done by several California municipalities with severely contaminated groundwater resources. The technology demonstrated in this project will reduce energy consumption currently attributed to the water sector (estimated as 20% of the state's total power consumption).

### **Agreement Objectives**

The objectives of this Agreement are to:

- Demonstrate that the water quality performance of the BBF water treatment system does not exceed California drinking water Maximum Contaminant Limits.
- Demonstrate that the BBF system can provide up to 70% energy savings when compared to a fluidized bed reactor system when treating similar amounts of contaminated water to drinking water quality standards.
- Conduct testing needed to secure Conditional Acceptance<sup>5</sup> for the BBF system as a drinking water treatment technology that does not exceed the Maximum Contaminant Limits in the State of California as required by Title 22 code of regulation<sup>6</sup>.

---

<sup>3</sup> 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](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF)).

<sup>4</sup> 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.

<sup>5</sup> Water Treatment Technology Approval Process, January 20, 2002, ([http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/documents/dwdocuments/Technologyapprovalprocess.pdf](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/dwdocuments/Technologyapprovalprocess.pdf))

<sup>6</sup> Title 22 Code of Regulations, Division 4 Environmental Health, Chapter 17 Surface Water Treatment.

# Exhibit A

## Scope of Work

### III. TASK 1 GENERAL PROJECT TASKS

#### **PRODUCTS**

##### **Subtask 1.1 Products**

The goal of this subtask is to establish the requirements for submitting project products (e.g., reports, summaries, plans, and presentation materials). Unless otherwise specified by the Commission Agreement Manager (CAM), the Recipient must deliver products as required below by the dates listed in the **Project Schedule (Part V)**. Products that require a draft version are indicated by marking “**(draft and final)**” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. With respect to due dates within this Scope of Work, “**days**” means working days.

##### **The Recipient shall:**

For products that require a draft version, including the Final Report Outline and Final Report

- Submit all draft products to the CAM for review and comment in accordance with the Project Schedule (Part V). The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt, unless otherwise specified in the task/subtask for which the product is required.
- Consider incorporating all CAM comments into the final product. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product.
- Submit the revised product and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period, or approves a request for additional time.

For products that require a final version only

- Submit the product to the CAM for acceptance. The CAM may request minor revisions or explanations prior to acceptance.

For all products

- Submit all data and documents required as products in accordance with the following:

Instructions for Submitting Electronic Files and Developing Software:

- **Electronic File Format**

- Submit all data and documents required as products under this Agreement in an electronic file format that is fully editable and compatible with the California Energy Commission’s (Energy Commission) software and Microsoft (MS)-operating computing platforms, or with any other format approved by the CAM. Deliver an electronic copy of the full text of any Agreement data and documents in a format specified by the CAM, such as memory stick or CD-ROM.

The following describes the accepted formats for electronic data and documents provided to the Energy Commission as products under this Agreement, and establishes the software versions that will be required to review and approve all software products:

- Data sets will be in MS Access or MS Excel file format (version 2007 or later), or any other format approved by the CAM.
- Text documents will be in MS Word file format, version 2007 or later.
- Documents intended for public distribution will be in PDF file format.

## Exhibit A Scope of Work

- The Recipient must also provide the native Microsoft file format.
- Project management documents will be in Microsoft Project file format, version 2007 or later.
  
- **Software Application Development**

Use the following standard Application Architecture components in compatible versions for any software application development required by this Agreement (e.g., databases, models, modeling tools), unless the CAM approves other software applications such as open source programs:

  - Microsoft ASP.NET framework (version 3.5 and up). Recommend 4.0.
  - Microsoft Internet Information Services (IIS), (version 6 and up) Recommend 7.5.
  - Visual Studio.NET (version 2008 and up). Recommend 2010.
  - C# Programming Language with Presentation (UI), Business Object and Data Layers.
  - SQL (Structured Query Language).
  - Microsoft SQL Server 2008, Stored Procedures. Recommend 2008 R2.
  - Microsoft SQL Reporting Services. Recommend 2008 R2.
  - XML (external interfaces).

Any exceptions to the Electronic File Format requirements above must be approved in writing by the CAM. The CAM will consult with the Energy Commission's Information Technology Services Branch to determine whether the exceptions are allowable.

### **MEETINGS**

#### **Subtask 1.2 Kick-off Meeting**

The goal of this subtask is to establish the lines of communication and procedures for implementing this Agreement.

#### **The Recipient shall:**

- Attend a "Kick-off" meeting with the CAM, the Commission Agreement Officer (CAO), and any other Energy Commission staff relevant to the Agreement. The Recipient will bring its Project Manager and any other individuals designated by the CAM to this meeting. The administrative and technical aspects of the Agreement will be discussed at the meeting. Prior to the meeting, the CAM will provide an agenda to all potential meeting participants. The meeting may take place in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The administrative portion of the meeting will include discussion of the following:

- Terms and conditions of the Agreement;
- Administrative products (subtask 1.1);
- CPR meetings (subtask 1.3);
- Match fund documentation (subtask 1.7);
- Permit documentation (subtask 1.8);
- Subcontracts (subtask 1.9); and
- Any other relevant topics.

The technical portion of the meeting will include discussion of the following:

- The CAM's expectations for accomplishing tasks described in the Scope of Work;
- An updated Project Schedule;

## Exhibit A Scope of Work

- Technical products (subtask 1.1);
  - Progress reports and invoices (subtask 1.5);
  - Final Report (subtask 1.6);
  - Technical Advisory Committee meetings (subtasks 1.10 and 1.11); and
  - Any other relevant topics.
- Provide an *Updated Project Schedule*, *List of Match Funds*, and *List of Permits*, as needed to reflect any changes in the documents.

### The CAM shall:

- Designate the date and location of the meeting.
- Send the Recipient a Kick-off Meeting Agenda.

### Recipient Products:

- Updated Project Schedule (*if applicable*)
- Updated List of Match Funds (*if applicable*)
- Updated List of Permits (*if applicable*)

### CAM Product:

- Kick-off Meeting Agenda

### Subtask 1.3 Critical Project Review (CPR) Meetings

The goal of this subtask is to determine if the project should continue to receive Energy Commission funding, and if so whether any modifications must be made to the tasks, products, schedule, or budget. CPR meetings provide the opportunity for frank discussions between the Energy Commission and the Recipient. As determined by the CAM, discussions may include project status, challenges, successes, advisory group findings and recommendations, final report preparation, and progress on technical transfer and production readiness activities (if applicable). Participants will include the CAM and the Recipient, and may include the CAO and any other individuals selected by the CAM to provide support to the Energy Commission.

CPR meetings generally take place at key, predetermined points in the Agreement, as determined by the CAM and as shown in the Task List on page 1 of this Exhibit. However, the CAM may schedule additional CPR meetings as necessary. The budget will be reallocated to cover the additional costs borne by the Recipient, but the overall Agreement amount will not increase. CPR meetings generally take place at the Energy Commission, but they may take place at another location, or may be conducted via electronic conferencing (e.g., WebEx) as determined by the CAM.

### The Recipient shall:

- Prepare a *CPR Report* for each CPR meeting that: (1) discusses the progress of the Agreement toward achieving its goals and objectives; and (2) includes recommendations and conclusions regarding continued work on the project.
- Submit the CPR Report along with any other *Task Products* that correspond to the technical task for which the CPR meeting is required (i.e., if a CPR meeting is required for Task 2, submit the Task 2 products along with the CPR Report).
- Attend the CPR meeting.
- Present the CPR Report and any other required information at each CPR meeting.

# Exhibit A

## Scope of Work

### The CAM shall:

- Determine the location, date, and time of each CPR meeting with the Recipient's input.
- Send the Recipient a *CPR Agenda* and a *List of Expected CPR Participants* in advance of the CPR meeting. If applicable, the agenda will include a discussion of match funding and permits.
- Conduct and make a record of each CPR meeting. Provide the Recipient with a *Schedule for Providing a Progress Determination* on continuation of the project.
- Determine whether to continue the project, and if so whether modifications are needed to the tasks, schedule, products, or budget for the remainder of the Agreement. If the CAM concludes that satisfactory progress is not being made, this conclusion will be referred to the Deputy Director of the Energy Research and Development Division.
- Provide the Recipient with a *Progress Determination* on continuation of the project, in accordance with the schedule. The Progress Determination may include a requirement that the Recipient revise one or more products.

### Recipient Products:

- CPR Report(s)
- Task Products (draft and/or final as specified in the task)

### CAM Products:

- CPR Agenda
- List of Expected CPR Participants
- Schedule for Providing a Progress Determination
- Progress Determination

### Subtask 1.4 Final Meeting

The goal of this subtask is to complete the closeout of this Agreement.

### The Recipient shall:

- Meet with Energy Commission staff to present project findings, conclusions, and recommendations. The final meeting must be completed during the closeout of this Agreement. This meeting will be attended by the Recipient and CAM, at a minimum.

The meeting may occur in person or by electronic conferencing (e.g., WebEx), with approval of the CAM.

The technical and administrative aspects of Agreement closeout will be discussed at the meeting, which may be divided into two separate meetings at the CAM's discretion.

- The technical portion of the meeting will involve the presentation of findings, conclusions, and recommended next steps (if any) for the Agreement. The CAM will determine the appropriate meeting participants.
- The administrative portion of the meeting will involve a discussion with the CAM and the CAO of the following Agreement closeout items:
  - Disposition of any state-owned equipment.
  - Need to file a Uniform Commercial Code Financing Statement (Form UCC-1) regarding the Energy Commission's interest in patented technology.
  - The Energy Commission's request for specific "generated" data (not already provided in Agreement products).

## Exhibit A Scope of Work

- Need to document the Recipient's disclosure of "subject inventions" developed under the Agreement.
  - "Surviving" Agreement provisions such as repayment provisions and confidential products.
  - Final invoicing and release of retention.
- 
- Prepare a *Final Meeting Agreement Summary* that documents any agreement made between the Recipient and Commission staff during the meeting.
  - Prepare a *Schedule for Completing Agreement Closeout Activities*.
  - Provide *All Draft and Final Written Products* on a CD-ROM or USB memory stick, organized by the tasks in the Agreement.

### Products:

- Final Meeting Agreement Summary (*if applicable*)
- Schedule for Completing Agreement Closeout Activities
- All Draft and Final Written Products

## REPORTS AND INVOICES

### Subtask 1.5 Progress Reports and Invoices

The goals of this subtask are to: (1) periodically verify that satisfactory and continued progress is made towards achieving the project objectives of this Agreement; and (2) ensure that invoices contain all required information and are submitted in the appropriate format.

#### The Recipient shall:

- Submit a monthly *Progress Report* to the CAM. Each progress report must:
  - Summarize progress made on all Agreement activities as specified in the scope of work for the preceding month, including accomplishments, problems, milestones, products, schedule, fiscal status, and an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. See the Progress Report Format Attachment for the recommended specifications.
- Submit a monthly or quarterly *Invoice* that follows the instructions in the "Payment of Funds" section of the terms and conditions, including a financial report on Match Fund and in-state expenditures.

### Products:

- Progress Reports
- Invoices

### Subtask 1.6 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.

# Exhibit A

## Scope of Work

### Subtask 1.6.1 Final Report Outline

#### The Recipient shall:

- Prepare a *Final Report Outline* in accordance with the *Style Manual* provided by the CAM. (See *Task 1.1* for requirements for draft and final products.)

#### Recipient Products:

- Final Report Outline (draft and final)

#### CAM Product:

- Style Manual
- Comments on Draft Final Report Outline
- Approval of Final Report Outline

### Subtask 1.6.2 Final Report

#### The Recipient shall:

- Prepare a Final Report for this Agreement in accordance with the approved Final Report Outline, Style Manual, and Final Report Template provided by the CAM with the following considerations:
  - Ensure that the report includes the following items, in the following order:
    - Cover page (**required**)
    - Credits page on the reverse side of cover with legal disclaimer (required)
    - Acknowledgements page (optional)
    - Preface (required)
    - Abstract, keywords, and citation page (required)
    - Table of Contents (required, followed by List of Figures and List of Tables, if needed)
    - Executive summary (required)
    - Body of the report (required)
    - References (if applicable)
    - Glossary/Acronyms (If more than 10 acronyms or abbreviations are used, it is required.)
    - Bibliography (if applicable)
    - Appendices (if applicable) (Create a separate volume if very large.)
    - Attachments (if applicable)
  - Ensure that the document is written in the third person.
  - Ensure that the Executive Summary is understandable to the lay public.
    - Briefly summarize the completed work. Succinctly describe the project results and whether or not the project goals were accomplished.
    - Identify which specific ratepayers can benefit from the project results and how they can achieve the benefits.
    - If it's necessary to use a technical term in the Executive Summary, provide a brief definition or explanation when the technical term is first used.

## **Exhibit A Scope of Work**

- Follow the Style Guide format requirements for headings, figures/tables, citations, and acronyms/abbreviations.
- Ensure that the document omits subjective comments and opinions. However, recommendations in the conclusion of the report are allowed.
- Include a brief description of the project results in the Abstract.
- Submit a draft of the report to the CAM for review and comment. The CAM will provide written comments to the Recipient on the draft product within 15 days of receipt
- Consider incorporating all CAM comments into the Final Report. If the Recipient disagrees with any comment, provide a written response explaining why the comment was not incorporated into the final product
- Submit the revised Final Report and responses to comments within 10 days of notice by the CAM, unless the CAM specifies a longer time period or approves a request for additional time.
- Submit one bound copy of the *Final Report* to the CAM along with *Written Responses to Comments on the Draft Final Report*.

### **Products:**

- Final Report (draft and final)
- Written Responses to Comments on the Draft Final Report

### **CAM Product:**

- Written Comments on the Draft Final Report

## **MATCH FUNDS, PERMITS, AND SUBCONTRACTS**

### **Subtask 1.7 Match Funds**

The goal of this subtask is to ensure that the Recipient obtains any match funds planned for this Agreement and applies them to the Agreement during the Agreement term.

While the costs to obtain and document match funds are not reimbursable under this Agreement, the Recipient may spend match funds for this task. The Recipient may only spend match funds during the Agreement term, either concurrently or prior to the use of Energy Commission funds. Match funds must be identified in writing, and the Recipient must obtain any associated commitments before incurring any costs for which the Recipient will request reimbursement.

# Exhibit A

## Scope of Work

### The Recipient shall:

- Prepare a *Match Funds Status Letter* that documents the match funds committed to this Agreement. If no match funds were part of the proposal that led to the Energy Commission awarding this Agreement and none have been identified at the time this Agreement starts, then state this in the letter.  
If match funds were a part of the proposal that led to the Energy Commission awarding this Agreement, then provide in the letter:
  - A list of the match funds that identifies:
    - The amount of cash match funds, their source(s) (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied.
    - The amount of each in-kind contribution, a description of the contribution type (e.g., property, services), the documented market or book value, the source (including a contact name, address, and telephone number), and the task(s) to which the match funds will be applied. If the in-kind contribution is equipment or other tangible or real property, the Recipient must identify its owner and provide a contact name, address, telephone number, and the address where the property is located.
    - A copy of a letter of commitment from an authorized representative of each source of match funding that the funds or contributions have been secured.
  - At the Kick-off meeting, discuss match funds and the impact on the project if they are significantly reduced or not obtained as committed. If applicable, match funds will be included as a line item in the progress reports and will be a topic at CPR meetings.
  - Provide a *Supplemental Match Funds Notification Letter* to the CAM of receipt of additional match funds.
  - Provide a *Match Funds Reduction Notification Letter* to the CAM if existing match funds are reduced during the course of the Agreement. Reduction of match funds may trigger a CPR meeting.

### Products:

- Match Funds Status Letter
- Supplemental Match Funds Notification Letter (*if applicable*)
- Match Funds Reduction Notification Letter (*if applicable*)

### Subtask 1.8 Permits

The goal of this subtask is to obtain all permits required for work completed under this Agreement in advance of the date they are needed to keep the Agreement schedule on track. Permit costs and the expenses associated with obtaining permits are not reimbursable under this Agreement, with the exception of costs incurred by University of California recipients. Permits must be identified and obtained before the Recipient may incur any costs related to the use of the permit(s) for which the Recipient will request reimbursement.

### The Recipient shall:

- Prepare a *Permit Status Letter* that documents the permits required to conduct this Agreement. If no permits are required at the start of this Agreement, then state this in the letter. If permits will be required during the course of the Agreement, provide in the letter:
  - A list of the permits that identifies: (1) the type of permit; and (2) the name, address, and telephone number of the permitting jurisdictions or lead agencies.
  - The schedule the Recipient will follow in applying for and obtaining the permits.

## **Exhibit A Scope of Work**

The list of permits and the schedule for obtaining them will be discussed at the Kick-off meeting (subtask 1.2), and a timetable for submitting the updated list, schedule, and copies of the permits will be developed. The impact on the project if the permits are not obtained in a timely fashion or are denied will also be discussed. If applicable, permits will be included as a line item in progress reports and will be a topic at CPR meetings.

- If during the course of the Agreement additional permits become necessary, then provide the CAM with an *Updated List of Permits* (including the appropriate information on each permit) and an *Updated Schedule for Acquiring Permits*.
- Send the CAM a *Copy of Each Approved Permit*.
- If during the course of the Agreement permits are not obtained on time or are denied, notify the CAM within 5 days. Either of these events may trigger a CPR meeting.

### **Products:**

- Permit Status Letter
- Updated List of Permits (*if applicable*)
- Updated Schedule for Acquiring Permits (*if applicable*)
- Copy of each Approved Permit (*if applicable*)

### **Subtask 1.9 Subcontracts**

The goals of this subtask are to: (1) procure subcontracts required to carry out the tasks under this Agreement; and (2) ensure that the subcontracts are consistent with the terms and conditions of this Agreement.

### **The Recipient shall:**

- Manage and coordinate subcontractor activities in accordance with the requirements of this Agreement.
- Incorporate this Agreement by reference into each subcontract.
- Include any required Energy Commission flow-down provisions in each subcontract, in addition to a statement that the terms of this Agreement will prevail if they conflict with the subcontract terms.
- If required by the CAM, submit a draft of each Subcontract required to conduct the work under this Agreement.
- Submit a final copy of the executed subcontract.
- Notify and receive written approval from the CAM prior to adding any new subcontractors (see the discussion of subcontractor additions in the terms and conditions).

### **Products:**

- Subcontracts (draft if required by the CAM)

## **TECHNICAL ADVISORY COMMITTEE**

### **Subtask 1.10 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:

## **Exhibit A Scope of Work**

- 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.

### **The Recipient shall:**

- Prepare a *List of Potential TAC Members* that includes the names, companies, physical and electronic addresses, and phone numbers of potential members. The list will be discussed at the Kick-off meeting, and a schedule for recruiting members and holding the first TAC meeting will be developed.
- Recruit TAC members. Ensure that each individual understands member obligations and the TAC meeting schedule developed in subtask 1.11.
- Prepare a *List of TAC Members* once all TAC members have committed to serving on the TAC.
- Submit *Documentation of TAC Member Commitment* (such as Letters of Acceptance) from each TAC member.

### **Products:**

- List of Potential TAC Members
- List of TAC Members
- Documentation of TAC Member Commitment

### **Subtask 1.11 TAC Meetings**

The goal of this subtask is for the TAC to provide strategic guidance for the project by participating in regular meetings, which may be held via teleconference.

# Exhibit A

## Scope of Work

### The Recipient shall:

- Discuss the TAC meeting schedule with the CAM at the Kick-off meeting. Determine the number and location of meetings (in-person and via teleconference) in consultation with the CAM.
- Prepare a *TAC Meeting Schedule* that will be presented to the TAC members during recruiting. Revise the schedule after the first TAC meeting to incorporate meeting comments.
- Prepare a *TAC Meeting Agenda* and *TAC Meeting Back-up Materials* for each TAC meeting.
- Organize and lead TAC meetings in accordance with the TAC Meeting Schedule. Changes to the schedule must be pre-approved in writing by the CAM.
- Prepare *TAC Meeting Summaries* that include any recommended resolutions of major TAC issues.

### Products:

- TAC Meeting Schedule (draft and final)
- TAC Meeting Agendas (draft and final)
- TAC Meeting Back-up Materials
- TAC Meeting Summaries

## IV. TECHNICAL TASKS

*Products that require a draft version are indicated by marking “(draft and final)” after the product name in the “Products” section of the task/subtask. If “(draft and final)” does not appear after the product name, only a final version of the product is required. **Subtask 1.1 (Products)** describes the procedure for submitting products to the CAM.*

### **TASK 2: PREPARE BBF SYSTEM DESIGN WITH SPECIFICATIONS AND TEST PLAN FOR CONDITIONAL REGULATORY APPROVAL**

The goal of this task is to establish engineering procedures for the construction of a full-scale low-energy, BBF System integrated with filtration and disinfection units to secure a source of treated potable water for the local community ().

### The Recipient shall:

- Investigate the Soapmine Road site conditions for optimal design.
- Design a full-scale BBF System.
- Develop *BBF System Design Drawings and Layouts* including general layout, Process Flow Diagram, Piping and Instrumentation Diagram/Drawing, and mechanical, electrical and control drawings.
- Prepare a *Draft Test Plan* for conditional acceptance as a drinking water source. The test plan must describe all the minimum requirements and standards and how the demonstration project will be designed and implemented to address all these requirements. The plan will also include a schedule and timeline for meeting all standards and requirements, and identification of any permits required prior to installations.
- Conduct a TAC meeting.
- Meet with the California State Water Resources Control Board (SWRCB) staff to refine the *Draft Test Plan*.
- Prepare a *Final Test Plan*.

## **Exhibit A Scope of Work**

- Prepare a *Task 2 Memorandum* that describes the optimal design characteristics for the System given the demonstration site conditions and results of TAC meetings and meetings with the SWRCB.

### **Products:**

- BBF System Design Drawings and Layouts
- Draft Test Plan
- Final Test Plan
- Task 2 Memorandum

### **TASK 3: FABRICATE BBF SYSTEM AND PROCURE FILTRATION AND DISINFECTION UNITS.**

The goals of this task are to fabricate the BBF System, including the BBF Vessels and Ancillary Equipment, and to procure the Filtration and Disinfection Units required to comply with state-mandated standards for potable water quality. .

#### **The Recipient shall:**

- Prepare and provide a copy of the *Shop Drawing Sets*.
- Fabricate the BBF Vessels and procure Ancillary Equipment.
- Procure filtration and disinfection units.
- Procure water quality instrumentation package.
- Inspect the BBF System prior to shipment and verify proper components and assembly.
- Prepare a *Task 3 Memorandum* that includes:
  - the fabrication and inspection process and findings
  - Shop drawing sets
  - Details and results of the factory acceptance test for the BBF System
  - Photographs of the fully assembled BBF System.
- Prepare *CPR Report #1* and participate in a CPR meeting, per subtask 1.3.

### **Products:**

- Shop Drawing Sets
- Task 3 Memorandum
- CPR Report#1

### **TASK 4: PERFORM CONSTRUCTION ACTIVITIES, INSTALL, AND COMMISSION BBF SYSTEM**

The goal of this task is to install the BBF System and perform necessary construction activities.

#### **The Recipient shall:**

- Identify, secure and provide *Copies of all Required Permits*.
- Review the condition of the demonstration site.
- Perform construction activities.
- Ship the BBF System to the test site.
- Install the BBF System.

## **Exhibit A Scope of Work**

- Prepare a *Construction and Installation Report* that summarizes observations from each stage of the construction activities and includes photographs and copies of all required permits.
- Prepare *CPR Report #2* and participate in a CPR meeting, per subtask 1.3.

### **Products:**

- Construction and Installation Report
- CPR Report #2
- Copies of Permits

### **TASK 5: OPERATE AND DEMONSTRATE BBF SYSTEM PERFORMANCE FOR MEETING REGULATORY STANDARDS**

The goal of this task is to demonstrate the performance of the BBF System in meeting or the standards for compliance for drinking water treatment in California.

#### **The Recipient shall:**

- Provide CAM a copy of the *National Sanitation Foundation 61 Certification Documentation* for the biofilter component.
- Inspect the completely assembled BBF system.
- Identify operation parameters for the targeted water quality and energy efficiency targets.
- Monitor water quality and prepare a *Water Quality Report* that includes preliminary test and performance data associated with operation of the BBF system. Optimize the BBF System for Drinking Water Conditional Acceptance tests.
- Conduct Conditional Acceptance test per the final test plan approved by California State Water Resources Control Board (SWRCB).
- Prepare a *System Optimization and Drinking Water Standards Test Report* that includes:
  - a discussion of how the system was optimized,
  - what tests were done
  - optimization that was performed
  - the results of tests in meeting Conditional Acceptance challenge tests

#### **Products:**

- Water Quality Report
- Copy of National Sanitation Foundation 61 Certification Documentation
- System Optimization and Drinking Water Test Report

### **TASK 6: MONITOR ENERGY USE SAVINGS AND WATER QUALITY IMPROVEMENTS**

The goal of this task is to operate the BBF System to demonstrate projected energy savings and water quality targets.

#### **The Recipient shall:**

- Develop a Monitoring and Verification (M&V) Plan to determine how to directly observe and quantify energy use and water quality benefits

## Exhibit A Scope of Work

- Monitor water quality and energy use and savings performance for a period of at least 12 months per the M&V plan.
- Summarize relevant data from one year of operation in an *Energy Savings and Water Quality Improvement Validation Report* that discusses actual M&V results in the context of the goals and objectives identified in Section II.C. per the M&V plan.
- Prepare *CPR Report #3* and participate in a CPR meeting, per subtask 1.3.

### Products:

- Monitoring and Verification (M&V) Plan
- Energy Savings and Water Quality Improvement Validation Report
- CPR Report #3

### TASK 7: EVALUATION OF PROJECT BENEFITS

The goal of this task is to report the benefits observed during this project and confirmed through project testing.

#### The Recipient shall:

- Complete three Project Benefits Questionnaires that correspond to three main intervals in the Agreement: (1) *Kick-off Meeting Benefits Questionnaire*; (2) *Mid-term Benefits Questionnaire*; and (3) *Final Meeting Benefits Questionnaire*.
- Provide all key assumptions used to estimate projected benefits, including targeted market sector (e.g., population and geographic location), projected market penetration, baseline and projected energy use and cost, operating conditions, and emission reduction calculations. Examples of information that may be requested in the questionnaires include:
  - For Product Development Projects and Project Demonstrations:
    - Published documents, including date, title, and periodical name.
    - Estimated or actual energy and cost savings, and estimated statewide energy savings once market potential has been realized. Identify all assumptions used in the estimates.
    - Greenhouse gas and criteria emissions reductions.
    - Other non-energy benefits such as reliability, public safety, lower operational cost, environmental improvement, indoor environmental quality, and societal benefits.
    - Data on potential job creation, market potential, economic development, and increased state revenue as a result of the project.
    - A discussion of project product downloads from websites, and publications in technical journals.
    - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
    - Additional Information for Product Development Projects:
      - Outcome of product development efforts, such copyrights and license agreements.
      - Units sold or projected to be sold in California and outside of California.

## Exhibit A Scope of Work

- Total annual sales or projected annual sales (in dollars) of products developed under the Agreement.
- Investment dollars/follow-on private funding as a result of Energy Commission funding.
- Patent numbers and applications, along with dates and brief descriptions.
- Additional Information for Product Demonstrations:
  - Outcome of demonstrations and status of technology.
  - Number of similar installations.
  - Jobs created/retained as a result of the Agreement.
- For Information/Tools and Other Research Studies:
  - Outcome of project.
  - Published documents, including date, title, and periodical name.
  - A discussion of policy development. State if the project has been cited in government policy publications or technical journals, or has been used to inform regulatory bodies.
  - The number of website downloads.
  - An estimate of how the project information has affected energy use and cost, or have resulted in other non-energy benefits.
  - An estimate of energy and non-energy benefits.
  - Data on potential job creation, market potential, economic development, and increased state revenue as a result of project.
  - A discussion of project product downloads from websites, and publications in technical journals.
  - A comparison of project expectations and performance. Discuss whether the goals and objectives of the Agreement have been met and what improvements are needed, if any.
- Respond to CAM questions regarding responses to the questionnaires.

The Energy Commission may send the Recipient similar questionnaires after the Agreement term ends. Responses to these questionnaires will be voluntary.

### Products:

- Kick-off Meeting Benefits Questionnaire
- Mid-term Benefits Questionnaire
- Final Meeting Benefits Questionnaire

### TASK 8: TECHNOLOGY/KNOWLEDGE TRANSFER ACTIVITIES

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.

#### The Recipient shall:

- Prepare an *Initial Fact Sheet* at start of the project that describes the project. Use the format provided by the CAM.
- Prepare a *Final Project Fact Sheet* at the project's conclusion that discusses results. Use the format provided by the CAM.
- Prepare 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.

## **Exhibit A Scope of Work**

- 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. These activities will be reported in the Progress Reports.
- When directed by the CAM, develop *Presentation Materials* for an Energy Commission-sponsored conference/workshop(s) on the project.
- When directed by the CAM, participate in annual EPIC symposium(s) sponsored by the California Energy Commission.
- Provide at least (6) six *High Quality Digital Photographs* (minimum resolution of 1300x500 pixels in landscape ratio) of pre and post technology installation at the project sites or related project photographs.
- Prepare a *Technology/Knowledge Transfer Report* on technology transfer activities conducted during the project.

### **Products:**

- Initial Fact Sheet (draft and final)
- Final Project Fact Sheet (draft and final)
- Presentation Materials (draft and final)
- High Quality Digital Photographs
- Technology/Knowledge Transfer Plan (draft and final)
- Technology/Knowledge Transfer Report (draft and final)

### **TASK 9: PRODUCTION READINESS PLAN**

The goal of this task is to determine the steps that will lead to the manufacturing of technologies developed in this project or to the commercialization of the project's results.

#### **The Recipient shall:**

- Prepare a *Production Readiness Plan*. The degree of detail in the plan should be proportional to the complexity of producing or commercializing the proposed product, and to its state of development. As appropriate, the plan will discuss the following:
  - Critical production processes, equipment, facilities, personnel resources, and support systems needed to produce a commercially viable product.
  - Internal manufacturing facilities, supplier technologies, capacity constraints imposed by the design under consideration, design-critical elements, and the use of hazardous or non-recyclable materials. The product manufacturing effort may include "proof of production processes."
  - The estimated cost of production.
  - The expected investment threshold needed to launch the commercial product.
  - An implementation plan to ramp up to full production.
  - The outcome of product development efforts, such as copyrights and license agreements.

## **Exhibit A Scope of Work**

- Patent numbers and applications, along with dates and brief descriptions.
- Other areas as determined by the CAM.

### **Products:**

- Production Readiness Plan (draft and final)

## **V. PROJECT SCHEDULE**

Please see the attached Excel spreadsheet.

STATE OF CALIFORNIA

STATE ENERGY RESOURCES  
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: TOMORROW WATER dba BKT UNITED PROJECT

**WHEREAS**, the City of Barstow is the Lead Agency for “Soapmine Road Area Nitrate Remediation Project” (hereinafter, “Project,”) a remediation system designed to treat nitrate-contaminated groundwater; and

**WHEREAS**, the City of Barstow, in 2012, prepared an Environmental Checklist, Initial Study, Mitigated Negative Declaration (hereinafter “MND”) and Mitigation Monitoring Program (hereinafter “MMP”) for the Project to evaluate the potential environmental impacts of implementing the Project, copies of which are on file with the California Energy Commission; and

**WHEREAS**, the City of Barstow, in 2013, amended the MND (hereinafter “Amended MND”) for the Project, a copy of which is on file with the California Energy Commission; and

**WHEREAS**, the City of Barstow, on December 2, 2013, approved and adopted the Amended MND for the Project; and

**WHEREAS**, the City of Barstow adopted findings required by the California Environmental Quality Act (“CEQA”), and approved the Project, by Adoption of Resolution 4736-2013, a copy of which Resolution is on file with the Energy Commission; and

**WHEREAS**, the Energy Commission is considering proposed Agreement EPC-15-092, “Low Energy Biofiltration System with Low Backwash Rate for Groundwater Contaminant Removal” (hereafter, “EPC-15-092”), a grant to fund a full-scale demonstration to test a Biofiltration system and an energy-saving Biofilter for the treatment of contaminated groundwater as a part of the Project; and

Prior to acting on the Agreement EPC-15-092, the Energy Commission desires to make certain findings pursuant to the CEQA Guidelines, title 14, section 15096;

**NOW THEREFORE, BE IT RESOLVED:**

1. The Energy Commission has reviewed the information contained in the Environmental Checklist, Initial Study, Mitigated Negative Declaration, Mitigation Monitoring Program, and Amended Mitigated Negative Declaration, that is relevant to its approval of EPC-15-092, and has reviewed the CEQA findings contained in the City of Barstow’s Environmental Checklist, Initial Study, Mitigated Negative Declaration, Mitigation Monitoring Program, and Amended Mitigated Negative Declaration, which are adopted to the extent that they are relevant to the Energy Commission’s decision to approve EPC-15-092.

2. The City of Barstow has already adopted the mitigation measures recommended in the Mitigated Negative Declaration and Amended Mitigated Negative Declaration, has authority to implement the mitigation measures or to seek any required approvals for the mitigation measures, and the Energy Commission has no direct authority to implement the mitigation measures.
3. The Energy Commission has reviewed and considered the Environmental Checklist, Initial Study, Mitigated Negative Declaration, Mitigation Monitoring Program, and Amended Mitigated Negative Declaration, and finds that these documents are adequate for its use as the decision-making body for its consideration of EPC-15-092.
4. Approval of EPC-15-092 is within the scope of The Soapmine Road Area Nitrate Remediation Project, and the activities evaluated in the Mitigated Negative Declaration and Amended Mitigated Negative Declaration.
5. Since the Mitigated Negative Declaration and Amended Mitigated Negative Declaration were finalized, there have been no substantial project changes and no substantial changes in the project circumstances that would require major revisions to the Mitigated Negative Declaration and Amended Mitigated Negative Declaration due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusion set forth in the Amended Mitigated Negative Declaration.
6. The Energy Commission has not identified any feasible alternative or additional feasible mitigation measures within its power that would substantially lessen or avoid any significant effect The Soapmine Road Area Nitrate Remediation Project would have on the environment.

**THEREFORE BE IT RESOLVED**, that the Energy Commission finds, on the basis of the entire record before it, that the mitigation measures incorporated in the Mitigated Negative Declaration and Amended Mitigated Negative Declaration will prevent EPC-15-092 from having any significant environmental impacts; and

**BE IT FURTHER RESOLVED**, that the Energy Commission approves Agreement EPC-15-092 with the Tomorrow Water, dba BKT United, for \$1,722,072; and

**BE IT FURTHER RESOLVED**, that this document authorizes the Executive Director or his or her designee to execute the same on behalf of the Energy Commission.

### **CERTIFICATION**

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on June 14, 2016.

AYE: [*List Commissioners*]

NAY: [*List Commissioners*]

ABSENT: [*List Commissioners*]

ABSTAIN: [*List Commissioners*]

---

Cody Goldthrite,  
Secretariat