Policy and Procedure Manual

Food and Agriculture Wastewater Energy Program (WEP), 2017

The 2017 Food and Agriculture Wastewater Energy Program is a program administered by BASE Energy, Inc. (BASE) and managed by Pacific Gas & Electric, Co. (PG&E)

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1 Introduction

Welcome to BASE's 2017 Food and Agriculture Wastewater Energy Program. This section describes the program's goals, funding, and participants.

Energy Savings. Our objective is to identify and assist in implementation of energy saving projects for wastewater treatment equipment and systems in agriculture and food and beverage processing facilities.

Incentives. We provide financial incentives for installing wastewater treatment equipment and systems that save energy beyond established standards and codes.

Key Participants.

1. Customer (Applicant): A Food, Beverage, or Agriculture Utility Customer whose site is implementing the energy savings measure(s) and ultimately receives or designates the payment from the Program Administrator. All incentives are paid directly to the customer unless otherwise indicated.
2. Project Sponsor: An entity that submits a project application and enters into the agreement on behalf of the customer. Customers can be their own sponsor, or may elect to have a third party sponsor: e.g. a wastewater system designer, ESCOs, wastewater system implementer, etc.
3. Program Administrator: BASE Energy, Inc. (BASE).
4. Program Manager: Pacific Gas and Electric Company (PG&E).

Funding. This program is funded by Utility Customers through the Public Goods Charge on their electric bill.

> *California Customers are not obliged to purchase any full fee service or other service not funded by this program. This Program is funded by the California utility ratepayers under the auspices of the California Public Utilities Commission (CPUC).*
>
> *Los consumidores en California no están obligados a comprar servicios completes o adicionales que no estén cubiertos bajo este Programa. Este Programa está financiado por los usuarios de servicios públicos en California bajo la jurisdicción de la Comisión de Servicios Públicos de California (CPUC).*

2 Customer Eligibility Requirements

Participating customers must fulfill all the following requirements:

1. Be a Food, Beverage, and Agriculture facility that falls under one of the following North American Industry Classification System (NAICS) codes:

   Agricultural, NAICS Code 110000
   Beverage Manufacture, NAICS Code 312100

Food Manufacturing, NAICS Code 311000

2. Have or plan to have a wastewater treatment or pre-treatment facility.
3. Pay the Electric Public Goods Charge through their electric bill.
4. Be within the PG&E service territory.

3 Eligible Product Specifications

All installed equipment that is considered for incentives must have an end-of-useful life (EUL) of five (5) years or greater. The following table summarizes the minimum performance requirement of installed equipment and systems by measure type.

Energy Saving Technology Description	Technology Implementation Requirements
Control mechanical and blower aerators to automatically turn on/off based on dissolved oxygen level	Install a Dissolved Oxygen (DO) sensor in the aeration pond Connect the DO sensor to a programmable logic controller (PLC), or similar device Connect the PLC to the aerator motor starter to automatically turn on/off aerator based on oxygen level
Control mechanical aerators speed with a variable frequency drive (VFD) based on dissolved oxygen level	Install a Dissolved Oxygen (DO) sensor in the aeration pond Install a VFD on the mechanical aerator motor Connect the DO sensor to a VFD Program the VFD to adjust the mechanical aerator speed based on oxygen level
Install high efficiency pump	Install a new or replace the existing pump with one that exceeds the standard pump efficiency identified in the PSAT software or average pump efficiency from several pump manufacturers
Control wastewater treatment pump speed with a variable frequency drive (VFD) in place of on/off control (open circuit pump system)	Install a VFD on the wastewater pump motor Install a sensor that can automatically trigger VFD speed (e.g. wastewater tank level sensor) based on system demand
Control wastewater treatment pump speed with a variable frequency drive (VFD) in place of throttling valve control (closed circuit pump system)	Install a VFD on the wastewater pump motor Install a pressure sensor at the wastewater pump discharge Completely open the existing throttling valve Connect the pressure senor to the VFD and program the VFD to regulate pump speed to maintain system pressure
Control wastewater aeration blower speed with a variable frequency drive (VFD) in place of a constant volumetric output with throttled capacity control	Install a Dissolved Oxygen (DO) sensor in the aeration pond (if not already present) Install a VFD on the aeration blower motor Connect the DO sensor to a VFD Program the VFD to adjust the mechanical aerator speed based on oxygen level Eliminate existing throttling vanes
Replace pneumatic pump with a positive displacement mechanical pump	Install new positive displacement pump or replace existing pneumatic pump with a positive displacement pump (optional) to increase energy savings, install a variable frequency drive to control pump speed based on system demand
Install high efficiency fine pore diffusers	Fine pore diffusers must have a standard oxygen transfer efficiency greater than 28% or greater than the existing diffuser, whichever is higher

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Energy Saving Technology Description	Technology Implementation Requirements
Install high efficiency aeration blower	Install a new or replace the existing blower with one that exceeds the standard blower efficiency identified in the FSAT software or average blower efficiency from several blower manufacturers
Install high efficiency mechanical aerators	Mechanical aerator must have a standard oxygen transfer rate greater than 3.0 lb O_2 / whp-hr or greater than the existing mechanical aerator, whichever is higher
Energy Efficient Wastewater Treatment Processes and Methods	Will be determined on a case by case basis
Water Conservation Projects that Result in System Energy Savings	Will be determined on a case by case basis
Install an Anaerobic Treatment System in Place of an Aerobic Treatment System	Will be determined on a case by case basis

In addition to the overall system performance requirements specified above, new equipment must have the following minimum efficiency rating:

- **Energy Efficient Blowers.** Eligible energy efficient blower must have a pumping efficiency greater than the standard fan efficiency shown in the FSAT software. For cases that the software is not able to provide standard blower efficiency it will be determined based on a literature survey of blower manufacturers.
- **Energy Efficient Pumps.** Eligible energy efficient pumps must have a pumping efficiency greater than the standard pumping efficiency shown in the PSAT software. For cases that the software is not able to provide a standard pumping efficiency it will be determined based on a literature survey of pump manufacturers.

4 Key Program Dates

Program Activity	Date
Begin Program Implementation Activities	January 1, 2017
End Direct Program Implementation Activities	December 15, 20167
Final Date for Customer to Implement Project	December 1, 2017
Final Date for Program Implementation Activities	July 25, 2018

5 Program Participation Process

The program participation process is outlined in Figure 1 and described in the following sections.

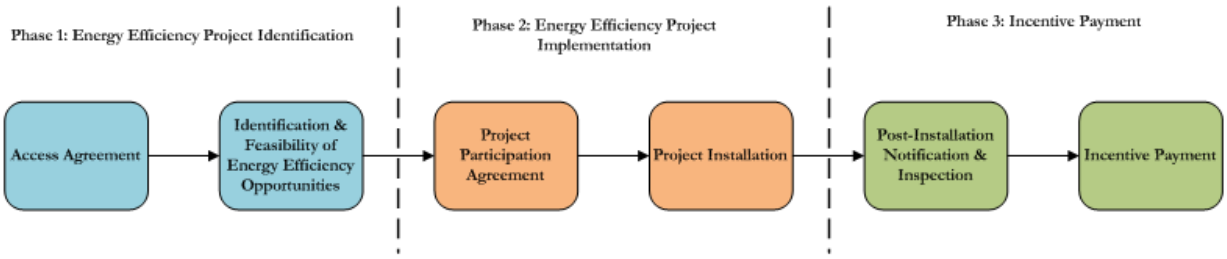

Figure 1 – Program Participation Process

1. **Site Access Agreement:** Customers interested in program participation must complete, sign and submit a Site Access Agreement. This agreement allows program staff into Customer premises to perform program activities, including measurements and data collection. Once WEP staff receives a signed Site Access Agreement, program staff will contact the customer to schedule a site visit or a project kick-off meeting (for new construction type projects).
2. **Technical Memorandum:** After the site visit (for retrofit project) or design documentation review (for new construction type projects) WEP staff will identify potential energy efficiency projects to be implemented at the facility. The results of this preliminary analysis will be described, quantified (preliminary analysis), and presented to the customer in the form of a Technical Memorandum (Tech Memo). WEP staff will discuss the findings with the Customer and ask the Customer to select the projects they would like to pursue.
3. **Detailed Report:** Once the Customer selects attractive projects, WEP staff will perform a detailed analysis and engineering report to that estimates energy savings, costs savings, implementation costs, potential incentive and simple payback period. The report will be submitted to PG&E in draft form for review and approval.
4. **Program Participation Agreement:** Once approved by PG&E, WEP staff will present the final detailed engineering report to the Customer along with the Customer Agreement (CA). The Customer will be asked to complete, sign, and submit the CA. The CA will commit the Customer to implement the selected energy efficiency projects and will allow WEP staff to reserve incentive funds for the Customer. Please note that approval of the CA **does not** guarantee payment of incentive. Incentive amount is determined only after energy efficient equipment has been installed and savings are verified. Final incentive amount will be adjusted based on the installed equipment.
5. **Project Implementation:** While the Customer implements the project, WEP staff will be available to provide technical assistance on an as needed basis.
6. **Project Verification:** Once the project is installed, commissioned and fully operational, Customer will notify WEP staff. WEP schedule a site visit with the customer to inspect the installed equipment and perform measurements to verify energy savings. WEP staff will prepare a detailed verification report which will be submitted to PG&E for approval. As part of the verification process, WEP staff will collect copies of invoices for the installed project.
7. **Incentive Payment:** After project verification is approved by PG&E, WEP staff will submit incentive funds to the Customer based on verified and approved energy savings.

8. **Customer Survey:** Six months after project implementation WEP staff will contact customer for a follow up on their project and request them to answer a short questionnaire on provided services and overall satisfaction.

6 Incentive Payment

Customer Incentives are paid directly to the Customer unless indicated in writing. In addition to customer incentives, there are Designer and Implementer Incentives for designers and implementers that help facilitate the implementation of energy efficient projects. All incentive payments are based on verified energy savings after the proposed projects are implemented. Incentive rates are summarized below:

- Customer incentive payment rate will be based on the current statewide policy rates
- Designer incentive payment rate is $0.02/ yearly kWh saved, up to $3,000.
- Implementer incentive payment rate is $0.02/ yearly kWh saved, up to $3,000.

Note: All incentives greater than $600 will be reported to the Internal Revenue Service (IRS) through Form 1099 as a non-employee compensation payment.

Incentive funds are limited and are available on a first come, first served basis. Customers and Vendors/Designers will not be eligible for incentive payment if:

- Customer has received or is receiving any compensation for participating in any of PG&E's other rebate programs unless WEP staff obtains prior written approval from the PG&E Program Manager.
- Vendor/Designer has received or is receiving any compensation for providing the same product or service either through another Public Purpose Program (PPP) or through any other funding source unless WEP staff obtains prior written approval from the PG&E Program Manager.

7 Dispute Resolution Process

All disputes involving BASE Energy, Inc. (BASE), Program Customers, and BASE Subcontractors will be logged and addressed internally throughout the program implementation in weekly meetings of BASE program management team.

If BASE Program Manager is not able to resolve the issue at hand, PG&E will be immediately notified. In the event that PG&E becomes involved with dispute resolution, the Program Manager will coordinate the efforts between all parties involved (e.g. BASE, PG&E, BASE Subcontractor, and Program Customer). BASE Program Manager will communicate with all involved parties within two days of filing a dispute notice.

All quality issues, disputes, and their resolutions will be summarized and reported to PG&E on a quarterly basis.

The following table summarizes the specific dispute resolution procedures that BASE will follow as needed.

Source of Dispute	Parties Affected	Resolution Procedures
Change in Baseline	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	Baselines will be clearly identified before Customer Agreement is signed. Any incentive amount that has been reserved as part of the customer signing the Customer Agreement will not be modified. BASE will promptly modify and implement new baselines recommended by PG&E and apply them to all new Program Customers or Program Customers that have not yet signed the Customer Agreement.
Change in Energy Savings Methodology	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	Energy savings methodology will be outlined before Project Commitment Agreement is signed. Any incentive amount that has been reserved as part of the customer signing the Customer Agreement will not be modified. BASE will promptly modify the energy savings methodology per PG&E recommendations and apply it to all new Program Customers or Program Customers that have not yet signed the Customer Agreement.
Delayed Incentive Payment	Customer/Sponsor Vendor/Implementer System Designer	BASE will remind PG&E Program Manager of overdue incentives and request an expected timeline for payment. BASE will contact the affected party to update them on the payment status and expected payment date.
Customer repeatedly fails post-install inspection	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	After a third failed inspection, BASE will contact the Customer to inform them that they have one last opportunity to fix any installation deficiency. If the Customer fails inspection a fourth time, the project will be closed. No incentive will be paid to the Customer, Vendor/Implementer or System Designer. An email will be sent to all affected parties and PG&E outlining the reasons for no payment.
After signing Customer Agreement customer does not install equipment	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	The project will be closed. No incentive will be paid to the Customer, Vendor/Implementer or System Designer. An email will be sent to all affected parties and PG&E outlining the reasons for no payment.
Installed equipment is different than Customer Agreement description	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	If the installed equipment (or system) is energy efficient then the energy savings will be adjusted. If energy savings are lower than the energy savings estimated in the Project Description Form then incentives will be adjusted. If energy savings are higher than the energy savings estimated in the Project Description Form incentive amount will be equal to the contracted amount in the Project Description Form.

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Source of Dispute	Parties Affected	Resolution Procedures
Program Participants do not fully understands Program and Procedures	Customer/Sponsor Vendor/Implementer System Designer	BASE will collect and review all program participant comments and critiques in a quarterly basis. If needed, BASE will update and re-release program documents based on program participant feedback.
Program Participants not satisfied with program services	Customer/Sponsor Vendor/Implementer System Designer	BASE will collect and review all program participant comments and critiques in a quarterly basis. If needed, BASE will modify program procedures based on program participant feedback.
Non-qualifying technologies	BASE BASE Subcontractor Customer/Sponsor Vendor/Implementer System Designer	BASE will engage in discussions with affected party. PG&E will be notified of any technology BASE believes should be included in the program (supporting documents will be supplied to PG&E). BASE will also recommend new technologies to PG&E's Emerging Technologies program for consideration.

8 Customer Feedback

Six months after project implementation, WEP staff will contact customers to follow up on their project implementation and, at the same time, administer a Customer survey to evaluate WEP quality of service and overall satisfaction. The survey will address the following:

1. Customer perceived convenience of the program
2. Customer perceived comprehensiveness of provided services
3. Customer perceived project success
4. Customer's overall satisfaction with the program

The survey will be administered through email. Responses would be compiled in a spreadsheet and will be provided to PG&E on request.

9 Liability Disclaimer

PACIFIC GAS AND ELECTRIC, CO. (PG&E) AND BASE ENERGY, INC. (BASE) MAKE NO REPRESENTATION OR WARRANTY, AND ASSUME NO LIABILITY WITH RESPECT TO QUALITY, SAFETY, PERFORMANCE, OR OTHER ASPECT OF ANY DESIGN, SYSTEM OR APPLIANCE INSTALLED PURSUANT TO THE AGREEMENT, AND EXPRESSLY DISCLAIM ANY SUCH REPRESENTATION, WARRANTY OR LIABILITY. CUSTOMER AGREES TO INDEMNIFY PG&E AND BASE, THEIR AFFILIATES, SUBSUDIARIES, PARENT COMPANY, OFFICERS, DIRECTORS, AGENTS, AND EMPLOYEES AGAINST ALL LOSS, DAMAGE, EXPENSE, FEES, COSTS, AND LIABILITY ARISING FROM ANY MEASURES INSTALLED.