California Energy Commission

Food Production Investment Program

Purpose

The Food Production Investment Program (FPIP) is funded by the Greenhouse Gas Reduction Fund (GGRF). All GGRF-funded programs **must advance** AB 32 and SB 32 as the primary program goal and each project must provide **real and quantifiable** Greenhouse Gas (GHG) emission reductions. The FPIP will seek to reduce GHG emissions through the adoption of advanced energy efficiency and renewable energy technologies while supporting the State's long-term GHG emissions reduction goals and maximizing other co-benefits.

Agenda

1. Program Background
2. Summary of Funded Projects
3. Proposed Changes
4. Workshop Questions
5. Schedule and Next Steps
6. Public Comments

Questions for Workshop Participants

Energy Commission staff is seeking input on the following questions related to FPIP program. This information could be used to update the program.

1. What other technologies should be considered for Tier I or Tier II and why? Provide justification and references for suggested additions.
2. What adjustments, if any, should be made on timeline requirements for match funding letters?
3. What adjustments, if any, should be made on the criterion that provides preference to capped facilities that emit more than 25,000 metric tons of CO2e annually or to uncapped facilities that emit between 10,000 and 25,000 metric tons of CO2e annually?
4. The Energy Commission is providing three months for the application period. Is this sufficient time? Should the Energy Commission include a second deadline in the solicitation to applicants who need more time to prepare its application?
5. What other program requirements have been a barrier for application (e.g., securing match funding commitment letters)?

Public Comments & How to Submit to the Docket

Written comments: Written comments must be submitted to the Docket Unit by **5:00 p.m.** on **May 24, 2019**. Staff recommends that all comments be submitted in writing. Written and oral comments, attachments, and associated contact information (e.g. address, phone number, email address) become part of the viewable public record.

The Energy Commission encourages use of its electronic commenting system. Visit https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=18-MISC-01. Comments may be included in the "Comment Text" box or attached in a downloadable, searchable Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf) file not exceeding 10 MB.

Written comments may also be submitted by email. Include the docket number **18-MISC-01** and "**Food Production Investment Program**" in the subject line and send to docket@energy.ca.gov.

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Summary of Current FPIP Eligible Projects

Category	Tier I	Tier II
Definition	Commercially available, energy efficient equipment upgrades that are drop in replacements or additions to existing equipment	Emerging and not widely used in California but have been proven elsewhere to reduce GHG emissions
Eligible Applicants/ Facilities	• Food production facilities defined by NAICS codes 311 and 3121 • Applicant must be a California food processor • GHG emission reductions occur at applicant's facility	
Eligible Costs	• Equipment • Measurement & Verification (M&V) when outside parties are used	• Equipment • Subcontractor costs for Engineering Design and M&V
Match Requirement	• 35% of eligible costs	• 15% of eligible costs
Eligible Technologies *Additional technologies added based on information submitted during the comment period	• Compressor controls and system optimization • Machine drive controls and upgrades • Mechanical dewatering • Advanced motors and controls • Refrigeration optimization (including low global warming potential refrigerants) • Drying equipment • Process equipment insulation • Boilers, economizers • Steam traps, condensate return, heat recovery • Evaporators • Alternatives to natural gas • Internal metering & software to manage & control energy use • Controls for compressed air, automatic blow down for boilers • Waste heat to power (including pressure reduction turbines) • Additional technologies subsequently approved*	• Solar thermal • Renewable energy generation, including biogas production • Microgrids • Fuel switching • Additional technologies subsequently approved*

FPIP Awarded Projects

Agreement Number: FPI-18-008
Solicitation: GFO-18-901
Tier: I
Amount: $2,806,326 ($1,511,099 Match)
Facility Type: Tomato Processing
Facility Location: Woodland
GHG Status: Capped
Project Description: Installation of high efficiency, multi-stage pre-evaporator system

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Agreement Number: FPI-18-007
Solicitation: GFO-18-901
Tier: II
Amount: $2,010,745 ($354,838 Match)
Facility Type: Dried & Dehydrated Food Manufacturing
Facility Location: Firebaugh
GHG Status: Capped
Project Description: Electrification of the onion drying and toasting process which will replace the existing natural-gas fueled system.

Agreement Number: FPI-18-012
Solicitation: GFO-18-901
Tier: II
Amount: $3,852,554 ($679,836 Match)
Facility Type: Poultry Processing
Facility Location: Livingston
GHG Status: Capped
Project Description: Enable stationary reefer units on the trailer yard to run on electricity instead of diesel.

Agreement Number: pending
Solicitation: GFO-18-903
Tier: I
Amount: $730,076 ($393,118 Match)
Facility Type: Fruit and Vegetable Canning
Facility Location: Sanger
GHG Status: Uncapped
Project Description: Replacement of outdated and inefficient boilers, compressors, chillers, and refrigeration system.

Tentative Schedule

Activity	*Date*
Comments and Responses to Workshop Questions due	**May 24, 2019, 5:00 pm**
Release draft FPIP Guidelines	June 14, 2019
Public Comment on draft Guidelines	June 21, 2019
Final FPIP Guidelines	July 5, 2019
Energy Commission Business Meeting Approval of FPIP Guidelines	July 17, 2019
Solicitation Release	July-September 2019
Deadline to Submit Applications	3 months following release
Post Notice of Proposed Awards	4-5 months following release
Anticipated Agreement Start Date	March-June 2020

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Energy Research and Development EPIC and Natural Gas Projects: Industrial, Agriculture, and Water

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Recipient: Gallo Cattle Company
Agreement Number: PIR-15-007
Award: $1,207,136
Co-funded Amount: $402,379
Project Location: Gallo Cattle Company, Atwater, CA
Description: This project demonstrates a new innovative system that extracts waste heat from biogas to electricity generators and uses the heat for heating and chilling purposes in a food processing facility.
Results: Natural Gas reductions - 19,527 MMBTUs/ year Electricity reductions - 1,385,227 kWh/ year.
Innovation Showcase: http://innovation.energy.ca.gov/SearchResultProject.aspx?p=30907&tks=636929043042655166

Recipient: UC Davis
Agreement Number: PIR-13-010
Award: $1,118,285
Co-funded Amount: $280,000
Project Location: Emerald Farms, Maxwell, CA
Description: This new technology uses infrared as an efficient heat source to quickly remove the surface and shell moisture of walnuts, followed by the final drying using hot air.
Results: 9.96% to 19.94% energy savings
Innovation Showcase: http://innovation.energy.ca.gov/SearchResultProject.aspxp=29784&tks=636929043975687931

Recipient: UC Berkeley
Agreement Number: EPC-14-075
Award: $4,981,729
Co-funded Amount: $1,530,590
Project Location: Various (102 industrial facilities)
Description: This project monitored the compressed air systems over time, looking at both the supply side (the compressor) and the demand side (production).
Results: Estimated 15%-17% compressed air energy savings. Final results pending.
Innovation Showcase: http://innovation.energy.ca.gov/SearchResultProject.aspx?p=30099&tks=636929044807671717