

DOCKETED

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California
Energy Commission
Research & Development



Industrial, Agricultural, and Water R&D Program Food Production Investment Program

Energy Research and Development Division

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Background

- California's pursuit of a low-carbon future will hit a critical milestone in 2030.
 - Clean Energy and Pollution Reduction Act 2030 targets for energy efficiency and renewable generation.
 - SB 32 updated Global Warming Solutions Act to require GHG reductions of 40 percent below 1990 levels by 2030.
- Rising energy rates, increasing regulation and reporting, drought and changing weather patterns drive demand for new industrial, agricultural, and water energy efficiency solutions.
- Energy Commission's R&D programs drive technology & strategic innovation and strategies to meet these challenges.



CEC's Energy Research Drives Technology & Strategic Innovation to Meet the Challenges

Electric Program Investment Charge (EPIC) - \$125M/yr

- ▶ Energy Efficiency & Demand Response
- ▶ Renewable Energy & Adv. Generation
 - ▶ Smart Communities
- ▶ Smart Grid, Storage, DER
- ▶ Environmental
 - ▶ Climate Adaptation and Infrastructure Risk Reduction
- ▶ Electric Vehicle Grid Integration
- ▶ Market Facilitation

Natural Gas R&D- \$24M/yr

- ▶ Energy Efficiency
- ▶ Renewable Energy & Adv. Gen.
- ▶ Pipeline Safety
- ▶ Environmental
 - ▶ Methane Leakage
 - ▶ Climate Adaptation and Infrastructure Risk Reduction
- ▶ NG Transportation

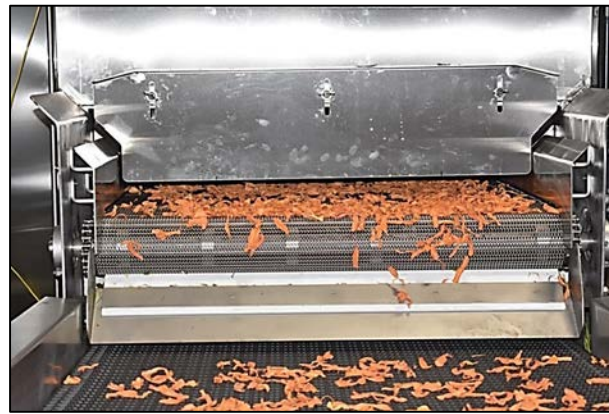
- Majority of industrial, agriculture and water projects fall under energy efficiency
- All funded projects must result in ratepayer benefits

Examples of Industrial, Agricultural, and Water R&D Projects

Goal: Improve the energy efficiency of industrial energy-related systems through development and demonstration of advanced technologies and strategies.



High efficiency indirect-fired rotary dryer for bulk food processing



Infrared dry-blanching/dehydration for fruits and vegetables



Winery water reuse and energy savings

For more information on the Energy Commission's R&D Program:
<http://www.energy.ca.gov/research/>



California Food Producers

- ▶ Third largest manufacturing sector in California
- ▶ **\$82 billion** contribution to CA economy
- ▶ Substantial job provider (**198,000 direct jobs, 562,000 indirect jobs**)*
- ▶ Large user of energy (**9,000 million kWh** and **1,400 million therms** in 2015) - costing over **\$1.6 billion**
- ▶ Emits over **3.3 million metric tons** of CO₂ equivalent emissions each year

Helping these industries remain competitive and the jobs remain in California are crucial and this can be done by updating and improving facilities to reduce operating costs and GHG emission.

* California League of Food Processors, Food Processing Industry Report, 2015, <http://clfp.com/flipbooks/filesNV2015/assets/common/downloads/publication.pdf>



Food Production Investment Program (FPIP)

- ▶ Established under the Budget Act of 2017, AB 109
- ▶ \$60 million from the Greenhouse Gas Reduction Fund to fund projects that reduce GHG emissions
- ▶ FPIP and Guidelines developed with input from:
 - ▶ Food Processing Task Force (industry, trade organizations, government agencies and utilities)
 - ▶ Public comments received from public workshops
 - ▶ Public comments received at the FPIP docket

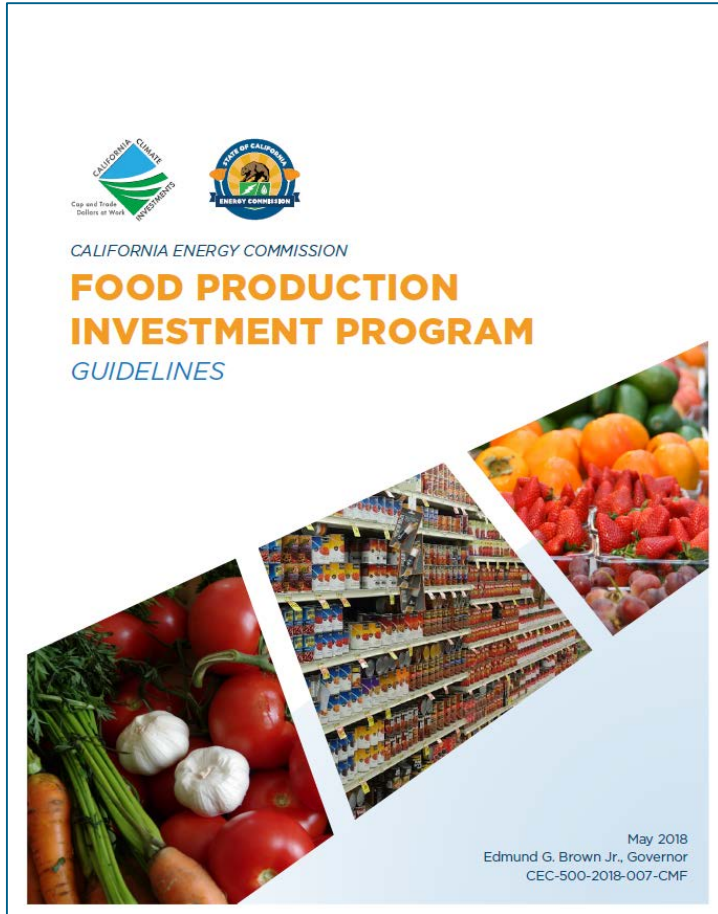


Program Goals

- ▶ Reduce GHG emissions
- ▶ Adopt commercially available and advanced energy technologies
- ▶ Provide technical confidence for further technology adoption
- ▶ Benefit priority populations (disadvantaged communities, low income communities, low income households)*

*as defined by SB 535 and AB 1550

FPIP Guidelines



- Adopted by the Energy Commission on May 9, 2018
- Guidelines provide information on:
 - ✓ How the program is structured
 - ✓ Who and what technologies are eligible
 - ✓ What criteria will be utilized in application scoring

Periodic grant solicitations will be issued, in conformance with the Guidelines

<http://www.energy.ca.gov/2018publications/CEC-500-2018-007/CEC-500-2018-007-SD.pdf>



About FPIP

- ▶ Eligibility limited to food processors (NAICS codes 311-3121* (Food & Beverage))
- ▶ Grant funds mostly limited to equipment and measurement and verification costs
- ▶ Two tiers of grants
 - ▶ Tier I: commercially available, drop-in replacements or additions; grants provide up to 65% of eligible costs
 - ▶ Tier II: adoption and demonstration of cutting-edge emerging technologies; grants provide up to 85% of eligible costs

* North American Industry Classification System:

https://www.census.gov/eos/www/naics/2017NAICS/2017_NAICS_Manual.pdf

Grant Funding Opportunity



GRANT FUNDING OPPORTUNITY

Food Production Investment Program



GFO-XX-YYY

<http://www.energy.ca.gov/contracts/index.html>

State of California
California Energy Commission |



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- ▶ Information on the FPIP and to subscribe to the listserv:
<http://www.energy.ca.gov/research/fpip/index.html>
- ▶ Public comments, guidelines, and other FPIP documents can be viewed at:
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=18-MISC-01>
- ▶ Workshop documents can be viewed at:
<http://www.energy.ca.gov/research/fpip/documents/>