

DOCKETED

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Climate Innovation Program Forests and Agriculture Workshop

December 12, 2023

Lindsey Fransen, Erik Jensen, and Zack Bradford



Agenda

- Introduction and Program Overview (9:00-9:30)
- Panel 1: Circular Bioeconomy (9:30-11:20)
- Morning Break (11:20-11:30)
- Panel 2: Fire Tech (11:30-12:30)
- Lunch Break (12:30-1:30)
- Panel 3: Climate-Smart Ag Tech (1:30-2:45)
- Open Question and Comment Period (2:45-4:00)



Workshop Participation

- Workshop is being recorded on Zoom
- The presentation and recording will be posted to <https://www.energy.ca.gov/programs-and-topics/programs/climate-innovation-program>
- Submit questions and comments in Zoom Q&A
- Submit written comments by January 5, 2024, to the Climate Innovation Program Docket, 22-ERDD-02, at <https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=22-ERDD-02>



Program Overview

Assembly Bill 209 (2022)

Public Resources Code § 25625

Directs the CEC to establish the Climate Innovation Program to fund technological advancements by **CA-headquartered companies** that enable the state to:

- Meet its **GHG reduction targets** and **achieve its climate goals** on an **accelerated timeline** and at a **lower cost**.
- Be **more resilient** to the impacts of climate change.



Program Overview

Stakeholder-driven process required to **identify and prioritize investments** that:

- Provide the **greatest potential benefits** to the state's climate goals.
- Are **not sufficiently addressed** by other funding programs.
- May **leverage and attract significant federal funding** to California.



Program Funding

Budgeted Amount (millions)	Fiscal Year					Total
	22-23	23-24	24-25	25-26	26-27	
2022 Budget Agreement	\$100	\$100	\$100	\$225	\$0	\$525
23-24 Budget Change	-\$98	-\$100	\$0	\$0	\$150	-\$48
New Total	\$2	\$0	\$100	\$225	\$150	\$477

- \$477M over 5 years from General Fund
- Up to 10% may be used for program administration
- Funding may take the form of a grant, contract, or other appropriate funding measure



Program Requirements

Eligibility

- Prime awardee must be CA-headquartered company
- Certain other entities can partner but cannot be prime

Repayment Provisions

- Repay award amount if company HQ leaves CA within 10 years of project end
- Repay award amount plus 20% if company experiences a liquidity event within 10 years of project end
- Repayment plans can be arranged with CEC



Program Timeline

Date	Item
Q3 2022	AB 209 (2022)
Q4 2022	Program introduction workshop
Q4 2023	Program update workshop
→ Q4 2023	Forests and agriculture workshop
Q1 2024	Additional workshops and investment plan
Q3 2024	Initial solicitation(s) posted



Planning Process

Climate Goals & Strategies Sector Research

Transportation

Buildings

Electricity

Industry

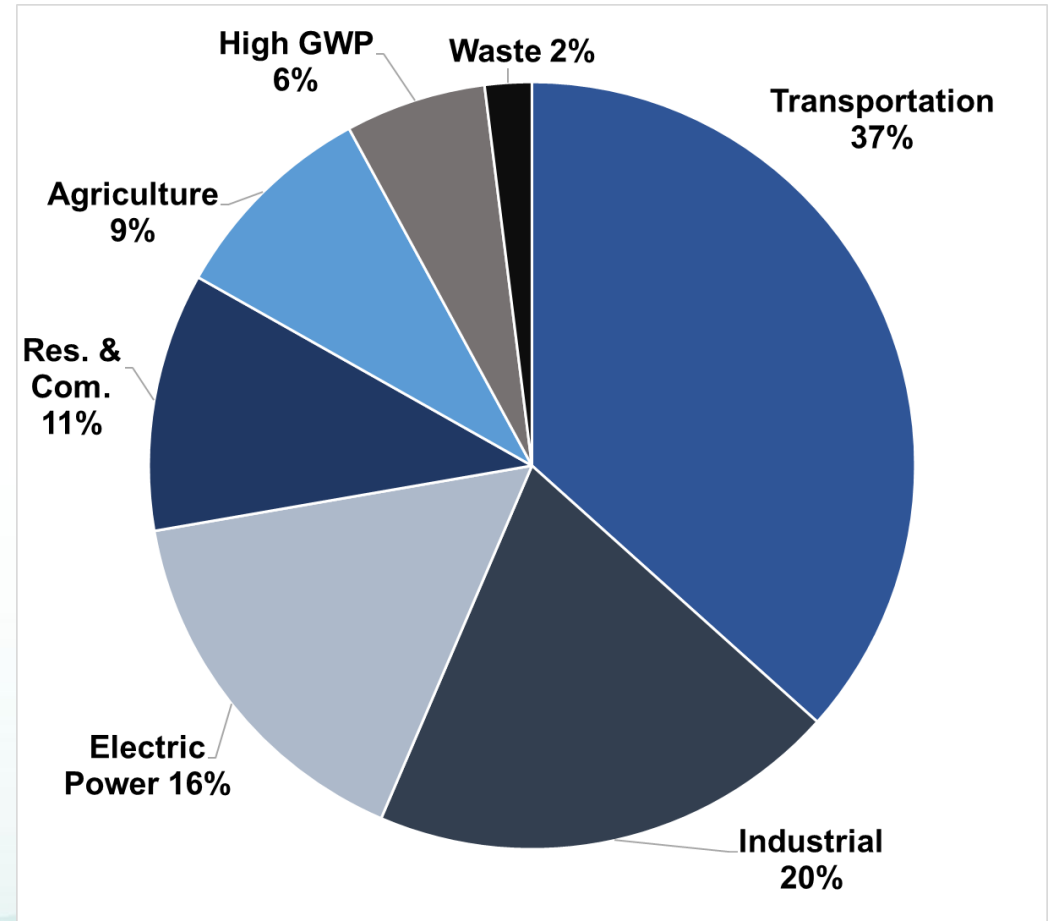
Natural & Working Lands

Short-lived Climate Pollutants

Carbon Capture

Resilience

2020 GHG Emissions



2022 CARB Scoping Plan



Planning Process

Technology Evaluation Criteria

Reduces GHG emissions

Increases resilience

Accelerates timeline to meet climate goals

Meets climate goals at lower cost

Addresses funding gaps

Leverages federal funding

Promotes equity

Provides multiple benefits

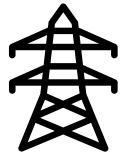


Objectives

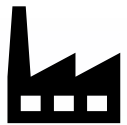
Advance and deploy technologies that:



Facilitate **resilient, electrified communities**



Increase **grid reliability**



Reduce, capture, or utilize GHG emissions from **industry**



Reduce emissions from and increase the resilience of **agriculture**



Protect **forests** from catastrophic wildfire



Resilient Electrified Communities



Objective Goals

- Eliminate GHG emissions from the built environment
- Ensure grid-supportive electrification of buildings and transportation
- Increase the safety, comfort, and convenience of buildings and transportation in the face of climate change

Technology Families

- Building efficiency and electrification
- Reduce emissions from transportation



Grid Reliability



Objective Goals

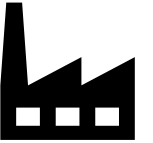
- Accelerate California's transition towards 100% renewable energy
- Build a resilient grid in the face of extreme climate-related weather
- Maintain a reliable grid as California electrifies

Technology Families

- Energy storage
- Transmission efficiency
- Innovative renewables deployment



Industrial Decarbonization



Objective Goals

- Accelerate decarbonization of heavy industry
- Identify and eliminate sources of short-lived climate pollutants

Technology Families

- Carbon capture and utilization
- Fuel switching
- Methane capture and utilization



Resilient Agriculture



Objective Goals

- Help farms become resilient carbon sinks
- Reduce short-lived climate pollutant emissions
- Improve air quality in rural communities

Technology Families

- Biomass and waste reduction and utilization
- On-farm renewable energy generation
- Electric farm and food processing equipment
- Soil health and carbon retention



Healthy Forests



Objective Goals

- Protect communities from catastrophic wildfire
- Sequester carbon in vegetation and soils
- Support local economies

Technology Families

- Wildfire detection and response
- Vegetation management
- Bioeconomy



Break

**The Circular Bioeconomy
Session will begin at 9:30.**



Session 1: Circular Bioeconomy

- Agriculture and forest "waste" to bioenergy and other value-added products
- Vegetation management technologies
- Equity and workforce development
- Forest management finance



["Stewardship Contracting in Oregon and Washington"](#) by [BLM Oregon & Washington](#), licensed under [CC BY 2.0](#).



Session 1: Circular Bioeconomy

Panelists

Name	Title	Organization
Julia Levin	Executive Director	Bioenergy Association of California
Karen Warner	Founder, CEO	BEAM Circular
John McCarthy	Program Manager for Wood Products and Bioenergy	CAL FIRE
Forest Crandall	Director of Investments	Blue Forest Conservation

Moderator: Zack Bradford, CEC



Break

**The Fire Tech Session
will begin at 11:30.**



Session 2: Fire Tech

- Remote sensing, modeling, and communication tools for risk assessment and information dissemination
- Remote cameras and artificial intelligence for wildfire detection
- Drones and other tools for rapid response, suppression, and large-scale reforestation



"Alert Wildfire Camera Detection System"
by BLM Oregon & Washington, licensed
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Session 2: Fire Tech

Panelists

Name	Title	Organization
Phillip SeLegue	Staff Chief – Intel	CAL FIRE
Paula Uniacke	Director of Impact	DBL Partners

Moderator: Erik Jensen, CEC



Lunch Break

**The Climate-Smart Agriculture
Technology Session will begin
at 1:30.**



Session 3: Climate-Smart Agriculture Technology

- On-farm renewable energy generation
- Electric farm and food processing equipment
- Soil health and carbon retention



Image by California Energy Commission.



Image by California Energy Commission.



Office 360 stock photo.



Session 3: Climate-Smart Agriculture Technology

Panelists

Name	Title	Organization
Kara Heckert	Resilient Agriculture West Advisor	American Farmland Trust
Leonard Diggs	Director of Farmer and Rancher Opportunities	Pie Ranch
Jessica Chiartas	PhD, Soils & Biogeochemistry President/Chief Scientist	UC Davis RegenScore

Moderator: Lindsey Fransen, CEC



Open

Public Comment and Q&A



Public Comments

Submitting Written Comments

- E-file comments in Docket # 22-ERDD-02:
[https://efiling.energy.ca.gov/EComment/EComment.aspx?
docketnumber=22-ERDD-02](https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=22-ERDD-02)
- See workshop notice for instructions on submitting comments by mail or email
- Written comments requested by January 5, 2024



Public Comments

- On computer:
 - Use the raise hand feature
 - Unmute yourself when called on
- On phone:
 - *9 – Raise / lower hand
 - *6 – Unmute / mute
- Introduce yourself by stating your name and affiliation
- Please stay under 3 minutes to allow time for others