

DOCKETED

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**California Energy Commission
Business Meeting
March 24, 2022
10:00 a.m.**



Pledge of Allegiance



**I pledge allegiance to the Flag
of the United States of America,
and to the Republic for which it stands,
one Nation under God, indivisible,
with liberty and justice for all.**

California Energy Commission's



SAVE THE DATE

December 8, 2022

Nominations due by:

JULY 1, 2022



Item 1: Consent Calendar

- a. Amendments to CEC Power Plant Siting Committee Assignments.



Item 2: ECAA Loan Funded Energy Project for the City of Orange Cove

March 24, 2022 Business Meeting

Sean Lockwood, Associate Energy Specialist
Renewable Energy Division, Local Assistance and Finance Office



Benefits of ECAA Loans for Californians

Improves Health Outcomes



Lowers Utility Costs



**Creates Green Jobs -
Building a Clean Energy
Economy**





Project Overview – City of Orange Cove

- \$2,228,616 loan at 1% simple interest
- LED lighting upgrades at 7 city sites
- Ground-mounted solar PV installation at City's Wastewater Treatment Plant



Photo: Wastewater Treatment Plant with Proposed Solar Array



Project Energy Analysis Summary

Loan Amount	Annual Energy Use Savings	Annual Energy Cost Savings
\$2,228,616	961,534 kWh	\$142,166



Staff Recommendation

- Approve loan agreement
- Adopt staff's determination that project is exempt from CEQA

Item 3: Carbon Removal in California

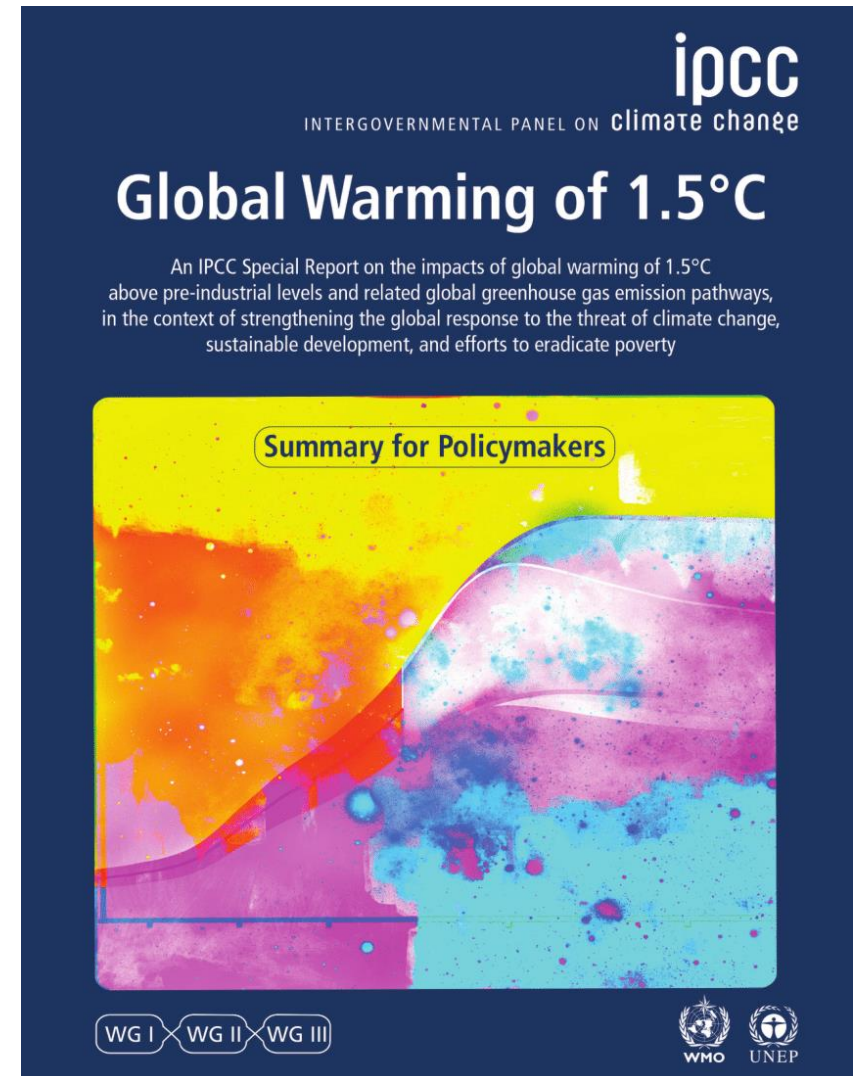
California Energy Commission Business Meeting
March 24, 2022



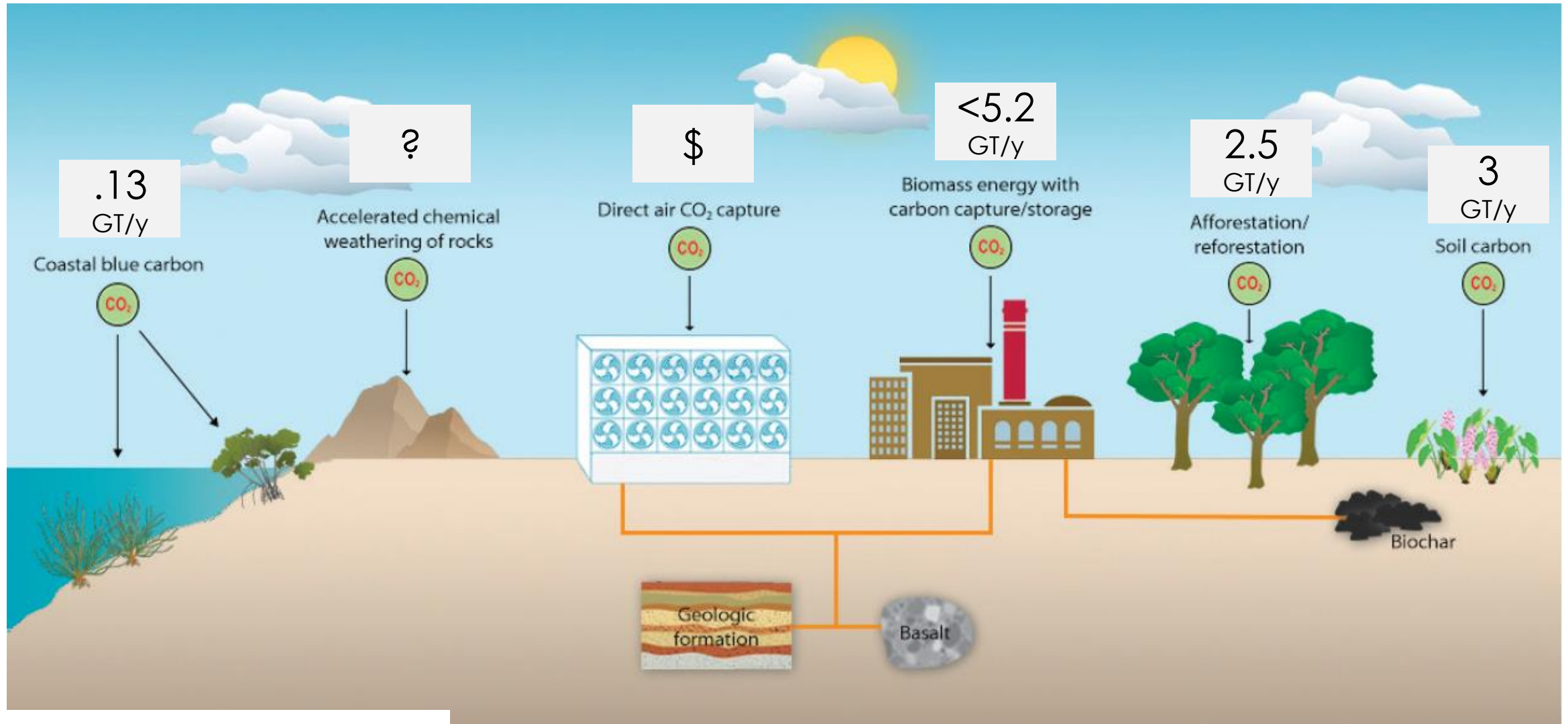
Justin Ong
justin.ong@resources.ca.gov

What is carbon dioxide removal?

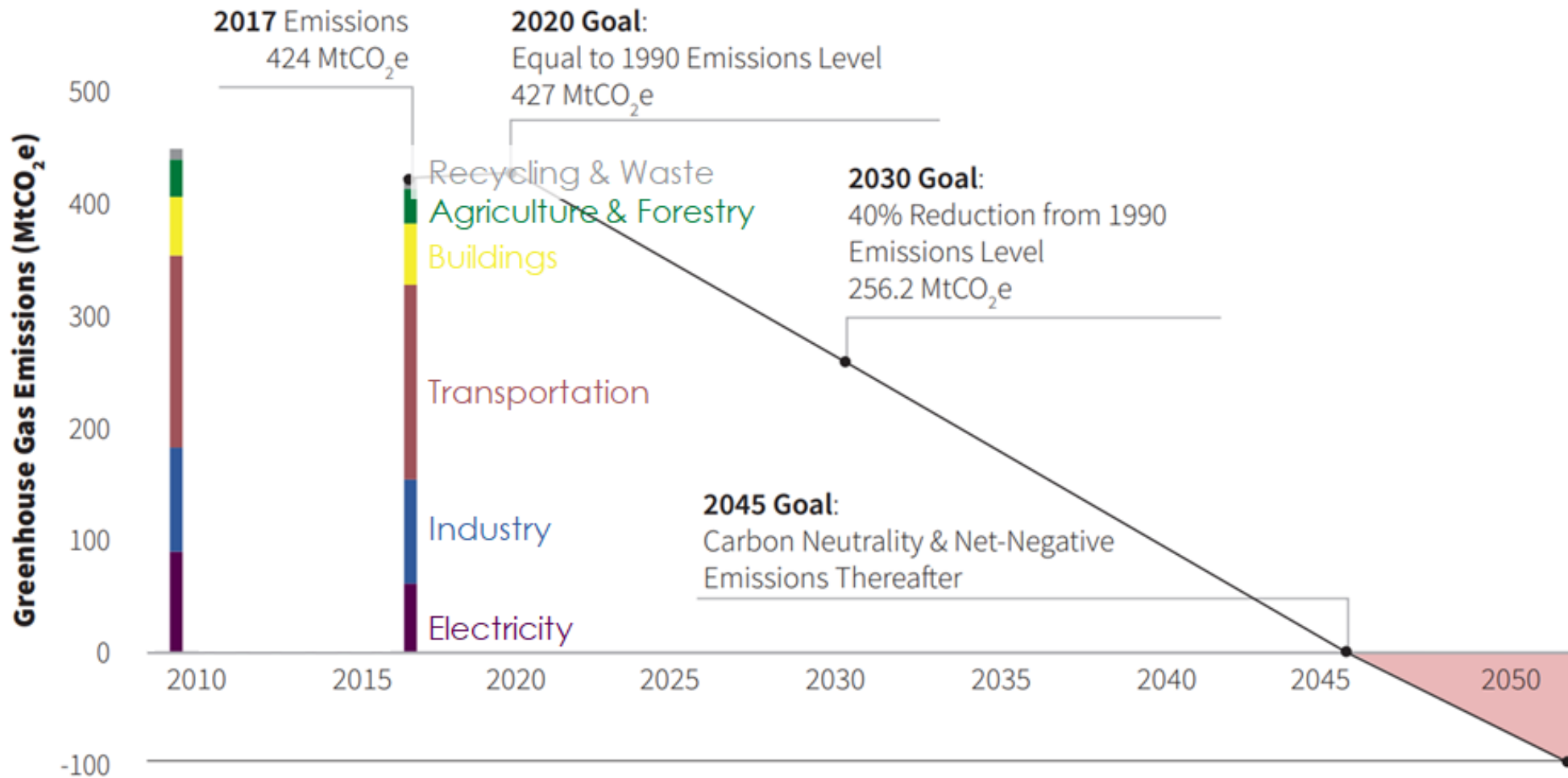
“Anthropogenic activities removing CO₂ from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological or geochemical sinks and **direct air capture and storage**, but excludes natural CO₂ uptake not directly caused by human activities.”



Current Negative Emissions Technologies Potential (<\$100/t)



Mapping the path to zero (and carbon negativity)



Project Orca

Capacity: 4,000 tons per year

Location: Hellisheidi, Iceland



Source: Climeworks

Avnos

Planned Capacity: 30 tons CO₂ & 1000L H₂O

Location: Bakersfield, CA



Carbon removal orgs in California (*not comprehensive*)



Direct Air Capture
Santa Monica



Direct Air Capture
Oakland



CO₂ to Food
Pleasanton



CO₂ to Building Materials
Los Gatos



CO₂ to Building Materials
Los Angeles



Direct Air Capture
Pasadena



CO₂ to Building Materials
Multiple Locations*



CLIMEWORKS

Direct Air Capture
Palm Springs*



Ocean Removal
San Carlos



Direct Air Capture
San Francisco



Direct Air Capture
Alameda



Direct Air Capture
San Francisco



CO₂ to Polymers
Berkeley



CO₂ to Fuels
Hawthorne



CO₂ to Chemicals
Berkeley



Ocean Removal
Pasadena



CO₂ to Chemicals
Davis



Carbon Sequestration
Palo Alto




Carbon Sequestration
Berkeley



Carbon Sequestration
Livermore

* = projects

Infrastructure & Investment Jobs Act

A photograph of President Joe Biden signing a document at a desk. He is surrounded by several other officials, including Vice President Kamala Harris, who is standing to his left. The desk has the Presidential Seal on it. The background shows other people and an American flag.

\$3.5 billion - Direct air capture hubs
\$2.5 billion - Carbon sequestration
\$115 million - Direct air capture prizes
\$310 million - Carbon utilization
\$50+ million - EPA permit programs

Questions?