CALIFORNIA COMPOST COALITION

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Allowances and Offsets in a Carbon Neutral World

CARB's Scoping Plan 2022 Update lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. It adopted what is supposed to be a technologically feasible, cost-effective, and equity-focused path to achieve the State's climate target. Under the Cap-and-Trade system, CARB sets an emissions cap on regulated entities (such as oil, utilities, and cement kilns) and issues a quantity of emission allowances consistent with that cap that is reduced over time to 40% less carbon by 2030. Emitters must hold allowances for every ton of greenhouse gas they emit. Companies may buy and sell allowances, and this market establishes an emissions price. The Cap-and-Trade program is generating over $1.5 billion per quarter with carbon pricing increasing from $10/ton to $30/ton over the last 10 years and is projected to be $100/ton by 2029. Whereas an allowance is a tradable credit to emit up to one ton of GHGs, an offset is a tradable compliance instrument that represents a GHG reduction or GHG removal enhancement of one ton of GHGs.

This Scoping Plan re-envisions our natural and working lands for the first time to ensure they play as robust a role as possible in incorporating and storing more carbon in the plants, soil, and wetlands that cover 90 percent of the State's 105 million acres, while also thriving with carbon farming. Natural and working lands are not a covered entity and are not part of the Cap-and Trade program. Instead, voluntary carbon offsets can be generated with carbon farming, and sold to private entities seeking to be carbon neutral and are not regulated entities by CARB. SB 253 (Weiner) plans to create a Climate Corporate Data Accounting Act for those in excess of $1 billion in revenue to publicly disclose their greenhouse gas emissions, where many of those same companies have pledges to also be carbon neutral by 2045 and are seeking to buy those carbon offsets. With many brands disclosing their Environmental Social Governance (ESG) Report in the name of sustainability, climate corporate accounting is becoming paramount. Nature-based global emissions offset contracts are expected to average $20.00/ton between 2023 and 2025.

With 3,800 global projects listed, pre-registered or registered and awaiting credit issuance in 2021, the voluntary carbon offset market, which was worth about $2 billion in 2021, will grow to $10-40 billion or more in value by 2030, transacting 0.5-1.5 billion tons of GHGs. Prices for carbon could rise to an estimated of $80-$150/ton by 2035. An acre of land used for carbon farming for reducing a carbon footprint generally removes 0.2 to 1.5 metric tons of carbon annually. Given that these GHG reductions are worth $15 to $20 per metric ton, whoever owns that acre of land can expect payments of $3 to $30 per year per acre.

As farmers and ranchers embrace carbon farming, their land goes from being a net-emitter of GHGs to carbon sequestering, with these regenerative farming methods which can lead to the creation of carbon offsets that are brought to market. These carbon offsets are then sold to Wall Street brand companies seeking to offset their own emissions in their corporate governance to become carbon neutral. For companies investing in SB 1383 and compost production and use, there will be a robust market for compost use generating offsets for the coming of this carbon neutral world.

Budget

Sequestered Dollars

The 2023-2024 Enacted Budget Summary reflects the state spending plan signed by the Governor on June 27, 2023, where some of your dollars are being sequestered into healthy soils with compost. Healthy landscapes can provide a powerful "carbon sink" to absorb greenhouse gases and help achieve the state's 2045 carbon neutrality goal. This Budget maintains $1.4 billion over multiple years in a program that supports nature-based solutions. This Budget also maintains $1.1 billion of these investments for climate smart agriculture, which includes the Healthy Soils Program. This Budget also created the Carbon Capture Storage (CCS) Program in the amount of $7.8 million. Keep in mind that CCS is geological storage of carbon dioxide into underground caverns, and not compost and biochar sequestering into the healthy soils of California, which is confusing to the environmental justice community that oppose CCS.

SB 308 (Becker) is now a 2-year bill that tried to define the controversial CCS and carbon dioxide 'removal' (CDR) with a definition of durable carbon sequestration that can reasonably be projected to retain a large majority of carbon atoms for 1,000 years and for which the responsible entity proves a guarantee of at least 100 years. The unintended consequences could have killed carbon sequestration by compost and biochar into the soils that cannot meet the 'durable' definition. In April 2022, an alliance of prominent Silicon Valley companies, including Google and Meta announced that it is purchasing $925 million in CDR over the next eight years. This is important as SB 253 (Weiner) would require business entities with total annual revenue of $1 billion to disclose their GHG emissions starting in 2026 which will lead to the purchase of carbon offsets from all types of sequestration projects.

Bill Watch

SB 308 (Becker)

TOPIC: Carbon Dioxide Removal Market Development Act. The California Global Warming Solutions Act of 2006 establishes CARB as responsible for monitoring and regulating sources emitting greenhouse gases. The act authorizes the state board to adopt cap-and-trade regulations that establish a system of market-based declining annual aggregate emissions limits for sources or categories of sources that emit greenhouse gases, applicable from January 1, 2012, to December 31, 2030, inclusive, as specified. The act authorizes the state board to include in its regulation of those emissions the use of market-based compliance mechanisms. The act also declares the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels.

This bill would enact the Carbon Dioxide Removal Market Development Act that would require the state board, no later than December 31, 2027, to adopt a regulation to require certain emitting entities to purchase negative emissions credits equal to a specified amount of their greenhouse gas emissions, as determined by the state board, in each calendar year beginning in the 2028 calendar year in accordance with specified requirements. The bill would require the state board, no later than December 31, 2027, to establish rules and processes for certifying carbon dioxide removal processes that may be used to create negative emissions credits and for tracking negative emissions credits in accordance with certain criteria. The bill would also require negative emissions resulting from the use of negative emissions credits to be included in the calculation of the state's net greenhouse gas emissions, as specified.

STATUS: Held in Assembly Natural Resources

SB 253 (Weiner)

TOPIC: Climate Corporate Data Accountability Act. This bill would require CARB, on or before January 1, 2025, to develop and adopt regulations requiring specified partnerships, corporations, limited liability companies, and other business entities with total annual revenues in excess of $1 billion and that do business in California, defined as "reporting entities," to publicly disclose to their GHG emissions reporting organization starting in 2026 and annually thereafter, their Scope 1 and Scope 2 GHG emissions, and, starting in 2027 and annually thereafter, their Scope 3 greenhouse gas emissions. The bill would require the state board to review during 2029, and update as necessary on or before January 1, 2030, these deadlines to evaluate trends in Scope 3 emissions reporting and to consider changes to the deadlines, as provided. The bill would require reporting entities to disclose their greenhouse gas emissions in a manner that is easily understandable and accessible to residents of the state. The bill would require reporting entities to ensure that their public disclosures have been independently verified by a third-party auditor, as provided.

This bill would require CARB, on or before July 1, 2027, to contract with the University of California, the California State University, a national laboratory, or another equivalent academic institution to prepare a report on the public disclosures made by reporting entities to the emissions reporting organization. The bill would require, in preparing the report, consideration to be given to, at a minimum, greenhouse gas emissions from reporting entities in the context of state greenhouse gas emissions reduction and climate goals. The bill would require the state board to provide the report to the emissions reporting organization to post on a digital platform that would be required to be created by the emissions reporting organization.

STATUS: In Assembly Appropriations since July 12, 2023

Carbon Registry

Working Lands

Pursuant to SB 27 (Skinner, 2021), the California Natural Resources Agency (CNRA) is currently developing a Registry of Natural and Working Lands projects that drive climate action in California and are seeking funding. CNRA envisions this Registry largely operating as a website, though CNRA must also adopt regulations governing how projects may be listed, what methodologies are used to account for carbon reductions, and other related matters. CCC testified at the Workshop to differentiate between compost and biochar use sequestering carbon as part of the Healthy Soils Initiative and Carbon Capture and Sequestration (CCS) that is highly controversial. The environmental justice community is confused by what sequestration is and having a distinct Registry separating these two strategies is paramount.

CCS may be an important strategy to reduce greenhouse gas emissions and mitigate climate change for big industrial projects. CCS is a process by which large amounts of carbon dioxide (CO_2) are captured, compressed, transported, and sequestered. The sequestration component of CCS includes CO_2 injection into geologic formations (such as depleted oil and gas reservoirs and saline formations) as well as use in industrial materials (e.g., concrete). CCS is distinct from biological sequestration as part of the Healthy Soils Initiative, which is typically accomplished through Natural and Working Lands management and conservation practices that enhance the storage of carbon with compost and biochar use to reduce CO_2 emissions. Studies have shown that CCS has the potential to reduce carbon emissions by millions of metric tons and may be an integral part of meeting California's long term climate goals. CARB has adopted a CCS protocol under the Low Carbon Fuel Standard (LCFS), describing the requirements that CCS projects must meet in order to generate LCFS credits.

Policy Watch

Sequestering Registry

SB 27 (Skinner) Carbon sequestration: state goals: natural and working lands: registry of projects. Approved by the Governor on September 23, 2021

This bill would require, no later than July 1, 2023, the Natural Resources Agency, in coordination with the California Environmental Protection Agency, CARB, the Department of Food and Agriculture, and other relevant state agencies, to establish the Natural and Working Lands Climate Smart Strategy and, in developing the strategy, to create a framework to advance the state's climate goals. The bill would require CARB, as part of its Scoping Plan, to establish specified carbon dioxide removal targets for 2030 and beyond.

This bill would require, no later than July 1, 2023, the Natural Resources Agency to establish and maintain a registry for the purposes of identifying and listing projects in the state that drive climate action on the state's Natural and Working Lands and are seeking funding from state agencies or private entities. The bill would authorize the agency, in collaboration with relevant state agencies, to create an application process for applicants to have their projects located in the state listed on the Registry, as specified. The bill would require the agency to establish a mechanism for retiring the listing of a project from the Registry once it is funded and tracking the outcome of the project to ensure it is completed. The bill would require project proponents to notify the agency when a project is completed and provide monitoring and reporting data for the duration of the contract terms of the project. The bill would require the agency to track carbon removal and greenhouse gas emission reduction benefits derived from projects funded through the Registry. The bill would authorize the agency to contract with a third-party organization to develop and operate the Registry. Proponents of projects in California can apply to CNRA to have a project listed on the Registry. Projects will be removed from the Registry once they are funded. Projects must provide monitoring and reporting data over time to CNRA. CNRA is required to track the carbon removal benefits derived from all projects funded through the Registry over time.

2022 Scoping Plan Update

The 2022 Scoping Plan Update was adopted in December 2022 which focused on a path to achieve carbon neutrality by 2045 and included Natural and Working Lands for the first time. Achieving carbon neutrality will require the State to consider greenhouse gas emissions and sinks from Natural and Working Lands (NWL). As part of the Scoping Plan, CARB modeled various land management scenarios to help develop targets. The Scoping Plan built on previous NWL workshops and reports and provided an in-depth discussion on developing modeling scenarios. Compost use on agricultural lands to build healthy soils which sequesters carbon became a prominent program.

In consideration of the modeling scenarios, CCC had worked with other regenerative agriculture advocates to push CARB staff to utilize studies currently on record. The January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan which had been completed years ago was integrated it into this Scoping Plan Update, acre by acre. This plan included hard fought CCC metrics to ramp up compost and mulch use by 2030 and make compost application a priority. Where previous drafts for this Plan did not include compost use on irrigated cropland, it became a strong addition to this Scoping Plan Update, with targets of compost being applied to an additional 31,000 to 62,000 acres each year to 2030, and with mulching on cropland increasing at 10,400 to 20,800 additional acres per year.

Considering recent, historic funding levels, it is assessed that implementation at the scale would cost $18 – $36 million per year, reducing GHG by 5.3 to 10.7 million metric tons. The Healthy Soils Program will get $50 million in the coming year, a big improvement over the May version of the Governor's budget which included only $10 million. Given recent historic budget allocations for the Healthy Soils Program, the future success of this CARB policy looks very bright as carbon sequestration is finally having its day. Now is the time to begin implementing the Scoping Plan.

CALIFORNIA COMPOST COALITION

The California Compost Coalition

is a registered Lobbying Coalition with the Fair Political Practices Commission (FPPC), created in 2002 by a group of compost operators in response to demands for increased recycling of organic materials & production of clean compost, bioenergy, anaerobic digestion, renewable natural gas, and biochar.

CCC Members
Agromin
American Refuse, Inc.
Atlas Disposal Industries LLC
BLT Enterprises of Fremont
Burrtec Waste Industries, Inc.
California Waste Recovery Systems
Cedar Ave Recycling and Transfer
Contra Costa Waste Service, Inc.
CR&R Environmental Services
Gilton Resource Recovery
Marin Sanitary Service
Monterey Regional WMD
Napa Recycling and Waste Services
Northern Recycling Compost
Peña's Disposal Service
Pleasanton Garbage Service
Quackenbush Mt. Compost
Recology
San Joaquin County Public Works
Soiland Co., Inc.
Sustainable Organic Solutions (SOS)
Tracy Material Recovery
Upper Valley Recycling
Vision Recycling
Zero Waste Energy, LLC.

CCC Partners
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GreenWaste Recovery
ReFuel Energy Partners
Resource Recovery Coalition of CA
Sonoma Compost
Zanker Road Resource Management
Z-Best Compost Facility
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CCC Technology Partners
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Kayla Robinson, EEC
Neil Edgar, Edgar & Associates, Inc.
Evan Edgar, Edgar & Associates, Inc.
Sean Edgar, Clean Fleets Advocates

Regulatory and Voluntary GHG Offset ...

CARB and CAR Programs

The Cap-and-Trade Program is a key element of California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. At the last auction, in May 2023, 56 million allowances sold with the current auction settlement price for regulatory carbon offsets at $30.05 per ton, up from $10.00 per ton in 2012. The revenues have funded $10.5 billion allocated to an array of programs, including compost and anaerobic digestion facility development at CalRecycle.

CARB adopted the six project types of Regulatory Compliance Offset Protocols adjunct to the Cap-and-Trade Program that may be used to generate GHG offset credits which include forest, livestock, ozone depleting substances, mine methane capture, and rice cultivation. Forest offsets account for a majority of the market, where soil has a greater potential to sequester carbon but will probably never be a CARB regulatory protocol, only a voluntary carbon offset.

Many of these Regulatory Compliance Offset Protocols were first developed as voluntary offset markets, typically through the Climate Action Reserve (CAR), and were modified by CARB to be clear and enforceable. There is a dearth of compliance offsets that are needed as the GHG reduction targets ratchet down to 40% by 2030. AB 398 (Garcia) was adopted in 2017 to extend the Cap-and-Trade Program to 2030 and requires CARB to establish a Compliance Offsets Protocol Task Force. The Task Force provides guidance to CARB in establishing new offset protocols for the Cap-and-Trade Program with direct environmental benefits in the State while prioritizing disadvantaged communities, rural and agricultural regions. The general offset criteria are that reductions must be real, additional, permanent, verifiable, and enforceable – beyond business as usual. The Task Force has not met for years and it is highly doubtful there will be any new protocols.

With the Lawrence Livermore Lab recognizing compost and biochar use as carbon negative practices, and with the Natural and Working Lands Climate Change Implementation Plan calling for the doubling of compost use to achieve up to 10.7 million metric tons of GHG reduction, now is the time to recognize that regulatory protocols will not be adopted and that the focus will be on the voluntary market. AB 293 (Garcia, 2019) calls for consideration of offsets on agricultural lands where up to 7.5 million more tons of compost use per year is targeted by 2030.

The Climate Action Reserve (CAR) develops voluntary GHG offsets, including a Soil Enrichment Protocol, which will provide a strong basis for the CARB's regulatory protocol. CAR adopted version 1.1 on May 1, 2022, for soil organic carbon accrual on non-forest lands. Validating and monetizing these carbon negative emissions is needed to provide incentives to transport the material to agricultural sites. Being a relatively new program, one company has already filed their Soil Enrichment Project Monitoring Plan. SB 27 (Skinner) has established the California Carbon Sequestration and Climate Resilience Project Registry for the purposes of identifying and listing carbon sequestration projects that need to be funded.