Legislative History of the Advisory Council and Role of Officers

Advisory Council Meeting
October 25, 2021

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Previous Advisory Council defined by California Health and Safety Code

- Council consisted of 20 members who are skilled in a variety of fields
- Required at least one member from colleges and universities, health agencies, agriculture, industry, community planning, transportation, professional engineers, general contractors, architects and organized labor
Current Advisory Council defined by California Health and Safety Code

- California Health and Safety Code, Sections 40260-40268:
- Council shall consist of:
  - Air District Board of Directors Chair, who shall serve as an ex-officio member
  - Seven members who shall be skilled and experienced in the fields of air pollution, climate change, or the health impacts of air pollution
  - Members shall be selected to include a diversity of perspectives, expertise, and backgrounds
Role of the Advisory Council

• Air District seeks input and expertise on a variety of air quality topics

• Advisory Council has previously explored:
  • Energy sector/greenhouse gas emissions
  • Ultrafine Particulates
  • Black Carbon

• Most recently the Advisory Council researched and developed a Particulate Matter Reduction Strategy Report (December 2020)
Role of Chair and Vice Chair

• Chair has helped determine meeting schedule, develop agenda, reviewed meeting materials/presentations

• Chairs the meeting and facilitates Advisory Councilmember feedback and public comment

• Provides reports to the Board of Directors on the work of the Council

• Guides development of reports/work products of the Council

• Vice-Chair supports Chair in their role, including Chairing a meeting, if needed
Advisory Council and Boards of the Air District

• Advisory Council works together with other Councils/Committees to gather input and provide guidance

• Advisory Council:
  • attends Board of Directors meetings quarterly to provide update on the work of the Advisory Council
  • provides guidance to Board of Directors on various scientific topics related to air quality
  • participates in community meetings to listen and gather input
  • may meet with Community Advisory Council (CAC), once seated, or join meetings of the CAC, to discuss air quality topics/receive feedback
Questions?
Bay Area Air Quality Management District

Air District Climate Protection Program

Advisory Council Meeting
October 25, 2021

AGENDA:

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Overview

• Previous meeting provided background on the Air District, our mission, vision and path forward
• Over the next several meetings staff will review key areas of focus including:
  • October 25, 2021: Climate Protection
  • November 8, 2021: Community Health and Equity Initiatives
  • December 13, 2021: Particulate Matter Report
Advisory Council Input and Guidance

- Air District staff seek the Advisory Council’s input and guidance on:
  - Program design; particularly when it comes to Climate Protection, Community Health and Equity Initiatives, Particulate Matter (PM)
  - Evaluation of program effectiveness
  - Framework for prioritization and where the Air District should focus
  - Support in identifying co-benefits or win-win next steps
Growing Urgency: Impacts

“There’s really one key message that emerges from this report: **We are out of time.**”

– Kim Cobb, Ph.D.
Professor of Earth and Atmospheric Sciences, Georgia Institute of Technology

“The IPCC Report is a ‘code red’ for humanity.”

– U.N. Secretary-General António Guterres


Source: https://www.forbes.com/advisor/personal-finance/apply-for-fema-assistance-hurricane-ida/

Source: https://www.independent.co.uk/climate-change/news/heatwave-us-pacific-northwest-deaths-b1880913.html

Source: https://www.ksla.com/2021/08/30/hurricane-ida-how-its-impacting-mississippi/

Source: https://earthobservatory.nasa.gov/images/148731/california-burning

Source: https://www.independent.co.uk/climate-change/news/heatwave-us-pacific-northwest-deaths-b1880913.html
Growing Urgency: Equity

“Calls for change after 11 people in NYC basement apartments died during catastrophic floods”

Source: ABC News

“Across all climate risks, children, older adults, low-income communities, some communities of color, and those experiencing discrimination are disproportionately affected by extreme weather and climate events”


Low-income residents are less able to evacuate due to lack of resources (e.g., money for gas or lodging).

“WE KNEW WHO WAS GOING TO DIE”: WARNINGS ABOUT LOWER-INCOME HEAT RISK WENT UNHEEDED

Source: The Intercept
Bay Area Greenhouse Gas (GHG) Emissions

2017 GHG Emissions Inventory
(with measurements-based revisions to methane estimates)

Source: Bay Area Air Quality Management District
Bay Area GHG Emissions: CO₂

Major Source Categories of CO₂

- **Stationary Sources**: Not subject to Cap-and-Trade
- **Stationary Sources**: Subject to Cap-and-Trade
- **Transportation**: Diesel
- **Transportation**: Non-diesel
- **Area sources**: Residential, industrial and commercial buildings
- **Area sources**: All others

Source: Bay Area Air Quality Management District

Key Campaigns

- Building Decarbonization Program
- Zero Emission Vehicle Acceleration Plan
- Diesel Free By ‘33
- Work with MTC and local governments to overcome barriers to VMT reduction
- Transition back-up power off fossil fuels

Advisory Council Meeting
October 25, 2021
Bay Area GHG Emissions: Methane

Key Campaigns

- Rule development: hydrogen plants; landfills
- Scientific studies
- Assisting local governments with organic waste diversion mandates

Updated Methane Emissions Inventory

- Others
- Composting
- Wastewater
- Livestock
- Landfills
- Natural gas distribution
- Refineries

Source: Bay Area Air Quality Management District
Bay Area GHG Emissions: F-Gases

Key Campaigns:

- Region-wide expansion of Residential Appliance Recycling Program
- Policy and technical support through Clean Building Compass
- Public education and outreach campaign
- Explore potential rule-making for hydrofluorocarbons (HFCs), sulfuryl fluoride

Source: Bay Area Air Quality Management District
Climate Protection Program

Local Government
- Climate Action Plans
- Policy & technical support
- Bay Area Healthy Homes Initiative
- Communications

Incentives
- Climate Tech Finance
- Electric Vehicle (EV) funding
- TFCA grants
- Moyer grants

Rules
- Hydrogen plants
- Landfill Rule amendment

Policy & Legislative
- Commuter Benefit Program
- Climate bill advocacy

Permitting
- Diesel backup generators (BUG) permitting

Inventory & Measurements
- Methane inventory improvement

Enforcement
- Landfill inspections
Where Do We Go From Here?

Local Government Support

Key Opportunity – Cities and Counties are:

- Laboratories of innovation
  - Community choice energy programs
  - Innovative financing solutions
- Critical players in reducing GHGs
- Eager to continue to be leaders in climate protection
  - Building energy reach codes
  - Climate Action Plans

Source: Inside Climate News

Following Berkeley’s Natural Gas Ban, More California Cities Look to All-Electric Future
Source: Inside Climate News
Where Do We Go From Here? (cont.)

Local Government Support

Accelerating transformational change at the local level

• Continue & enhance support for building decarbonization programs

• Replicate the success of the building decarbonization initiative to additional sectors, e.g., provide resources and guidance related to F gases, Diesel Free by ‘33, etc.

• Support the critical role of local governments in achieving state targets and mandates:
  – Divert 75% of organic waste by 2025
  – Increase energy efficiency in existing buildings by 50% by 2030
Where Do We Go From Here? (cont.)

Local Government Support

Accelerating transformational change at the local level (cont.)

• Policy support, information exchange and convenings
  • Model ordinances, best practices
  • Clean Building Compass
  • Local government newsletter, webinars

• Provide key technical and planning support to long-range planning
  - GHG inventories and climate action plans
  - California Environmental Quality Act (CEQA) thresholds, guidance and review
Where Do We Go From Here? (cont.)

Rule Development

We have some constraints:

• Limited authority under Assembly Bill (AB) 398 – cannot regulate sources of CO$_2$ covered by Cap & Trade

• Cannot regulate transportation sources

• Authority over building codes and energy efficiency is limited to federal, state and local governments

• Technical challenges
Where Do We Go From Here? (cont.)

Rule Development (cont.)

But we also have opportunities:

• Regulate non-CO$_2$ GHGs (methane, F-gases)
  - 13-5: Hydrogen Plants, Board hearing Q4 2021
  - Landfills?

• Achieve GHG co-benefits from regulating traditional air pollutants
Where Do We Go From Here? (cont.)

Transportation

Address the largest sources of GHGs

- EV Acceleration Plan and Charge!
- Moyer, etc. – grants for zero and near-zero emission equipment
- Transportation Fund for Clear Air (TFCA) – local transportation demand management programs
- Calendar Year (CY) 2020 TFCA and Moyer reduced approx. 62,000 tons per year CO$_2$
- Commuter Benefit Program
- Flex Your Commute
- Support Plan Bay Area implementation
Where Do We Go From Here? (cont.)

Climate and Equity

• Incentive programs
  – Clean Cars for All
  – Expanding EV programs in multi-family sector

• Policy initiatives
  – Diesel Free By ‘33
  – Promoting clean alternatives for back-up power

• Integrate GHG reduction with AB 617 work
  – Bay Area Healthy Homes Initiative

Source: Bay Area Air Quality Management District
Potential Win-Win Solutions

- Bay Area Healthy Homes Initiative
- Wildfire AQ Response Program/Clean Air Filtration Program
- Rules on residential furnaces and gas-fired heaters

Source: Bay Area Air Quality Management District
Grants for publicly accessible electric vehicle infrastructure

Grants for low-income residents to trade in cars for cleaner transportation

Source: Bay Area Air Quality Management District
Innovative Financing for Innovative Technologies

Reducing greenhouse gases by increasing access to capital to accelerate climate technology commercialization

Working Capital for Business Growth
Loan guarantees of up to $2.5M or 90%

Loans for Buying Climate Tech
Low-interest loans of up to $30M over 30 years
Loan Guarantees

Partnership

Nor-Cal FDC
Northern California Small Business Financial Development Corporation

IBank
Small Business Finance Center

Guarantee
up to 90% or $2.5M
up to 7 yrs

Commercial lender

Loan
up to $20M
rates vary

Entrepreneur

climate tech venture

Source: Bay Area Air Quality Management District
## Funded Projects

<table>
<thead>
<tr>
<th>Technology</th>
<th>Total Loan Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SW/TCH Maritime:</strong> Hydrogen fuel cell ferry</td>
<td>$5,000,000 over 5 years</td>
</tr>
<tr>
<td><strong>Gridscape Solutions:</strong> Renewable microgrids as a service</td>
<td>$1,000,000 over 1 year</td>
</tr>
<tr>
<td><strong>Imperial Eclectic Service:</strong> EV charging stations and solar installations</td>
<td>$350,000 over 7 years</td>
</tr>
<tr>
<td><strong>The Climate Center:</strong> Accelerating climate solutions non-profit</td>
<td>$200,000 over 2 years</td>
</tr>
</tbody>
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**Total Air District Commitment:** $350,000  
**Total Loan Amount Supported:** $6,550,000
Carbon Dioxide Removal (CDR) / Carbon Capture and Storage (CCS)

• What is CDR? (IPCC’s 1.5°C Report)
  • Anthropogenic activities removing CO₂ from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs
  • CDR – remove CO₂ from ambient air; Carbon capture – from more concentrated emissions sources

• Is CDR required to meet climate goals?
  • Existing cumulative CO₂ emissions
  • No clear alternative path to getting to net-zero GHG emissions
LLNL estimated that 125 M tons/yr of negative emissions capacity would comfortably meet the need – especially if some measures are slow.

Source: Lawrence Livermore National Laboratory
General Types of Carbon Capture

- Land-based
- Bioenergy with CCS (BECCS)
- Direct air capture
- Biochar
- Ocean-based
- Enhanced weathering

Source: Mercator Research Institute
Arguments Against CDR

- Environmental justice (EJ) issues
  - Less incentive to reduce/eliminate emissions
  - Continues operation of the fossil fuel industry and their disproportionate impacts
  - Possible additional air contaminant emissions that impact EJ communities
  - Cost of developing technology can divert funds from emissions reduction
  - Storage may affect EJ communities and be unsafe
- Other
  - Overall process might not be effective – use life cycle analysis
  - Unintended consequences to environment or society
Moving Forward with Meaningful Leadership

• Strengthen and support local action toward achieving statewide goals
• Integrate equity into all climate initiatives
• Seek authority from Legislature to regulate CO$_2$
• Work with California Air Resources Board (CARB), Dept. of Pesticide Regulation, others to reduce sulfuryl fluoride (high Global Warming Potential (GWP) fumigant)
• Leverage all Air District tools to maximize impact
Discussion Questions

- Is there anything that we've missed? What more could we be doing with the tools we have?
- Is there a pressing need for carbon capture technology? Should the state/region encourage/require carbon capture where feasible?
- When prioritizing policy interventions, how should we account for climate benefits/dis-benefits?
- What metrics should the Air District use to track progress and prioritize climate actions?
Questions / Discussion