



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

TECHNOLOGY IMPLEMENTATION OFFICE (TIO)
STEERING COMMITTEE

COMMITTEE MEMBERS

Bud Beebe, Sacramento Municipal Utility District (Retired)
Cindy Chavez, Air District Board of Directors (Committee Chair)
Mark Cupta, Prelude Ventures
Ahmad Ganji, San Francisco State Industrial Assessment Center
David Hudson, Air District Board of Directors
Janea Scott, California Energy Commission
Marilyn Waite, Hewlett Foundation
Jetta Wong, Los Angeles Cleantech Incubator

**MONDAY
MARCH 25, 2019
9:30 A.M.**

**1ST FLOOR BOARD ROOM
375 BEALE STREET
SAN FRANCISCO, CA 94105**

AGENDA

**1. CALL TO ORDER - ROLL CALL
PLEDGE OF ALLEGIANCE**

The Committee Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Committee members. The Committee Chair shall lead the Pledge of Allegiance.

Staff/Phone (415) 749-

2. PUBLIC COMMENT ON AGENDA MATTERS

Pursuant to Government Code Section 54954.3, the public has the opportunity to speak on any agenda item. All agendas for Council meetings are posted at the Air District, 375 Beale Street, San Francisco, California 94105 at least 72 hours before a meeting.

This meeting will be webcast. To see the webcast, please visit www.baaqmd.gov/bodagendas at the time of the meeting. Closed captioning may contain errors and omissions, and are not certified for their content or form.

3. APPROVAL OF THE MINUTES OF OCTOBER 22, 2018

Clerk of the Boards/5073

The Committee will consider approving the draft minutes of the Technology Implementation Office Steering Committee meeting of October 22, 2018.

4. **OVERVIEW OF TECHNOLOGY IMPLEMENTATION OFFICE**

R. Chiang/8621
rchiang@baaqmd.gov

The Steering Committee will receive an update on the mission and programs of the Technology Implementation Office.

5. **CLIMATE TECH FINANCE PROGRAM OVERVIEW AND LAUNCH**

D. Tang/8726
dtang@baaqmd.gov

The Committee will receive an update on the launch of Climate Tech Finance, the Air District's first loan program for industrial facilities and outreach efforts to public agencies, small businesses, technology developers, financing institutions, and other program partners.

6. **POTENTIAL PROJECTS AND FUTURE DIRECTIONS**

D. Tang/8726
dtang@baaqmd.gov

The Committee will receive an update on the types of projects that may be candidates, to receive loans and loan guarantees from the Climate Tech Finance program and seek input on facilities and projects that would be a match for the program.

7. **PUBLIC COMMENT ON NON-AGENDA MATTERS**

(Public Comment on Non-Agenda Items Pursuant to Government Code § 54954.3) Members of the public are afforded the opportunity to speak on any agenda item. All agendas for regular meetings are posted at District headquarters, 375 Beale Street, San Francisco, CA, 94105 at least 72 hours in advance of a regular meeting. At the beginning of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Committee's subject matter jurisdiction. Speakers will be limited to up to three (3) minutes each.

8. **COMMITTEE MEMBER COMMENTS**

Any member of the Steering Committee or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)

9. **TIME AND PLACE OF NEXT MEETING**

At the call of the Committee Chair.

10. **ADJOURNMENT**

The Committee meeting shall be adjourned by the Committee Chair.

CONTACT:

MANAGER, EXECUTIVE OPERATIONS
375 BEALE STREET, SAN FRANCISCO, CA 94105
vjohnson@baaqmd.gov

(415) 749-4941
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting. Please note that all correspondence must be addressed to the “Members of the Technology Implementation Office Steering Committee” and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Committee meeting. Any correspondence received after that time will be presented to the Committee at the following meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District’s offices at 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

Accessibility and Non-Discrimination Policy

The Bay Area Air Quality Management District (Air District) does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, or mental or physical disability, or any other attribute or belief protected by law.

It is the Air District’s policy to provide fair and equal access to the benefits of a program or activity administered by Air District. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by the Air District. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint under this policy. This non-discrimination policy also applies to other people or entities affiliated with Air District, including contractors or grantees that the Air District utilizes to provide benefits and services to members of the public.

Auxiliary aids and services including, for example, qualified interpreters and/or listening devices, to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly.

If you believe discrimination has occurred with respect to an Air District program or activity, you may contact the Non-Discrimination Coordinator identified below or visit our website at www.baaqmd.gov/accessibility to learn how and where to file a complaint of discrimination.

Questions regarding this Policy should be directed to the Air District’s Non-Discrimination Coordinator, Rex Sanders, at (415) 749-4951 or by email at rsanders@baaqmd.gov.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 BEALE STREET, SAN FRANCISCO, CA 94105

FOR QUESTIONS PLEASE CALL (415) 749-4941

EXECUTIVE OFFICE:

MONTHLY CALENDAR OF AIR DISTRICT ANTICIPATED MEETINGS

MARCH 2019

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Executive Committee	Wednesday	20	9:30 a.m.	1 st Floor Board Room
Board of Directors Budget and Finance Committee	Friday	22	9:30 a.m.	1 st Floor, Board Room
Board of Directors Technology Implementation Office Steering Committee	Monday	25	9:30 a.m.	1 st Floor Board Room
Board of Directors Legislative Committee	Wednesday	27	9:30 a.m.	1 st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee	Thursday	28	9:30 a.m.	1 st Floor Board Room

APRIL 2019

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting	Wednesday	3	9:30 a.m.	1 st Floor Board Room
Board of Directors Personnel Committee	Friday	5	9:30 a.m.	1 st Floor Board Room
Board of Directors Regular Meeting	Wednesday	17	9:30 a.m.	1 st Floor Board Room
Board of Directors Climate Protection Committee	Monday	22	9:30 a.m.	1 st Floor Board Room
Board of Directors Budget and Finance Committee	Monday	22	10:30 a.m.	1 st Floor, Board Room
Board of Directors Legislative Committee	Wednesday	24	9:30 a.m.	1 st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee	Thursday	25	9:30 a.m.	1 st Floor Board Room
Board of Directors Stationary Source Committee	Monday	29	9:30 a.m.	1 st Floor Board Room

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Cindy Chavez and Members
of the Technology Implementation Office Steering Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 12, 2019

Re: Approval of the Minutes of October 22, 2018

RECOMMENDED ACTION

Approve the attached draft minutes of the Technology Implementation Office Steering Committee (Committee) meeting of October 22, 2018.

DISCUSSION

Attached for your review and approval are the draft minutes of the Technology Implementation Office Steering Committee meeting of October 22, 2018.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

Attachment 3A: Draft Minutes of the Committee Meeting of October 22, 2018

AGENDA: 3A – ATTACHMENT

Draft Minutes – Technology Implementation Office Steering Committee Meeting of October 22, 2018

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105
(415) 749-5073

DRAFT MINUTES

Summary of Board of Directors
Technology Implementation Office Steering Committee Meeting
Monday, October 22, 2018

1. CALL TO ORDER – ROLL CALL

Technology Implementation Office (TIO) Steering Committee (Committee) Chairperson Cindy Chavez called the meeting to order at 9:38 a.m.

Present: Committee Chairperson, Cindy Chavez; Board of Directors (Board) Chairperson, David Hudson; and Members Bud Beebe, Ahmad Ganji, and Janea Scott.

Absent: Member Mark Gupta.

Also Present: None.

2. PUBLIC COMMENT ON AGENDA MATTERS

No requests received.

3. APPROVAL OF THE MINUTES OF JUNE 21, 2018

Public Comments

No requests received.

Committee Comments

None.

Committee Action

Member Scott made a motion, seconded by Member Beebe, to approve the Minutes of June 21, 2018; and the motion carried by the following vote of the Committee:

AYES: Beebe, Chavez, Ganji, and Scott.

NOES: None.

ABSTAIN: None.

ABSENT: Gupta and Hudson.

4. **TECHNOLOGY IMPLEMENTATION OFFICE STEERING COMMITTEE COMPOSITION**

Damian Breen, Deputy Air Pollution Control Officer of Technology, introduced Dr. Ranyee Chiang, Technology Implementation Officer, who gave the staff presentation *TIO Steering Committee Composition*, including: tackle barriers for emerging climate technologies; technology focus areas; TIO Steering Committee advises Air District staff; Steering Committee Composition; and candidates.

NOTED PRESENT: Member David Hudson was noted present at 9:46 a.m.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the professional experience of the seven prioritized candidates vetted by Air District staff; the desire for candidates with experience in public and loan finance programs, community engagement, energy efficiency, environmental technology, and carbon funding; the importance of equity among and availability of candidates; whether any of the candidates currently hold governor-appointed seats whose assignments will change with the new gubernatorial administration; and the suggestion for a working group to strategize how the Air District can further partner with the California Air Resources Board (CARB), California Public Utilities Commission, and other State regulatory agencies.

Committee Action

None; receive and file.

5. **TECHNOLOGY ASSESSMENT AND OUTREACH**

Dr. Chiang introduced Brian Butler, Staff Specialist, who gave the staff presentation *Technology Assessment and Outreach*, including: climate technology review; actions to accelerate technologies; regulate; educate; incentivize; outreach goals and approach; stakeholders; outreach channels; and Climate Tech Marketplace on September 13, 2018.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the suggestion that the Air District present the technology assessment to Mayors' Conferences and Cities Associations in the nine Bay Area counties, the California League of Food Producers, boiler companies, California Building Standards Commission, and government procurement officers; how the testing of backup diesel generators contributes to the increase of greenhouse gas (GHG) emissions; whether Air District incentives for accelerating technologies will be used for research and development, or just deployment; the return of hydrogen fuel cell technology; the suggestion that the Air District focuses on reducing process-related carbon emissions for petroleum measures; the need to move away from dependence on natural gas appliances

and transition to a net-zero emissions portfolio, compatible with an anticipated low-carbon future; the fact that Air District staff feels that the amount of technologies being considered has reached maximum capacity; and the Committee’s preferred areas of focus, and caution of unintended consequences of mitigation measures that are pursued.

Committee Action

None; receive and file.

6. LOAN PROGRAM AGREEMENT

Dr. Chiang introduced Derrick Tang, TIO Manager, who gave the staff presentation *Loan Program Agreement*, including: Climate Tech Finance Program overview; California Infrastructure Economic Development Bank (IBank) timeline, program guidelines; finance process; long-term goals; and Climate Tech Finance Program link.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the steps in the financing process, and whether the Air District or the IBank is the applicant’s first point of contact; the differences between the application for a government loan and a home loan; the anticipated amount of interaction the Air District will have with the applicant and IBank once an application has been processed, and the anticipated ease of the process for the applicants; speculation of who may apply; and the responsibility of the collaborating agencies to share any potential risk.

Committee Action

None; receive and file.

7. ELECTRIC VEHICLE INFRASTRUCTURE AND FLEET INCENTIVE PROGRAMS

Dr. Chiang introduced Mark Tang, Staff Specialist, who gave the staff presentation *Electric Vehicle (EV) Infrastructure and Fleet Incentive Programs*, including: adoption of EVs in the Bay Area and California; current and needed EV charging infrastructure; Transportation Fund for Clean Air (TFCA); impact of Air District funding on Bay Area public charging stations; Charge! Program 2017-2018 and Fiscal Year Ending (FYE) 2019; Clean Fleets FYE 2019; and outreach activities.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the fact that this program is intended to fund shovel-ready projects only; the timeline of the Charge! program’s upcoming funding cycle; the launch of the Clean Fleets program in August 2018; the correlation of the type and amount of Air District messaging EVs in a

given area and the current level of EV adoption in that area; CARB’s One-Stop-Shop Pilot Program, which gives low-income consumers the opportunity to cross-qualify for CARB’s multiple clean-transportation incentives; the need to promote the Air District’s EV programs in disadvantaged communities, and whether the Air District will ensure that some program funding is saved for applications from disadvantaged communities; the suggestion that the Air District considers partnering with Elix wireless charging technology; the need to select charging infrastructure that has the capacity to be upgraded as technology improves; the need to install EV charging infrastructure in low-income communities, communities that were not early adapters of EV charging infrastructure, and communities that the private sector is reluctant to upgrade; the suggestion that the Air District forms partnerships with credit unions to offer financial assistance to those who cannot afford EVs; the suggestion that, as exchanges of properties between owners occur, the Air District obtains public transaction information and informs both parties about the demand and opportunities for EV charging infrastructure; the suggestion that the Air District launches an informational campaign (about EV trends and charging infrastructure demands, targeting affluent communities) that is not tied to Air District grant programs; Green Building Standards Code compliance for new buildings; the suggestion that the Air District reach out to banks that are concerned that the property value of commercial buildings will decrease if there is insufficient parking; and the need to anticipate future technologies that will focus on zero-emissions vehicles’ capabilities of operating both indoors and outdoors.

Committee Action

None; receive and file.

8. PUBLIC COMMENT ON NON-AGENDA MATTERS

No requests received.

9. COMMITTEE MEMBER COMMENTS

None.

10. TIME AND PLACE OF NEXT MEETING

At the Call of the Chair.

11. ADJOURNMENT

The meeting adjourned at 11:54 a.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Cindy Chavez and Members
of the Technology Implementation Office Steering Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 18, 2019

Re: Overview of Technology Implementation Office

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Bay Area Air Quality Management District (Air District) established the Technology Implementation Office (TIO) in 2017 to advance emerging, cost-effective technologies to reduce greenhouse gas emissions in the Bay Area, that are also replicable in other regions. The TIO's programs utilize partnerships and incentives (grants and loans) for climate technologies, including electric vehicles (EVs), zero emissions vehicles and infrastructure, energy storage, waste-to-energy, waste management, and other technologies relevant for industrial facilities. The major programs include:

- Bay Area EV Coordinating Council – quarterly convening of Bay Area facilities, businesses, and local governments to coordinate EV programs
- Charge! – grants for installing publicly available charging infrastructure
- Clean Cars for All – incentives for low-income residents to turn in an older vehicle and purchase or lease a clean vehicle or get a transportation card
- Clean Fleets – grants for Bay Area light-duty fleets to adopt electric vehicles
- Climate Tech Finance – loan and loan guarantee program for industrial facilities
- Climate Tech Network – quarterly convening of technology developers, facility managers, financing organizations, and local governments

DISCUSSION

As part of this agenda item, staff will welcome new members to the Steering Committee; give an overview of the TIO, its mission and programs; as well as providing a refresher on the format, structure and role of the Committee.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Ranyee Chiang
Reviewed by: Damian Breen

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Cindy Chavez and Members
of the Technology Implementation Office Steering Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 12, 2019

Re: Climate Tech Finance Program Overview and Launch

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Climate Tech Finance program is the Air District's first loan program for industrial facilities. The program was designed to address a financing gap for technologies that have been successfully demonstrated but have not secured a critical mass of customers. The program also offers technology evaluation and matchmaking opportunities to connect technologies with Bay Area facilities.

The Climate Tech Finance program offers subsidized direct loans to public agencies and loan guarantees to small businesses for the purchase of emerging technologies that reduce greenhouse gases. To distribute the loans and loan guarantees, the Air District is collaborating with the California Infrastructure and Economic Development Bank (IBank) to co-finance projects. This initial program has \$4 million available from the Air District for loans and loan guarantees.

DISCUSSION

The Climate Tech Finance program was announced to facilities, governments, and partner organizations in November 2018. As part of the broader outreach strategy, staff developed outreach materials and met with stakeholders to increase awareness about the loan and loan guarantee opportunities. Air District staff presented webinars, hosted the first Climate Tech Network event to bring together emerging climate technologies and potential customers, and sponsored or attended external events.

Staff will continue outreach efforts by developing additional materials, delivering targeted messages to facilities and technology developers, and promoting Climate Tech Finance at conferences and events in relevant sectors. Staff are seeking input from the Steering Committee on additional outreach channels and strategies to effectively promote the Climate Tech Finance program with technology developers and facilities.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Derrick Tang
Reviewed by: Ranyee Chiang

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Cindy Chavez and Members
of the Technology Implementation Office Steering Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 12, 2019

Re: Potential Projects and Future Directions

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

To identify initial technologies of focus, the Air District completed an assessment of 188 technologies that reduce greenhouse gases (GHGs). The results were published as the Climate Technology Review, a report summarizing the key results of the technology assessment and providing greater detail on especially promising technologies in various industry sectors. From this assessment, the Air District identified energy storage and waste technologies as key areas of focus for initial loan projects.

DISCUSSION

From the ongoing outreach efforts for Climate Tech Finance, Air District staff have compiled an early list of potential loan projects. Staff have received strong early interest from two groups of potential borrowers in particular: wastewater treatment plants and municipalities seeking to electrify their facilities.

Staff are seeking input from the Steering Committee on project attributes that should be prioritized. For projects that meet program priorities and are close to construction, Air District staff will perform an engineering evaluation of the potential loan project. IBank then performs financial underwriting of the loan. Because the loan funds revolve, initial projects under this program will be evaluated as pilots to inform future loan projects, updates to the Climate Tech Finance program, and expand collaborations with IBank and other financing institutions. Staff will discuss potential opportunities for the Climate Tech Finance program to expand or partner with other financing organizations.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Derrick Tang
Reviewed by: Ranyee Chiang