

AIR ISSUES & REGULATIONS COMMITTEE

A Committee of the Bay Area Clean Water Agencies

Committee Meeting

November 20, 2013 10:00 am - 1:00 pm

Introductions & Opening

Agenda

- Introductions and Opening
- Regulatory Updates
 - I. Local Regulatory News
 - II. State Regulatory News
 - III. National Regulatory News
- Technical Resources
- Grant Opportunities
- AIR Business Items
- Closing



Local Regulatory News

Local Regulatory News

BAAQMD Regulation 2

BAAQMD Regulation 2 Amendments

- Amendments:
 - Adopted by BAAQMD on December 19, 2012
 - Will allow issuance of PSD and NSR permits
- Rule 4, Emissions Banking (PM_{2.5}), is currently effective
- Rules 1, 2, & 6 are still being reviewed by USEPA



Local Regulatory News

BAAQMD Regional Climate Protection Strategy

BAAQMD Climate Protection Resolution

- On November 6th, BAAQMD passed a climate protection resolution, which commits the BAAQMD to:
 - Developing a regional climate protection strategy
 - Setting a goal of reducing GHG emissions to 80% below 1990 levels by 2050
- As a result of this resolution, BAAQMD will prepare a Bay Area Climate Protection Work Program to guide climate protection activities and identify necessary resources for future action

Local Regulatory News

BAAQMD Permits Survey Results

BAAQMD Permits Survey Results

- Received feedback from 5 facilities
- Central Contra Costa Sanitary District
 - ATC Permit for Auxiliary Boiler #2 Burner Upgrade (36 days)
 - ATC Permit for Auxiliary Boiler #1 Burner Upgrade (42 days)
 - Title V Permit Renewal (22 months)
- City of Santa Rosa Wastewater Treatment Facility
 - Title V Permit Renewal (22 months)
 - ATC Permit for CHP (6 months)



BAAQMD Permits Survey Results (Continued)

- East Bay Municipal Utility District
 - New Source / Exempt Source (9 weeks)
 - Title V Permit Renewal (3 years)
 - Condition Change (7 weeks)
 - Letter Requesting Condition Change (Request denied after 6 months)
- San Jose/Santa Clara RWF
 - Change of Condition (2 years, 4 months)
 - Title V Permit Renewal (1 year, 9 months and counting)
- City of Palo Alto
 - No permit applications submitted in the past 5 years

State Regulatory News

State Regulatory News

Medium- and Heavy-Duty Vehicles and Engines

CARB Medium- and Heavy-Duty Vehicles and Engines Regulations

GHG Emission Standards:

- Proposes to adopt USEPA's existing GHG emission standards for MY 2014-2018 medium- and heavy-duty vehicles and engines
 - see http://www.epa.gov/otaq/climate/documents/420f11031.pdf and http://www.epa.gov/otaq/climate/regs-heavy-duty.htm
- Regulation will mostly affect vehicle and engine manufacturers

Optional NOx Standards:

- Proposes to allow manufacturers to optionally certify new medium- and heavyduty engines to one of 3 standards: 0.1 g/bhp-hr, 0.05 g/bhp-hr, & 0.02 g/bhp-hr
- Regulation will mostly affect vehicle and engine manufactures; however, it may have an indirect affect on future vehicle purchases or project funding

Diesel ATCM:

- Proposes to make vehicle owners/dispatchers responsible for compliance with the
 5 min. idling requirement for commercial vehicles with a GVWR > 10,000 lbs
- Proposes to add school, hotels, and motels to the definition of "restricted areas" such that diesel-fired auxiliary power units would not be allowed to operate more than 5 minutes within 100 feet of these restricted areas
 AIR ISSUES & REGULATIONS COMMITTEE A Committee of the Bay Area Clean Water Agencies 1.4

Additional information is available at:

http://www.arb.ca.gov/regact/2013/hdghg2013/hdghg2013.htm

National Regulatory News

National Regulatory News

2014 Renewable Fuel Standards

2014 Renewable Fuel Standards

- Proposes levels of renewable fuels to be blended into gasoline and diesel
- USEPA is seeking comment on the following volumes:

Category	Proposed Volume ^a	Range
Cellulosic Biofuel	17 million gallons	8-30 million gallons
Biomass-based Diesel	1.28 billion gallons	1.28 billion gallons
Advanced Biofuel	2.20 billion gallons	2-2.51 billion gallons
Renewable Fuel	15.21 billion gallons	15-15.52 billion gallons

^a All volumes are ethanol-equivalent, except for biomass-based diesel which is actual.



Additional Items

Additional Items

Technical Resources

CARB Diesel Training Courses

- Course 504: In-Use Off-Road Diesel Vehicle Regulation
 - Provides an overview of the regulation (applicability, current/future compliance requirements, etc.)
 - Diesel Off-Road Online Reporting System
 - Scheduled for December 5th in San Diego
- Course 505: Large Spark-Ignition Fleet Regulation
 - Overview of the regulation, including applicability, requirements, compliance extensions, and enforcement activities.
 - Scheduled for December 5th in San Diego
- Course 511: Diesel Exhaust After-Treatment Devices
 - Diesel PM health effects
 - Diesel engine PM and NOx production and control strategies
 - DPF types, applications, and regulations.
 - Scheduled for December 4th in San Diego
- Course 520: How to Comply with CARB Diesel Regulations
 - Reviews inspection process, non-compliance consequences, and how to comply
 - Scheduled for November 26th in Valencia and December 10th in Sacramento

AIR ISSUES & REGULATIONS COMMITTEE

A Committee of the Bay Area Clean Water Agencies 20

California's Water-Energy-Climate Nexus: Energy and GHG Emissions Embedded in Water

- On October 15th, TCR and Water Energy Innovations released a white paper addressing the relationship between water systems, energy use, and GHGs
- Proposes framework to measure energy use & GHGs of water and wastewater systems, including:
 - Development of GHG accounting guidance for water agencies
 - consistent and comparable measurement of carbon footprints
 - metrics to benchmark agency performance
 - Introduction of a single energy and GHG registry for water agencies
 - Training of resources and support for water agencies
- White paper is available for download at:

http://www.theclimateregistry.org/downloads/2013/10/California-Water-Energy-Climate-

Regional Climate Change Agreement

- On October 28th, California, Oregon, Washington, and British Columbia signed an agreement to align policies to reduce GHG emissions and promote clean energy
- Pact seeks to enhance cooperation through:
 - Accounting for the costs of carbon pollution in each jurisdiction
 - Harmonizing 2050 targets for GHG reductions and developing mid-term targets needed to support long-term reduction goals
 - Expanding the use of zero-emission vehicles
 - Adopting and maintaining low-carbon fuel standards in each jurisdiction
 - Supporting research on ocean acidification
 - Continued deployment of high-speed rail across the region

Combined Heat and Power (CHP) Technical Assistance Partnerships

- DOE has launched 7 new regional CHP Technical Assistance Partnerships to help achieve the national goal of 40 gigawatts of new CHP capacity by 2020, which is a 50% increase from 2013
- Organizations will:
 - Offer best practices for CHP project financing, market analysis tools and resources, and technical site evaluations, including assistance throughout the project development process
 - Support research, development, and demonstration projects to help grow the CHP market, including finding CHP solutions that fit small- and medium-sized facilities and accelerating new product commercialization
 - Provide information on the energy and non-energy benefits and applications of CHP to state and local policy makers, regulators, energy end-users, trade associations, etc.
- Additional information is available at:

http://www1.eere.energy.gov/manufacturing/distributedenergy/coptaps.html

Climate Ready Water Utilities (CRWU) Initiative and Water Utility Climate Alliance (WUCA)

- Webinars will assist the water sector in:
 - Developing a better understanding of climate change
 - Managing impacts
 - Creating adaptation strategies
- Webinars will also:
 - Include presentations from utility representatives that have used the planning methods to make critical decisions
 - Provide tools and resources to facilitate the planning process
- Webinars are currently scheduled for December 4th and March 19th
- Additional information is available at:

http://water.epa.gov/infrastructure/watersecurity/clin

Communicating Effectively to Ensure the Long-Term Success of Climate/Clean Energy Programs

- USEPA's State and Local Climate and Energy Program is hosting a 3-part webcast series on communications
- Part 1: Gaining Support & Attracting Participation Through Communication
 - Developing and using a communications plan
 - Statistics that engage, empower, & transform participation into results
 - Case studies:
 - understanding your audience
 - · tailoring strategies to meet their needs
- Part 2: Role of Communication in Ensuring Behavior Change
 - How communications tools can be used to achieve behavior change
 - Case studies:
 - role of behavior change
 - using incentives to recognize behavior change
 - how to measure behavior change



Communicating Effectively to Ensure the Long-Term Success of Climate/Clean Energy Programs

- Part 3: Using Effective Communication to Showcase Successes
 - How communities must publicize the success of their programs
 - Case studies:
 - how to showcase the benefits and successes
 - how to effectively share best practices to encourage replication of successes
- Webcasts are scheduled for December 4th, 11th, and 18th
- http://www.epa.gov/statelocalclimate/



USEPA's Office of Water: Draft Climate Change Adaptation Implementation Plan

- USEPA released draft Climate Change Adaptation Implementation Plan in November for public review
 - Details USEPA plans to help communities adapt to climate change
 - Recognizes need to integrate climate adaptation planning into EPA's programs, policies, rules, and operations to ensure effectiveness as the climate changes
 - Provides overview of opportunities & resources to protect water quality and availability
- Public comments are due January 3, 2014
- The draft plan is available for download at;

http://epa.gov/climatechange/Downloads/impacts-adaptation/office-of-water-plantodf

USEPA Climate Ready Estuaries Program: Workbook on Developing Climate Change Adaptation Plans

- Planning for climate change impacts is a 2-part process:
 - 1. Vulnerability assessment identify and assess the climate change risks that may be a threat to an organization's goals
 - 2. Action planning uses the vulnerability assessment to set priorities and develop responses
- USEPA released a draft workbook that provides guidelines for this process, including:
 - A systematic process to determine:
 - The risks that should be addressed
 - Approaches for building local capacity to understand and manage the risks
 - A guide to climate change adaptation planning based on USEPA's experience with watershed management
- Comments due November 22nd

Creating and Expanding Funding Streams for Adaptation Planning and Implementation

- First webinar of the National Adaptation Webinar Series will:
 - Explore ways to use existing mandates to implement adaptation
 - Provide a forum on challenges and creative ways to move adaptation forward
 - Case study: how adaptation is moving forward in the City of Cleveland
- Webinar is November 21st
- Register for the webinar at:

 http://lists.icfwebservices.com/t/82

 AIR ISSUES & REGULATIONS COMMITTEE

 A Committee of the Bay Area Clean Water Agencies 29

2014 Climate Leadership Conference

- Annual conference convenes forward-thinking leaders to share:
 - energy and climate-related solutions
 - introduce new opportunities
 - provide support for those addressing climate change
- Scheduled for February 24 26, 2014 in San Diego
- Early registration is open through December 12th
- Conference topics include, but are not limited to:
 - California Adaptation Strategy
 - GHG Reduction Goal Setting
 - The Energy-Water Nexus: Understanding Risk & Impact on Operations
 - Zero-Carbon Power: Integrating Renewable Energy Into Your Portfolio
 - Solutions for Long-term Energy Planning
 - Innovation Initiatives in GHG Management
- Conference details are available at:



http://www.climateleadershipconference.org/

Additional Items

Grant Opportunities

State Water Board's Clean Water State Revolving Fund (CWSRF) Program

CWSRF Program:

- Accepts applications on a continuous basis
- Offers low interest financing agreements for water quality projects
- Disburses \$200 \$300 million annually
- Any city, town, district, or other public body created under State law is eligible for funding
- Eligible projects include Wastewater Treatment Facility Construction Projects, local sewers, etc.
- Additional information is available at:

www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/sncorms.

Free Energy Audits

- California Energy Commission's Energy Partnership Program:
 - Provides up to \$20,000 of technical support to identify energy projects and their technical and economic viability
 - Available to both water and wastewater utilities
- Applications accepted on a first-come, first-serve basis
- Questions: Shahid Chaudhry at (916) 654-4858 or Shahid.Chaudhry@energy.ca.gov
- Additional information is available at:

http://www.energy.ca.gov/efficiency/partnership/



CARB's Clean Vehicle Rebate Project (CVRP)

CVRP Program:

- Accelerates the number of ultra-clean vehicles sold in California
- Helps establish a sustainable market
- CVRP offers rebate funding for Hybrid and Zero-Emission Vehicles:
 - \$57 million in funding secured for FY13-14, available through 2015 on a first-come, first-serve basis
 - Approximately 54% of funding still available
 - Rebates of up to \$2,500 per light-duty vehicle available for purchase or lease of new eligible zero-emission or plug-in hybrid electric vehicles
- Additional information is available at:

http://energycenter.org/index.php/incentive-programs/clean-vehicle-projection-

CARB's Truck Loan Assistance Program

- Truck Loan Assistance Program:
 - Helps small business fleet owners finance truck upgrades required under CARB's In-Use Truck and Bus Regulation
 - Helps truck owners purchase cleaner trucks, exhaust retrofits, and truck efficiency upgrades
- Program offers competitive-rate financing for fleets meeting the following criteria:
 - Company must be a small business (100 employees or less and less than \$10 million in annual revenue)
 - Fleet must operate in California a minimum of 51% of the total mileage
 - Fleet must be 40 or fewer heavy-duty trucks
- An additional \$18 million in funding is available
- Additional information is available at:

http://www.arb.ca.gov/msprog/truckstop/funding/loans fa.htm

AIR Issues & Regulations Committee
A Committee of the Bay Area Clean Water Agencies 35

Carl Moyer Memorial Air Quality Standards Attainment Program

- BAAQMD's Carl Moyer Program:
 - Strives to reduce air emissions from local heavy/medium-duty engines
 - Approximately \$15 million is available for emission reduction projects
 - Accepting applications on a first-come, first-serve basis
- Grants:
 - Cannot be used for projects currently required by law
 - Can be used for equipment compliance at least 3+ years prior to laws
 - Are available for projects that:
 - Install verified emission control devices
 - Replace older heavy-duty engines with newer and cleaner engines
 - Replace older equipment with newer and cleaner equipment
 - Purchase new equipment that is cleaner than the law requires
 - Install electric idling-reduction equipment
- Revised program guidelines adopted October 30

Voucher Incentive Program: On-road Heavy-Duty Vehicles

Program:

- Provides funding to reduce on-road heavy-duty diesel truck emissions
- Applies to owners and operators of fleets of < 10 vehicles
- Applies to on-road trucks with a GVWR > 14,000 pounds
- Available funds:
 - Total of \$3 million available now for the BAAQMD
 - Up to \$45,000 towards the purchase of a new vehicle
 - Up to \$10,000 for purchase/ installation of retrofit device
- Applications accepted on a first-come, first-serve basis
- Revised program guidelines adopted October 20th:

http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm

Hybrid & Zero-Emission Truck & Bus Voucher Incentive Project

Project:

- Provides vouchers to help California fleets purchase hybrid and zero-emission trucks and buses
- Fleets can order as many as 200 vouchers, with a limit of one voucher per vehicle
- Only applies to heavy- and medium-duty vehicles
- Available funds:
 - Total of \$15 million available now
 - Up to \$55,000 towards the purchase of a new truck or bus
 - Vouchers expected to be available starting in December
- Applications accepted on a first-come, first-serve basis
- Additional information is available at:

http://www.californiahvip.org/default.aspx

Alternative and Renewable Fuel and Vehicle Technology Program

- Program provides financial support for projects that:
 - Reduce the use of petroleum fuels and increase the use of alternative/renewable fuels and advanced vehicle technologies
 - Produce sustainable alternative and renewable low-carbon fuels
 - Improve efficiency, performance, and market viability of alternative light-, medium-, and heavy-duty vehicle technologies
 - Retrofit medium- and heavy-duty on-road and non-road vehicle fleets to alternative technologies or fuel use
- Available Funding from CEC:
 - Up to 25% or \$1.1 million of the total project cost
 - Applications due January 10, 2014
 - Additional information is available at:
 http://www.energy.ca.gov/contracts/transportation.html#PON-13-604
- Additionally, the Draft 2014-2015 Investment Plan Update proposes
 to fund up to \$20 million to support the in-state production of
 biofuels, including biofuels derived from waste-based feeds to ckommittee

Public Interest Energy Research Natural Gas Program

- Program supports research, development, and demonstration projects related to renewable energy, advanced generation, and energy-related environmental research within the following areas:
 - Improving the performance and advancing the market penetration of CHP
 - Addressing technical and economic challenges to the development and market deployment of CHP systems that use associated gas
 - Accelerating the deployment of localized power generation and CHP
 - Reducing emissions for the direct use of biogas/biomethane, potential operational issues associated with the use of low heating value gas, and postcombustion technologies
- Applications due December 6th
- Additional information is available at:

http://www.energy.ca.gov/contracts/pier.html#PON-13-502



REMOTE Program

- REMOTE: Reducing Emissions Using Methanotrophic Organisms for Transportation Energy
- Program will provide \$34 million to find advanced biocatalyst technologies that can convert biogas to liquid fuel for transportation
- Current synthetic gas-to-liquids conversion approaches are technologically complex and require large, capital-intensive facilities, which limit widespread adoption
- Program goals include:
 - Lowering the cost of gas to liquid conversion
 - Enabling the use of low-cost, low-carbon, domestically-produced natural gas
- List of current projects is available at:

http://www.arpa-e.energy.gov/sites/default/files/documents/files/METALS%26REMOTE_Project_Descriptions_03191

USDA Funding to Develop Advanced Biofuels Projects

- Biorefinery Assistance Program:
 - Provides loan guarantees to viable commercial-scale facilities to develop new and emerging technologies for advanced biofuels
 - \$181 million in funding available to develop biorefineries or retrofit existing facilities with appropriate technology
- Applications are due January 30, 2014
- Example Project Fremont Community Digester:
 - Received a loan guarantee for \$12.8 million
 - Constructed an anaerobic digester which processes more than 100,000 tons of food waste

AIR ISSUES & REGULATIONS COMMITTEE

A Committee of the Bay Area Clean Water Agencies 42

- Biogas from the digester runs generators which produce 2.85 MW electricity which is sold to the local utility
- Additional information is available at:

http://www.rurdev.usda.gov/BCP_Biorefinery.html

Additional Items

AIR Business Items

BACWA AIR Budget Update

- Total Budget for FY 2013/2014: \$74,441
 - Spent: \$29,758 (through last Friday the 15th)
 - 40% of budget



BACWA Meetings

- Upcoming Meetings:
 - Volunteers for future field trips
 - BAAQMD Meeting
 - Pam Leong new engineering manager
 - Not much has changed since March meeting
 - Discuss topics of interest
 - Updating facility data in BAAQMD database
 - Permit review delays
 - Review any topics covered last year?
 - IC Engines Permitting Roundtable (see following slides)

AIR ISSUES & REGULATIONS COMMITTEE
A Committee of the Bay Area Clean Water Agencies 4.5

Engine Categories

- Engines Subject to BAAQMD Permits:
 - Prime movers (digester gas blend generator and blower engines)
 - Emergency engines
 - Portable engines (if not under State Registration)
- Engines Regulated at the State Level:
 - Off-road mobile vehicles and equipment
 - On-road mobile vehicles
 - Portable equipment engines



Example Agenda for Engine Roundtable

- Applicable regulations
- Schedule
- Time-frame
- Cost
- Data and analysis
- Permit package
- Communications



Closing

Next Meeting: Wednesday, January 22, 2014

(actually the 4th Wednesday since Jan. 1st is Wed.)

Additional Slides



Biogenic Emissions Coalition Update

- Current Clean Air Act PSD and Title V permitting requirements will apply to CO₂ emissions from POTW treatment processes and the combustion of biosolids and biogas starting in July 2014
- Center for Biological Diversity, et al. v. USEPA:
 - Court ruled against the 3-year deferral of GHG standards for biomass burning
 - Court's decision should add urgency to USEPA's effort to amend its tailoring rule
- Deadline to appeal the Court's decision was extended to 30 days after the U.S. Supreme Court decides whether it will hear lawsuits challenging USEPA's GHG regulations & permitting process
- Extension allows USEPA and affected industry groups to:
 - Find a solution that allows continued deferral of biogenic GHG emissions from the Title V and PSD permitting programs
 - Discuss specific impacts of any decisions on wastewater utilities
 - Work on a permanent exemption for these emissions

USEPA's Report of Climate Change Impacts on Streamflow and Water Quality

- Watershed modeling conducted to characterize the sensitivity of streamflow, nutrient, & sediment loading to plausible climate change/urban development scenarios
- The final report provides improved understanding of:
 - Challenges associated with integrating existing tools & data sets
 - The complex and context-dependent relationships between climate change, land use change, and water resources in different regions of the nation
 - How future conditions likely different from past experience
- The final report is available for download at:

http://cfpub.epa.gov/ncea/global/recordisplay.cfm?deid=256912



Local Regulatory News

BAAQMD:

- Amendments to Reg. 2, Rules 1, 2, 4 and 6
- Adoption of Fine Particulate
 Matter Emission Inventory

- November 7, 2012, BAAQMD Board public hearing:
 - (1) adoption of proposed amendments to Regulation 2 Permits
 - Rule 1: General Requirements
 - Rule 2: New Source Review
 - Rule 4: Emissions Banking
 - Rule 6: Major Facility Review
 - (2) adoption of a District Emissions Inventory for fine particulate matter (PM_{2.5}) for year 2010.
- These amendments will be submitted to the USEPA for:
 - Approval
 - Revise the CA State Implementation Plan (SIP)

Purpose:

- Incorporate recent U.S. EPA requirements for NO₂, PM_{2.5}, and GHG Prevention of Significant Deterioration (PSD) & Title V permitting
- Make it consistent with recent changes in Fed. requirements, so BAAQMD can issue PSD and New Source Review (NSR) permits
- Obtain approval of its SIP
 - Clean Air Act requires SIPs for areas in non-attainment of air quality standards



- Potential impacts to BACWA POTWs:
 - Most of the changes will affect major facilities
 - Facilities that apply for new or modified permits for sources of PM_{2.5} will be subject to a new BACT
 - BAAQMD will list PM_{2.5} as a criterion pollutant
 - BACT for any new project with $PM_{2.5} > 10$ lbs./day
 - Only enforceable by BAAQMD until the SIP is updated and then the USEPA can also enforce under Title V.
 - NH3 is a precursor to PM_{2.5} and so NH3 will be regulated as both a Toxic Air Contaminant and a PM_{2.5} precursor
 - For CCCSD, biggest impact is more fees for the PM_{2.5} precursor
 - PM_{2.5} limitations can always be imposed if required as a mitigation under a CEQA finding
 - Smaller facilities that are not applying for new or modified permits will not be affected by the rule changes

 AIR ISSUES & REGULATIONS COMMITTEE A Committee of the Bay Area Clean Water Agencies 55

Additional details:

- Regulatory Amendments: http://www.baaqmd.gov/Divisions/Engineering/Proposed-Reg-2-Changes.aspx.
- Emissions Inventory: http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/PM-Planning.aspx

