United States
Environmental Protection Agency

California
Air Resources Board

South Coast
Air Quality Management District

San Joaquin Valley
Air Pollution Control District

These four agencies are committed partners in the Clean Air Technology Initiative, a collaborative effort to accelerate advanced clean technologies in support of improved air quality and improved quality of life in California's South Coast and San Joaquin Valley Air Basins.

WORK PLAN

for the Clean Air Technology Initiative

What Is the Aim of This Initiative?

Two regions of California experience some of the highest air pollution levels in the entire United States: the San Joaquin Valley and South Coast Air Basins. Accelerating progress on this public health challenge requires an all-out team effort – while also maintaining sensitivity to each region's unique demographic and air quality profiles. A collaborative initiative by four agencies (the U.S. Environmental Protection Agency, the California Air Resources Board, the San Joaquin Valley Air Pollution Control District, and the South Coast Air Quality Management District) will align resources to accelerate cleanup solutions in the form of advanced clean technologies.

Who Will Oversee This Effort?

Spearheading the Clean Air Technology Initiative is a Research Coordination Council (RCC) comprised of key staff from all four agencies, to oversee collaborative projects in technology research, development, demonstration, and deployment that can help the two regions attain federal air quality standards and thereby obtain dramatic public health benefits. In its initial effort, the RCC will oversee enactment of two comprehensive community clean air partnerships, one each in the San Joaquin Valley and South Coast Air Basins.

This document outlines a preliminary workplan focusing on the top emission-source categories in the State Implementation Plan, as further detailed in the Challenge section.

Objectives and Desired Outcomes

- To carry out two community-based projects, one each in the San Joaquin Valley and South Coast Air Basins.
- To showcase an integrated approach (addressing traditional air pollutants, air toxics, and greenhouse gas emissions) in a highly impacted community, to serve as a model for other heavily impacted areas facing challenges in nonattainment and environmental justice.
- To expedite technology development and commercialization of clean technologies to meet the State Implementation Plan and other clean air objectives; to facilitate the deployment of low-emission technology in a selected community.
- To enhance local empowerment through community data collection, public education, and meaningful participation in clean air policymaking.
- To foster opportunities for green jobs and sustainable business development.

Challenges

Attainment of clean air standards is a major public health challenge, embodied in local attainment plans designed to fulfill State Implementation Plan requirements under the Clean Air Act. For the South Coast and San Joaquin Valley Air Basins, increasingly stringent federal standards for ozone and PM2.5 pose fast-approaching and very difficult attainment deadlines. Significant emission reductions are needed from all sources, with the bulk of the remaining task being mobile source emissions. To have any reasonable expectation of meeting attainment deadlines, aggressive stakeholder partnership is essential.

Approach

Select a highly impacted community in each air district for further control and/or toxic risk reduction.

Each air district selects a focus area that is highly impacted by a mixture of mobile and stationary sources, especially sources representing major contributors to the State Implementation Plan inventories and key toxics drivers in the community. The technologies demonstrated can, therefore, achieve significant reductions for State Implementation Plan purposes as well as reduced local toxics exposure.

The criteria for selecting a community highly impacted by air quality issues include many factors. Health risk data, concentrations of toxic-emitting facilities in close proximity to residential or sensitive receptors, and diesel particulate matter emissions from mobile sources should be considered for toxic exposures. Traditional air pollutant emissions, known air pollution sources, history of air quality-related complaints, and community-identified air quality issues should also be considered. The demographics of the area and the willingness of local government and community groups to participate are also important considerations.

South Coast Air Basin Focus Area: The City of San Bernardino has a large intermodal railyard with the highest health risk of all railyards in Southern California. This city is also impacted by goods movement activities that originate at the ports and move east via trucks and trains through San Bernardino and out of the state, as well as triggering new warehouse and distribution projects in inland areas. In addition, there are more than 1,000 stationary sources in the area holding SCAQMD permits, such as autobody and automotive repair shops; transportation facilities; concrete and aggregate operations; military installations; printing and coating operations; and manufacturing facilities.

San Joaquin Valley Air Basin Focus Area: The southern San Joaquin Valley focus area houses 1.2 million residents, and frequently exceeds health- based air standards when regional pollutants are trapped by surrounding mountains and atmospheric inversion layers. The focus area straddles Kern and Tulare counties, with mobile source emissions from the goods movement corridor of Highway 99 and Interstate 5, and stationary source emissions from a variety of energy production facilities, farms, and agricultural processing operations. The focus area includes the city of Bakersfield with the Valley's highest wintertime particulate matter concentrations, and the city of Arvin, with the Valley's highest 8-hour ozone concentrations in the summer.

TECHNOLOGIES
Select technologies for demonstration/commercialization that would reduce emissions from identified source categories (technology selection based primarily on RCC-established criteria).

Agency staff will perform a comprehensive evaluation and identify candidate technologies that would meet the RCC criteria and develop performance criteria for other technologies.

PARTNERS
Identify and secure participation of local community groups, public agencies, and private-sector partners.

Agency staff will jointly solicit assistance and participation of community stakeholders including community members, business leaders, public agencies, and elected officials, to showcase the Initiative and to solicit input to enable a successful joint effort.

FUNDING
Identify and secure funding and other resources; including targeting of existing grant programs.

Agency staff will work collaboratively to maximize the use of existing funding sources (local, state, and federal opportunities) and identify potential new funding sources (e.g., diesel cleanup grants, transportation reauthorization, public-private partnerships).

PROJECTS
Issue a proposal solicitation for innovative technology projects that meet the same criteria established by the RCC and initiate contracts.

A joint RFP may be released, or existing projects may be leveraged, to demonstrate clean technologies within the selected communities. These projects should meet the RCC criteria and provide the greatest emission-reduction potential.

EMISSIONS
Initiate enhanced local emissions inventory, air quality monitoring, and compliance review.

SCAQMD and SJVAPCD staff will conduct detailed evaluation of local emission sources to enhance the completeness of current emissions inventories and propose additional micro-scale monitoring, where appropriate, within the communities to better understand localized exposure. There will also be an enhanced review of permit and emission-report data bases, to ensure assessments are based on accurate and up-to-date facility records.

OUTREACH
Initiate enhanced outreach and education to facilitate local empowerment.

Enhanced outreach and education to facilitate local empowerment may be accomplished through providing training, informational tools, and two-way contact channels with local governments. Training will be given on how to recognize air quality issues, field data collection and outreach to the public, and data gathering to enhance participation of local governments and communities. Information on health impacts of air pollution will also be made available. Opportunities for participation in clean air policymaking will be provided through Town Hall meetings, working groups, and interactive public workshops.

COMMUNITY
Assess local community wellbeing (i.e., survey instrument).

Community surveys will be conducted to obtain general feedback on environmental and health concerns within the select communities.

SHOWCASE
Set up technology displays and permit assistance center.

SCAQMD and SJVAPCD staff will work with selected communities to establish sites where technologies being showcased can be displayed for education and outreach purposes. In addition, respective districts will also set up permit assistance to businesses that intend to demonstrate or implement clean technologies meeting the RCC criteria.

TRAINING
Establish green job training opportunities for local businesses and community members.

Agency staff will work with local community colleges or vocational schools to identify specific skills demanded by Initiative-showcased technologies, and seek to establish congruent training classes for local workforces to meet the demand.

EVALUATION
Evaluate and document Initiative Workplan implementation.

There will be periodic program evaluation to identify and address implementation issues and report back to RCC. Technical reports will also be prepared to document program implementation and progress as a case study, so that similar programs can be replicated in other areas of the nation.