

Appendix E

Incentives

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Appendix E: Incentives

The San Joaquin Valley Air Pollution Control District (District) has increasingly relied on its advocacy efforts to secure state and federal funding sources, and locally-generated funding to implement incentive programs that have become a crucial component of the District's overall strategy for achieving the emissions reductions necessary to bring the Valley into attainment. These programs provide an effective way to accelerate emissions reductions and encourage technology advancement, particularly from mobile sources, a sector not directly under the District's regulatory jurisdiction. Given that 85% of the NO_x emissions in the Valley come from mobile sources, these successful voluntary incentive grant programs help the Valley achieve highly cost-effective emissions reductions that are surplus of the regulatory emissions reductions.

E.1 DISTRICT EXPERIENCE TO DATE IN ADMINISTERING AND IMPLEMENTING INCENTIVE PROGRAMS

The District operates one of the largest and most well-respected voluntary incentive programs in California. Through strong advocacy at the state and federal levels, the District has appropriated \$136 million in incentive funding in the 2015-2016 District Budget.¹ Since the District's inception in 1992, considerable funding has been invested into thousands of clean-air projects throughout the Valley. These projects have achieved significant emissions reductions with corresponding air quality and health benefits.

The District typically requires match funding of 30% to 70% from grant recipients. To date, grant recipients have provided \$692,200,000 in matching funds, with a combined District and grant recipient funding investment of more than \$1.4 billion.

Table E-1 Summary of Grant Expenditures and Results

District Incentive Funding (\$)	Grant Recipient Match Funding (\$)	Emissions Reductions (tons)	Cost-Effectiveness (\$/ton)
\$756,300,000	\$692,200,000	123,600	\$6,118

¹ SJVAPCD. Recommended Budget 2015-2016. p.68. (2015, May 21) Retrieved from http://www.valleyair.org/Board_meetings/GB/agenda_minutes/Agenda/2015/May/BudgetHearing/final/03.pdf

E.2 SIP CREDITABILITY FOR INCENTIVE-BASED EMISSIONS REDUCTIONS

Historically, states and local air agencies have not been able to obtain credit in state implementation plans (SIPs) for incentive-based emissions reductions. When given SIP credit, incentive-based emissions reductions can be used alongside regulatory-based emissions reductions to meet federal Clean Air Act (CAA) requirements, such as demonstrating attainment with federal air quality standards at a future date or demonstrating that emissions reductions meet federal SIP reasonable further progress requirements. Given the substantial investment from the public and private sectors in replacing equipment under these voluntary incentives, establishing a general framework to receive SIP credit for these emissions reductions was critical. Recognizing the importance of this issue, the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB), and the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), worked together with the District and signed a Statement of Principles (MOU) in December 2010 that established a general framework for ensuring that reductions in air emissions resulting from voluntary incentives to replace off-road agricultural equipment received credit in the SIP. The MOU states that the District, NRCS, ARB and EPA would work collaboratively to develop a mechanism to provide SIP credit for emissions from incentive programs that are surplus, quantifiable, enforceable, and permanent. In continuing these efforts, in July 2012, EPA and USDA agreed to implement this concept to ensure that emissions reductions from incentive programs were given their proper credit in the SIP context.

As a result of these collaborative efforts, the District adopted Rule 9610 (State Implementation Plan Credit for Emission Reductions Generated Through Incentive Programs) on June 20, 2013. District Rule 9610 establishes the administrative mechanism through which SIP credit is quantified for emissions reduced in the Valley through incentives. EPA proposed a limited approval of Rule 9610 in May 2014² and finalized that approval on April 9, 2015.³

As with prohibitory rules, EPA guidance requires that emissions reductions achieved through voluntary incentive programs be demonstrated to be surplus, quantifiable, permanent, and enforceable in order for those reductions to receive SIP credit. Additionally, EPA guidance requires extensive documentation of emissions reductions proposed for SIP credit with ongoing follow-up and tracking of the emissions reductions.

District incentive programs are designed to meet the surplus-quantifiable-enforceable criteria. In order to be surplus, emissions reductions from voluntary incentive programs generally must not be required by any local, state, or federal regulations. Quantifiable emissions reductions are calculated using methodologies of state programs or other publically developed methodologies. To ensure enforceable and permanent emissions reductions, programs require mechanisms such as legally binding agreements with

² Revision to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District; Quantification of Emission Reductions from Incentives. 79 Fed. Reg. 96 pp. 25650-28658. (2014, May 19) (to be codified at 40 CFR Part 52). <http://www.gpo.gov/fdsys/pkg/FR-2014-05-19/pdf/2014-11481.pdf>

³ Revision to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District; Quantification of Emission Reductions from Incentives. 80 Fed. Reg. 68 pp. 19020-19033. (2015, April 9) (to be codified at 40 CFR Part 52). <http://www.gpo.gov/fdsys/pkg/FR-2015-04-09/pdf/2015-07972.pdf>

program participants and physical inspections to verify the completion of projects. Furthermore, all criteria and reporting mechanisms are transparent to the public.

E.3 INCENTIVE FUNDING SOURCES

The District is engaged at every level of state and federal government to craft policy and funding targets that account for the Valley's unique challenges and need to accelerate emissions reductions, particularly from sources not under the District's regulatory authority. The District therefore, works closely with the Valley's legislative delegation to ensure that the Valley's needs are well represented in discussions of where to focus funding throughout the state and the region as a whole. In addition, the District is focused on how to effectively allocate the limited funding received for its incentive programs.

In addition to aggressively pursuing funding from state funding sources such as the Carl Moyer Program and Lower-Emission School Bus Program, the District has been very successful in securing grants from the highly-competitive federal Diesel Emissions reductions Act (DERA) and the state Assembly Bill (AB) 118 Air Quality Improvement Program (AQIP). Currently, the District is actively engaged with ARB, the California Energy Commission (CEC) and other state agencies to ensure that the Valley is well represented in project selections from the Greenhouse Gas (GHG) Reduction Fund totaling over \$1 billion per year.

E.4 INCENTIVE STRATEGY

Each of the funding sources administered by the District includes different guidelines and statutory requirements for using the funds. Beyond the specific guidelines of each funding source, the District considers the following common factors when deciding how and where to spend incentive funds:

E.4.1 Cost Effectiveness

An important factor when considering where to invest District funds is determining which types of projects and programs will give the District the greatest return on its investment. This is typically represented in dollars per ton of emissions reduced. While cost-effectiveness is a primary factor, the District also considers projects that may not have the highest cost-effectiveness, but that provide other benefits, such as the advancement of new technology or community involvement.

E.4.2 Inventory of Available Projects

This factor is critical in all District incentive programs. To date, the District has been extremely successful in designing incentive programs that have broad appeal and applicability across multiple industries. Over the past 10 years, this level of interest has resulted in a substantial backlog of eligible projects waiting for funding. Unfortunately in most cases, many of those on waiting lists have since moved into a regulated class,

making them ineligible for funding. As a result, the District must continue to not only work within the existing regulations to find cost-effective, surplus project categories, but also to focus future funding in areas where a significant inventory of eligible projects still exists.

E.4.3 Required Expenditure Timeframes

Each funding source that the District administers generally requires obligation and expenditure by certain deadlines. These deadlines greatly impact funding priorities and choice of projects. The District may prioritize a funding category over others because of the timeframe associated with a particular funding source. For instance, priority may be given to certain projects that can reasonably be expected to finish prior to the deadline for that specific fund over other projects of equal relevance or cost-effectiveness, but with longer expected completion times. Again, the flexibility of this option works in concert with the dynamic nature of the incentive programs, projects, expenditure deadlines.

E.4.4 Upcoming Regulatory Deadlines

To ensure that incentive programs obtain the maximum SIP-creditable emissions reductions, the District performs a thorough analysis of all local, state, and federal regulations relating to the target categories. In addition, the District works proactively with the regulating agencies during the rule development process to understand the potential impacts of that rule on incentive projects and to ensure that opportunities for early incentive funding are maximized. These analyses determine which types of projects can be funded, for how long projects can be funded, which also impacts the potential cost-effectiveness of certain projects.

E.4.5 Health Benefits

In addition to emissions reductions needed to attain air quality standards, the District also seeks incentive projects that provide direct health benefits to Valley residents. For instance, the District's Lower-Emission School Bus Program is focused primarily on the localized toxic risk involved in children's exposure to diesel particulates. While not the largest source of regional particulate pollution, replacing or retrofitting aging school buses has an enormous impact on the toxic risk of school transportation.

E.4.6 Environmental Justice

The District places a strong emphasis in providing funding in a manner that benefits environmental justice communities. The District has worked cooperatively with the Environmental Justice Advisory Group to understand the Valley's environmental justice issues and to craft programs that reduce emissions in these areas.

E.4.7 Community Involvement and Benefits

The District develops and administers programs with an emphasis on community involvement. Some examples of these are the Clean-Green-Yard-Machine program,

Drive Clean! Rebate program, Burn Cleaner program, Transit Pass Subsidy program, and the Polluting-Automobile Scrap and Salvage program.

E.5 STATUTORY CONSTRAINTS ON INCENTIVE FUNDING

As previously mentioned, the District derives its current incentive funding comes from a range of local, state, and federal funding sources. These funding sources contain restrictions on the types of projects that may be funded, funding limitations, expenditure deadlines, and the administrative approach for funding distribution. These requirements vary significantly from one funding source to another, resulting in a complex matrix of funding categories and program requirements. Some key examples are summarized in Table E-2.

Table E-2 Statutory Constrains on Incentive Funding

Funding Source/ Category	Program Requirements
Proposition 1B Goods Movement	Funding must be dedicated to heavy duty trucks and locomotives. Program procedures require use of a Request-for-Proposals (RFP) process and priority be given to the most cost-effective projects.
Lower-Emission School Bus	Funding must be allocated to school bus replacements or retrofits. Retrofits are prioritized by oldest to newest buses.
Carl Moyer	Funding is primarily used on heavy-duty diesel equipment projects. Program has strict funding and cost-effectiveness requirements.
DMV Funds	Funding is used primarily for on-road and off-road mobile sources. Portions of funds must follow Carl Moyer and Lower-Emission School Bus guidelines.
Advanced Emission Reduction Option Funds	The District's Governing Board has discretion as to where to apply these funds through the District's annual budget process.
Indirect Source Review (ISR) Funds	Funding preference is given to emissions reductions opportunities near development projects.

E.6 DISTRICT INCENTIVE PROGRAMS

The District's incentive programs continue to be a model for other agencies throughout the state. Recent audits noted the District's efficient and effective use of incentive grant funds in reducing air pollution. The District has collaborated extensively with the U.S. Environmental Protection Agency (EPA), California Air Resources Board (ARB) and the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) to develop the mechanism to take credit in state implementation plans (SIP) for emission reductions generated through incentive programs that satisfy the four federal criteria for SIP creditability – surplus, quantifiable, enforceable and permanent.

Historically, states and local air agencies have not been able to obtain SIP credit for incentive-based emissions reductions. When given SIP credit, incentive-based emissions reductions can be used alongside regulatory-based emissions reductions to meet federal CAA requirements, such as demonstrating attainment with federal air

quality standards at a future date or demonstrating that emissions reductions meet federal SIP reasonable further progress requirements. Given the heavy investment from the public and private sectors in replacing equipment under these voluntary incentives, establishing a general framework to receive SIP credit for these emissions reductions was critical for ensuring the continued success of these programs. Working together with EPA, ARB, and the USDA-NRCS, the District adopted Rule 9610 (State Implementation Credit for Emission Reductions Generated Through Incentive Programs) on June 20, 2013. District Rule 9610 establishes the administrative mechanism through which the District and ARB take SIP credit for emissions reduced through incentives. EPA proposed a limited approval of Rule 9610 in May 2014⁴ and finalized that approval on April 9, 2015.⁵

E.6.1 2015-2016 Incentive Spending Priorities

The current incentive priorities are reflected in the 2015-2016 District Budget Incentive Spending Plan and are summarized in Table E-3.

Table E-3 District Incentive Priorities (2015-2016 Budget)

Community Incentives
Drive Clean Rebate (alternative-fueled passenger vehicles)
Polluting Automobile Scrape and Salvage (Tune In Tune Up, EFMP)
Burn Cleaner (residential wood burning)
Clean Green Yard Machines (residential lawn and garden)
REMOVE (transit subsidies, bike paths, etc.)
Vanpool Voucher Incentive Program
Charge Up (electric vehicle charging infrastructure)
Goods Movement
Proposition 1B Heavy Duty Trucks
Locomotives
Heavy Duty Equipment Programs
Agricultural Equipment Replacement
Agricultural Irrigation Pumps
Truck Voucher Program
Construction Equipment Replacement
Refuse Fleet Replacement
Advanced Transportation/Vehicles
Public Benefit Grants
EV Readiness Implementation
School Bus Replacement and Retrofit
School Bus Replacement and Retrofit
Statewide School Bus Replacement and Retrofit

⁴ Revision to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District; Quantification of Emission Reductions from Incentives. 79 Fed. Reg. 96 pp. 25650-28658. (2014, May 19) (to be codified at 40 CFR Part 52). <http://www.gpo.gov/fdsys/pkg/FR-2014-05-19/pdf/2014-11481.pdf>

⁵ Revision to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District; Quantification of Emission Reductions from Incentives. 80 Fed. Reg. 68 pp. 19020-19033. (2015, April 9) (to be codified at 40 CFR Part 52). <http://www.gpo.gov/fdsys/pkg/FR-2015-04-09/pdf/2015-07972.pdf>

Regional Assistance
Greenhouse Gas Mitigation Assistance
Technology Advancement
Technology Advancement Program
Zero-Emission Commercial Lawn and Garden

E.6.2 Heavy Duty Trucks

The District has administered numerous incentive programs targeted at on-road heavy-duty trucks, one of the biggest sources of NOx emissions in the Valley. Through the state's Proposition 1B Goods Movement Emission Reduction Program, Carl Moyer Voucher Incentive Program (VIP), and the District's-Truck Voucher Program (TVP) funded by grants from EPA and locally generated incentive funds, the District has replaced hundreds of older, high-polluting trucks with cleaner trucks certified to meet the latest EPA emission standards.

The District's Truck Voucher Program (TVP) was designed to provide an alternative source of incentive funding for heavy-duty truck operators that were unable to obtain funding through the proposition 1B program. The District contracts with Valley dealerships and makes the review and approval process efficient and streamlined to provide vouchers to truck owners. The District provides up to 35% of the cost of a new truck that meets or exceeds the 2010 emission standard for heavy-duty trucks. The District has funded the replacement of over 800 heavy-duty trucks, with more applications coming in every day. The program is very popular with Valley based heavy-duty truck dealers because the program operates very efficiently.

A typical TVP project can take as little as two weeks to complete, which is from the time the application is received by the District to the time the applicant is driving the new truck off of the lot. The program can operate at this pace because the contracted dealers that partner with the District reduce the voucher amount from the overall cost of the truck, which lowers the applicants' loan amount for the truck. After the truck is purchased the District validates the voucher with the dealer and mails a check to the dealer for the voucher amount.

The District's truck voucher programs have been designed to provide an alternative source of incentive funding for small businesses that do not qualify for funding under the Proposition 1B Program. The District contracts with Valley dealerships and makes the review and approval process efficient and streamlined to provide vouchers to truck operators.

E.6.3 Agricultural Pumping Engines

The District provides up to 85% funding for farmers looking to replace older, dirtier diesel engines with low-emission Tier 4 engines or zero-emission electric motors. Agriculture accounts for a majority of the local economy, and this program not only provides for significant emissions reductions from agricultural operations, but provides economic relief to Valley farmers, ranchers, and dairy operators. Eligible projects are funded with local, state, and federal sources, including but not limited to District Indirect

Source Review (ISR) mitigation fees, Carl Moyer Program funding, AB 923 funding, Federal Designated Funding, and Federal Diesel Air Shed Grant funding. In the past, collaboration with the California Public Utilities Commission (PUC) and local utilities has allowed for additional incentives on electric line extensions and special rate schedules, enhancing participation in the District's replacement program.

Over the past fifteen years, the District has funded the replacement of over 6,900 agricultural pump engines, with more projects currently in the queue. Over 2,500 of these replacements involved replacing older diesel engines with electric motors. The District has seen an increased demand for emissions-compliant diesel-engine repowers to electric motors in recent years. This option is ideal for both parties, since the District achieves the maximum emissions reductions with electric motor repowers and farmers lower their operating costs by switching to electricity, a more affordable fuel source. The District will consider pursuing a renewed public/private collaborative partnership similar to the previously mentioned partnership to provide further incentives for replacing remaining agricultural internal combustion engines with electric motors, potentially including assistance for line extensions for remotely located wells.

For a typical irrigation pump project, the District will verify that the old engine is operational and eligible. If so, the engine owner is offered the incentive and has the new engine or motor installed, making sure that the old engine is sufficiently disabled. The District conducts a post-inspection prior to payment to document the new engine or motor's specifications and to ensure the emissions reductions are accurate. Ongoing monitoring and reporting ensures the projects meet contracted emissions reductions targets.

E.6.4 Agricultural Equipment

Off-road agricultural equipment replacements and repowers play a crucial role in reducing emissions. These equipment units, including tractors, backhoes, wheel loaders, and other off-road farming vehicles are widely used in the Valley, and are essentially uncontrolled and unregulated. Eligible projects are funded with local, state, and federal sources, including but not limited to ISR, Carl Moyer funding, AB923 funding, Federal Designated funding, and Federal Diesel Air-Shed Grant.

The District has funded the repower and replacement of over 4,000 off-road agricultural vehicles, with a significant number of additional projects currently in the queue. Whether a farmer wishes to repower the current equipment with a cleaner engine or replace the equipment altogether, this program allows the District to achieve surplus emissions reductions while also facilitating the early equipment retirement and fleet turnover, both of which result in more efficient farming operations with less overall hours of operation.

In both repower and replacement projects, the farmer enters into an agreement with the District to replace the old, dirty engine or vehicle with newer, cleaner technology. The District first performs a pre-inspection to determine that the equipment and engine are operational. Then a final inspection is performed to verify the new equipment, as well

as witness the old equipment and engine's destruction at a District-approved recycling or scrapping facility, ensuring the old equipment and engine will never be put back into service. Ongoing monitoring and reporting ensure the expected emissions reductions and operation of the equipment meet the grant agreement requirements.

E.6.5 Locomotives

The emissions from goods movement are a significant source of diesel particulate matter (PM) in the Valley and the state, and many of the larger cities in the Valley are home to locomotive rail yards. Locomotives, in particular, present a considerable health risk from diesel PM emissions. Residential areas located close to rail yards have shown a significant increase in cancer risk and can equal or exceed the regional background or regional health risk levels.⁶ The locomotive component of the Heavy-Duty Engine Program awards up to 85% grant funding for newer, cleaner diesel locomotive engines and locomotive replacements. Eligible projects are funded with local, state, and federal sources, including but not limited to the Carl Moyer Program, the Federal Diesel Air Shed Grant, and DERA funding.

The District has funded the repower or replacement of 41 locomotives, with more projects currently in the queue. One of the major benefits to the locomotive repower and replacement program is increased efficiency and longevity as a result of the revolutionary GenSet engine technology. The GenSet system uses multiple smaller off-road tier-4 emission level engines mounted on a single chassis. This system allows for each of the engines to be fired up individually so that in low-power demand situations only one of the engines can be used, helping to reduce unnecessary emissions. In addition, this system comes equipped with idle reduction technology that will shut down the engine during periods of inactivity.

The District funds locomotive repower or replacement projects through an RFP procurement process, and reviews and selects recipients based on established scoring criteria. During the pre-inspections, all necessary locomotive engine information is verified by District inspectors and documented in digital photographs. Upon verification of all information, the District enters into an agreement with the recipient for the project. Once the replacement switcher locomotive engine has been purchased and the original engine has been dismantled, the recipient will complete and return the claim-for-payment packet, and a post-inspection is performed, prior to payment, to verify the new information. Monitoring and reporting continue for the duration of the agreement to ensure the emissions reductions expected from the project occur.

E.6.6 Forklifts

The replacement and retrofit of forklifts are funded through the District's Large Spark-Ignited (LSI) forklift retrofit program and its Electric Forklift New-Purchase program. Operators can meet the proposed in-use fleet-average emission standards by purchasing low- and zero-emission equipment and by retrofitting uncontrolled

⁶ ARB. Railyard Health Risk Assessment and Mitigation Measures. Conducted at the Stockton Railyard. (2009) Retrieved on 8/18/2015 from <http://www.arb.ca.gov/railyard/hra/hra.htm>.

equipment in their fleets. The use of new controlled engines and the retrofit of existing engines can reduce fuel use and improve engine life, thus creating cost savings that offset a portion of the additional equipment cost. Eligible projects are funded with federal, state, and local sources, including Carl Moyer Program funds and motor vehicle surcharge fees.

The District has funded 53 forklift projects. The installation of a LSI retrofit system improves engine operation and reduces fuel use. Closed-loop fuel systems generally improve the engine's overall efficiency. There is an estimated 10% to 20% reduction in fuel consumption with engines using closed-loop systems. An electric forklift has an obvious advantage as an emission-free vehicle, but can typically cost \$1,500 to \$5,000 more than a comparable LSI forklift. However, since an electric forklift has a longer useful life and reduced fuel and maintenance costs, the electric forklift can reduce life-cycle costs compared to a LSI forklift.

The forklift program is an over-the-counter program, in that applications are continually accepted on a first-come-first-served basis. Contrary to many of the off-road or agricultural components in the Heavy-Duty Engine Program, a pre-inspection is not required for the new electric forklift component (LSI retrofits are pre-inspected to ensure emissions are real and quantifiable). After contracts are awarded and the new equipment is purchased and installed, post-inspections are performed to ensure emissions reductions are accurately recorded and ongoing monitoring and reporting are required to ensure the emissions reductions occur.

E.6.7 School Bus Replacement and Retrofit

School bus replacements and retrofits play a vital role in reducing school children's exposure to both cancer-causing and smog-forming pollution. The School Bus Replacement and Retrofit programs provide grant funding for new, safer school buses and air pollution control equipment (retrofit devices) on buses that are already on the road. Public school districts in California that own their buses are eligible to receive funding. Eligible projects are funded with local, state, and federal funds including the Lower-Emission School Bus Program (Proposition 1B), DERA funding, and the American Reinvestment and Recovery Act (ARRA).

The District has provided funding to retrofit 2,254 school buses and replace 503 school buses. New buses purchased to replace older buses may be fueled with diesel or an alternative fuel, such as compressed natural gas (CNG), provided that the required emissions standards specified in the current guidelines for the Lower-Emission School Bus Program are met. Funds are also available for replacing on-board CNG tanks on older school buses and for updating deteriorating natural gas fueling infrastructure. Commercially available hybrid-electric school buses may be eligible for partial funding.

Eligible school buses are selected based on specific program requirements, including replacing the oldest models first. After determining eligibility, school districts are awarded contracts that provide a reasonable time period for project completion. A claim-for-payment form must also be submitted before funds can be awarded.

E.6.8 Alternative Fuel Infrastructure

At the District's 2015 Study Session in May 2015 the District discussed a multi-faceted action plan for promoting the deployment for near-zero emission natural gas (NG) vehicles and infrastructure in the Valley. One component of this action plan includes providing additional incentives for NG vehicles and infrastructure.

Providing incentives is an important component of promoting the use of natural gas vehicles due to the current lack of NG infrastructure and higher incremental costs for NG vehicles. The incremental cost of a NG truck can be as much as \$60,000 more than a comparable diesel model. However, since the cost and maintenance of NG is less than diesel, there will eventually be a return on investment for the truck owner. Unfortunately, large fleets tend to turn their trucks over every 4-5 years, and the cost differential between NG and diesel is currently much lower than in the past based on lower diesel fuel costs. Truck owners therefore have little time to realize the cost benefits of NG vehicles. New incentives to reduce the incremental cost associated with NG vehicles would help overcome this market barrier and begin to create a larger market for NG vehicles in the Valley. As more NG vehicles are deployed, a secondary used truck market would also be created in the Valley that would further assist in increasing the overall deployment of NG vehicles. The District is taking incentive-based actions as summarized below.

E.6.8.1 Continue to fund new NG infrastructure through District's Public Benefit Grants Program

The District administers the Public Benefit Grants Program which was developed to bring direct benefits to Valley residents through local emission reduction projects implemented by local government agencies and public education institutions. Under the Alternative Fuel Infrastructure component of this program, public agencies can receive funding for the installation of new NG fueling infrastructure or expansion of existing infrastructure to support their vehicle deployment goals. One recent example of expanded fueling infrastructure under this program includes the construction a new public-access liquid NG fueling station in partnership with the City of Lathrop. Under the New Alternative Fuel Vehicle Purchase component, public agencies can receive funding for the purchase of new NG vehicles with a GVWR of 14,000 pounds or less. Public agencies purchase NG passenger vehicles to add to their existing fleets and supplant the duties of gasoline-powered vehicles.

E.6.8.2 Provide higher incentives for NG truck technologies that meet near-zero optional emissions standards

Under the District's Truck Voucher Program, the District currently provides up to 35% of the cost of a new 2010-certified truck, not to exceed \$50,000. The District is exploring providing higher incentive levels for NG vehicles that meet the recently adopted near-zero optional emissions standards.

E.6.8.3 Provide new incentives for fleet expansions with new NG trucks

Truck funding is essentially limited to replacement projects where an older vehicle is scrapped and a new vehicle is purchased. The District supports NG vehicle fleet expansion in which incentives are provided for new vehicle purchases without the requirement to scrap an existing vehicle. As with the above, higher incentive levels would be explored and provided for NG truck technologies certified to the near zero option emissions standards.

E.6.8.4 Seek State AB 118 and Cap and Trade funding for the deployment of NG vehicles and installation of NG infrastructure

A portion of Cap and Trade revenues should be allocated to provide funding for the replacement of existing trucks with NG trucks and the installation of new fueling infrastructure that result in reductions of both criteria pollutants and GHG emissions. This is being pursued through both administrative and legislative means.

E.7 COMMUNITY BASED INCENTIVES

While all of the District's incentive programs are open to residents of the Valley, there are a number of programs, such as the Heavy-Duty Engine Program and the Proposition 1B Program, that are specifically designed for Valley businesses. These programs focus on replacing or retrofitting large diesel-powered equipment such as trucks, tractors, and agricultural irrigation pump engines. These programs are highly efficient and extremely cost-effective. Of equal importance, the District currently operates several incentive programs designed for the general public. These programs give the general public the opportunity to contribute to the goal of cleaner air for all Valley residents. The District's community incentives include a wide range of project types and source categories.

E.7.1 Burn Cleaner Program

The Burn Cleaner Program helps Valley residents upgrade their current high-polluting wood-burning devices and open hearth fireplaces to cleaner alternatives such as natural gas fired devices, and EPA certified wood and pellet stoves. Through this program residents are reducing directly emitted PM2.5 emissions in areas and times where those reductions are most needed. In 2014 the District updated the Burn Cleaner Program to make it more accessible and to increase the incentive amounts with great success. Through this program, the District offers a financial incentive to Valley residents with an increased incentive amount available to low-income qualified applicants through a streamlined voucher program that involves partnering with interested retailers. The program has upgraded over 9,730 wood-burning devices, and continues to receive a steady stream of applicants.

E.7.2 Polluting Automobile Scrap and Salvage (PASS)

Through the PASS program the District provides financial incentives to repair or replace eligible high emitting vehicles operating within the Valley. Weekend Tune In Tune Up (TITU) events are held throughout the Valley to provide emissions tests of vehicles to determine the likelihood of failing a smog test. Vehicles failing this test are provided vouchers that are redeemed at participating qualified smog shops for up to \$650 in smog related repairs plus the cost of necessary smog checks and diagnostic time. In addition, opportunities exist through the weekend events to qualify for vehicle replacement incentive funding for 1995 vehicles whose owners meet program eligibility requirements including vehicle model year and household income. To date the PASS program has replaced 600 high emitting vehicles with new, cleaner vehicles, retired 504 additional vehicles, and repaired 15,249 vehicles. The PASS program has primarily been supported with locally generated incentive funds; however, a portion of the funding for vehicle repairs was funded through the Reformulated Gasoline Settlement Fund created as a result of an antitrust class action. In addition, funding for a portion of the vehicle replacement projects was provided by ARB through the Enhanced Fleet Modernization Program (EFMP) as well as the EFMP Plus Up program.

E.7.3 Clean Green Yard Machine

The Clean-Green-Yard-Machine (CGYM) program reduces emissions at the neighborhood level by providing incentives for residents to retire their old high-polluting gas mowers in favor of nonpolluting, electric mowers. The program has used locally generated incentive funds as well as funding from the State's AQIP. The CGYM program has successfully replaced over 4,090 gas lawn mowers with clean electric models.

E.7.4 Drive Clean! Rebate Program

This grant program encourages Valley residents to drive advanced clean vehicles, including electric and other alternative-fueled vehicles. Since the launch of the Drive Clean! Rebate Program in March 2012, the District has issued 2,493 rebates, totaling more than \$6.8 million in grant funding.

E.7.5 Public Benefit Grants Program

The Public Benefit Grants Program is one of the District's newest incentive programs and provides funding to Valley cities, counties, and other public agencies for a wide variety of clean-air, public-benefit projects. Eligible applicants are cities, counties, special districts (e.g. water districts and irrigation districts), and public educational institutions (e.g. school districts, community colleges, and state universities) located within the Valley.

Currently, there are three components under the program:

- New Alternative Fuel Vehicle Purchase: \$15.4 million has been awarded for the purchase of clean alternative fuel vehicles such as zero-emission motorcycles, and plug-in electric vehicles
- Enhanced Transportation Strategies: \$3.7 million has been awarded to support local projects that incorporate advanced transit and transportation strategies that reduce emissions such as large-scale bicycle networks and bus rapid transit
- Alternative Fuel Infrastructure: \$5 million has been awarded to support the installation of new NG fueling infrastructure or expansion of existing in-use stations to further the use of NG vehicles

E.7.6 REduce MOtor Vehicle Emissions (REMOVE)

The REMOVE program provides incentives for specific projects that will reduce the Valley's motor vehicle emissions, including e-mobility (video-telecommunications), bicycle infrastructure, alternative fuel vehicle mechanics training, and public transportation subsidies. The District has funded over 60 projects for over \$3.4 million. Types of projects that have been funded include the construction of new Class I and II bikeways, subsidizing transit passes for new riders, and the installation of new electronic operating systems to allow the general public to pay bills and apply for permits and licenses online in lieu of driving to an office. The program allocates funds to cost-effective projects that have the greatest motor vehicle emissions reductions resulting in long-term impacts on air pollution problems in the Valley. All projects must have a direct air quality benefit in the Valley.

E.7.7 Vanpool Voucher Incentive Program

The Valley is an expansive region and many of its residents make long commutes for work on a daily basis. To offset some of these miles traveled, the Vanpool Voucher Incentive program provides incentives to Valley residents to participate in vanpools in lieu of using single occupant vehicle commutes to work. The program encourages commuter rideshare practices among frequent long distance riders (greater than 20 miles) in the Valley. The District has issued a total of 114,374 vouchers to Valley commuters for \$4.3 million.

E.7.8 Charge Up! Program

To supplement the Drive Clean! Rebate Program, the District recently launched the Charge Up! Program which provides funding for the purchase and installation of publically accessible electric vehicle (EV) chargers. EV charging infrastructure is severely lacking in the Valley in comparison to other regions of the state, making it difficult for the technology to grow and sustain in the Valley as residents are hesitant to purchase EVs without the ability to easily refuel. The program aims to address these concerns of existing EV owners and promote the use of EVs with potentially new consumers. Since the launch of the program in June 2015, the District has awarded more than \$1.4 million in incentives for the siting and installation of 140 level 2 and level 3 electric vehicle chargers.