

City of Shafter Community Emissions Reduction Program (CERP) Development

Updated emission reduction and exposure reduction strategies for Committee feedback

August 5, 2019

San Joaquin Valley Air Pollution Control District

Steering Committee Feedback

- Committee members have provided extensive feedback through numerous Committee meetings and written recommendations
- District staff working to evaluate emission reduction proposals submitted by Committee members
 - Working closely with other agencies to evaluate wide range of measures
 - Incorporating suggested measures to the extent feasible
- Shafter's draft CERP now includes over 50 measures, over \$44.7 million dedicated to clean air incentives, achieving over 2000 tons of pollutants reduced

Electric Car Incentive Funding

- **Suggestion:** “100 electric car replacements for private vehicles 15 years or older including SUV’s...An electric vehicle charging outlet will also be provided...This program would need another \$10,000 to \$15,000 per vehicle.”
- **Proposed Measures:**
 - NEW Program for Shafter residents to replace at least 100 cars
 - Provide increased incentives to cover up to 90% of new EV/PHEV vehicle costs for low-income, qualified applicants (up to \$10,000 extra incentive on top of existing incentives, minimum range of 120-150 miles)
 - \$100,000 for 17 new public EV Chargers in community
 - Residential charging funding through PG&E \$800 rebates
 - Enhanced outreach to promote Drive Clean in the San Joaquin vehicle repair and replacement (Tune In Tune Up, vehicle replacement options for all residents)

Solar Installations for Low Income Homes

- **Suggestion:** *“250 low-income homes to have solar installed. The federal tax credit and the DAC-SASH program would pay nearly 100% of the cost. This funding should be made available with either current sources or AB617 funds. The homes receiving this solar will also have an electric heat pump installed for heating and cooling, electric hot water heater and an electric induction stove.”*
- **Proposed Measure:**
 - District will assist in coordinating with the CA Public Utilities Commission and utilities to increase community awareness of and accessibility to available incentives for homeowners and small businesses to install rooftop/community solar power and energy storage systems with a goal of providing incentives to 250 homes
 - Some potential programs that will be available for Shafter residents to apply for include DAC-Single Family Solar Homes (DAC-SASH) and Solar on Multifamily Affordable Housing (SOMAH)

Community Solar Green Tariff Program

- **Suggestion:** *“The Community Solar Green Tariff program should be put in place in Shafter. Low income residents subscribing should also receive electric heat pump installations for heating and cooling, an electric hot water heater, and an electric induction stove.”*
- **Proposed Measure:**
 - District will assist in coordinating with the CA Public Utilities Commission and utilities to increase community awareness of and accessibility to available incentives for homeowners and small businesses to install rooftop/community solar power and energy storage systems
 - District will work with PG&E to facilitate community member subscriptions to Green Tariff (DAC-SASH) and Community Solar Green Tariff (CSGT)

Community Car Share Program

- **Suggestion:** *“20 EV’s placed around Shafter neighborhoods with charging stations. These vehicles with 150 to 250 mile range are made available for rent at a subsidized cost by low-income residents. A cost of 20 cents per mile should be reasonable. Many Programs like this already exist all over the State of California.”*
- **Proposed Measure:**
 - \$250,000 in funding for local partner(s) to launch car share program in Shafter (e.g. Miocar, Green Commuter, etc.)
 - Funding will leverage available state funding and cover cost of vehicles, infrastructure, and subsidized ridership cost

Community EV “Test Drive” Program

- **Suggestion:** *Increase outreach for and access to electric vehicle incentives for Shafter residents.*
- **Proposed Measure:**
 - \$200,000 in funding for local partner(s) to deploy 10 battery electric vehicles with a range of at least 150 miles and associated charging infrastructure for residents who would like to ‘check out’ battery electric vehicles for up to 4 weeks
 - The purpose of this trial program would be to ensure that an electric vehicle would meet the needs of an individual or family prior to making the switch to an electric vehicle

Community Dial-A-Ride Transportation Service

- **Suggestion:** *“Shafter community transportation services, Dial-a-ride, should receive two EV’s.”*
- **Proposed Measure:**
 - Up to \$400,000 will be invested to support the purchase of two electric vehicles for Dial-a-ride in Shafter, including funding for EV infrastructure
 - District will work with the appropriate transit agency to ensure that the proposed vehicles will meet the duty-cycle and expected range of operations of the Dial-a-ride service

Truck Rerouting

- **Suggestion:** *“Heavy duty trucks using Lerdo Hwy through the two stop signs adjacent to Golden Oak Elementary must be routed somewhere else. Perhaps Tulare and Riverside Avenues may be used for westbound and eastbound routes respectively.”*
- **District Response:**
 - Work with City, County, CalTrans, and all other appropriate land-use and transportation agencies to communicate Steering Committee feedback and receive agency feedback and response for CERP

Electric School Buses

- **Suggestions:** *“Electrification of buses for school system;”*
“Richland Elementary should receive 5 electric school buses.”
- **Proposed Measure:**
 - Provide funding to replace 8 diesel school buses that operate in the Shafter community and surrounding area with zero-emission battery electric school buses (3 already in process of being replaced)
 - Up to \$3,200,000 in funding

Electric Engines for Oil Wells

- **Suggestion:** *“Oil wells and related equipment within the 7 mile radius which use stationary internal combustion engines should convert to electric motors if the electrical grid is available within 1,000 feet.”*
- **Proposed Measure:**
 - Provide incentives to convert internal combustion engines driving pump jacks to electric motors as feasible for oil wells and related equipment within the 7 mile radius
- Additionally, upcoming potential regulatory enhancements to IC Engine Rule under new PM2.5 Plan

Agricultural Pump Engine Electrification

- **Suggestion:** *“Farmers using internal combustion engines to pump water within the 7 miles and located within 500 feet of the electrical grid should be given a 90% subsidized electric motor conversion opportunity for a period of one year... After one year, if they have not converted to electricity, they will lose all opportunity to participate in any incentive program for such conversions...”*
- **Proposed Measure:**
 - For engines where electrification is feasible, the District will provide up to 90% of incentive funding to electrify the engine and install necessary infrastructure (including line extensions, etc.)
 - As committed to in the District’s 2018 PM2.5 Plan, the District will work with CARB to adopt additional regulatory backstops as feasible

Agricultural Burning Alternatives

- **Suggestions:** *“Wood chipping on-site instead of burning;” “No agricultural burning will be allowed within the 7-mile radius. A subsidy will be available for grinding this material including small amounts of material due to attrition.”*
- **Proposed Measure:**
 - Up to \$1,000,000 will be invested to incentivize grinding/chipping and soil incorporation of agricultural biomass on up to 2000 acres where the open burning of biomass would impact air quality for the community of Shafter

JP Oil Flaring Reduction

- **Suggestion:** *“JP Oil must reduce current flaring levels, averaged over the past five years, by 90%.”*
- **Proposed Measure:**
 - District to adopt amended flare regulation to further reduce emissions from flaring activities
 - Shafter Steering Committee feedback to be incorporated into process - members and interested members of the public are encouraged to be involved with the Rule 4311 (Flares) rule amendment process

High Speed Rail Emissions

- **Suggestion:** *“High Speed Rail construction within the 7-mile radius must use Tier 4 engines in all off-road construction equipment.”*
- **District Response:**
 - Work with CARB and California High Speed Rail Authority to communicate community concerns and receive feedback on appropriate processes for addressing questions
 - Continue seeking local clean air projects through mitigation funding provided by High Speed Rail Authority

Dairy Lagoon Aeration/Manure Management

- **Suggestion:** *“The ten factory dairies to the west of Shafter will agree not to empty or aerate their manure lagoons during the months of December and January to reduce ammonia in the air during the worst months of PM2.5. An incentive may be appropriate initially and if effective a rule should be made.”*
- **Proposed Measure:**
 - Support state efforts to implement manure management alternatives and install dairy digesters to control manure lagoon emissions
 - Reductions in emissions from dairies are also targeted by the following measures: feed mixer electrification; conservation management education and outreach; irrigation pump conversions to electric; and alternative manure management strategies

Residential Wood Burning

- **Suggestion:** *“No more EPA wood stoves or inserts will be subsidized in Shafter for the replacement of old wood stoves and fireplaces...Instead, no burn days will be strictly enforced in the Shafter area and all fines collected. Likewise, no natural gas inserts will be subsidized, instead electric heat pumps will be subsidized at 75% of their total cost for everyone and 100% of their total cost for low-income residents.”*
- **Proposed Measure:**
 - EPA-certified wood stoves and inserts will no longer be funded in the community of Shafter in areas with access to natural gas
 - Implement District’s new residential wood burning rule starting in 2019-20 season
 - Up to \$600,000 will be invested to incentivize the replacement of fireplaces and wood stoves with non-wood-burning units, including 75-100% for electric heat pumps

Facility Inspections

- **Suggestion:** *“Conduct monthly inspections of Plains LPG and maximum fines imposed for each violation over the next five years.”*
- **Proposed Measure:**
 - District staff will conduct increased inspections as follows: inspect **each facility that has had an emission violation over the past 3 years at least twice per calendar year** for the next 5 years, or until the facility has 4 consecutive inspections without an emission violation, whichever occurs first

Oil Well Setbacks

- **Suggestion:** *“No new oil wells will be drilled within 2,500 feet of residents, schools and all environmental sensitive locations.”*
- **District Response:**
 - As the District does not have land-use authority, the District has made available to the responsible agencies the various land-use strategies that have been presented by the Committee for potential inclusion into the CERP for responsible agency’s input and response in the Shafter Community Emissions Reduction Program

Tree Planting/Urban Greening

- **Suggestion:** *“1,000 appropriate trees will be planted in Shafter residential lots with willing residents paid to care for them for 5 years. Total cost of \$500 per tree.”*
- **District Response:**
 - District is proposing measure to increase urban greening and forestry in the community through partnerships with other entities (Tree Foundation of Kern, CalFire, Kern County Parks and Recreation, Tree Fresno) and seeking state funding, with a goal to plant up to 1000 trees in the community of Shafter

Electric Yard Trucks

- **Suggestion:** *“The almond huller just north of Shafter on Hwy 43 will be given incentives of 80% to purchase two electric yard trucks.”*
- **Proposed Measure:**
 - Up to \$4,000,000 available to help support conversion to electric yard trucks in Shafter area at industrial operations and distribution centers
 - The District will conduct specific outreach to referenced almond huller to offer incentives to support the purchase of electric yard trucks

Pesticides

- **Suggestion:** Several specific measures were suggested by Committee members regarding pesticides
- **Proposed Measure:**
 - Through discussions with District and Committee, DPR and CARB are committed to including in the CERP actions to address pesticides and are working together to draft strategies to be included by the end of August
- District to continue facilitating collaborative efforts with Steering Committee, CARB and DPR to evaluate potential CERP proposals

Increase Access to Car Repair/Replace Incentives

- **Suggestion:** Amend the Drive Clean in the San Joaquin Requirements to remove the emissions requirement
- **Proposed Measure:**
 - District will discuss with CARB the feasibility of amending state-approved guidelines to expand eligible vehicles without the need for a failed emissions test

Other CSC Ideas to Benefit Shafter Air Quality

- Changes to Drive Clean in the San Joaquin Program Requirements (remove emissions requirement, newer years replaced) (C.1)
- Enhanced outreach and education in community (O.1, O.2, RB.2, RB.4)
- Enhanced Enforcement (IS.3, RB.3, RB.5, HD.3)
- Air Filtration Systems in schools (SC.1)
- Vegetative barriers installed near sources of concern (VB.1)
- Targeted anti-idling campaigns (SC.2, IR.1)
- Low Dust Nut Harvester Incentive Program targeted for Shafter (A.2)
- Partnerships with City of Shafter: land use, road paving, & sidewalks (LU.1-3, RD.1, RD.2, HD.8, IS.6)
- Funding for zero/near-zero emissions heavy duty trucks, yard trucks & infrastructure (HD.1, HD.2)
- Clean-engine technology for locally operating locomotives (HD.6, HD.7)
- FREE Electric lawn equipment for Shafter residents (LG.1)
- EV Mechanic Training (C.4)

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Complete List of Updated Proposed CERP Measures

Emission reduction and exposure reduction strategies for the
Committee's feedback

Land Use/Urban Sources

Solar Power: Seek incentives for local businesses and homeowners to install solar power and energy storage

- Type of Strategy: Incentive
- Purpose: District will assist in coordinating with the CA Public Utilities Commission and utilities to increase community awareness of and accessibility to available incentives for homeowners and small businesses to install rooftop/community solar power and energy storage systems
 - Potential programs include DAC-SASH, DAC-Green Tariff, Community Solar Green Tariff, etc.
- Goal: Funding available, and number and type of projects will be developed, with input of Steering Committee, when state funding guidelines are available
- Target: To be determined, working with PUC

Commercial Cooking: Further reduce particulate emissions from commercial underfired charbroilers

- Type of Strategy: Incentives (with regulatory backstop)
- Purpose: To provide incentives to further reduce particulate emissions from large restaurants that use underfired charbroilers
- Goal:
 - Partner with willing restaurants and provide \$150,000 in incentive funding per restaurant for the installation of control equipment to reduce particulate emission from underfired charbroilers
 - Provide enhanced outreach and education to local restaurants regarding health impacts and availability of funding for installation of controls
- Target:
 - Invest up to \$300,000 (1-2 restaurants)

New Construction: Provide assistance during the CEQA process

- Type of Strategy: Land use
- Purpose: To provide assistance during the California Environmental Quality Act (CEQA) process with guidance on how the project may impact air quality in the Valley, and information on how air pollution impacts can be reduced
- Goal: Work with Lead Agencies and project proponents to enhance project designs in the early stages of the planning process for a better overall project with minimized impact on air quality, by early identification of feasible mitigation measures
- Target: Reductions in criteria pollutants and/or Toxic Air Contaminants

Land Use/Sustainable Development: Implement Projects that Reduce VMT

- Type of Strategy: Partnership
- Purpose: To reduce vehicle miles traveled (VMT) in the community through measures that promote active transport and increase the walkability of community neighborhoods.
- Goal: Work with City of Shafter to obtain feedback on opportunities for community members to be involved in land use planning processes. City of Shafter has committed to notify community members about upcoming meetings that address the development of the Environmental Justice element of the City's General Plan.
- Target: To be determined by City of Shafter through public planning process.

Land Use: Support Planning and Development of Clean Fueling Infrastructure

- Type of Strategy: Advocacy/Incentives
- Purpose: To provide support for planning and development of fueling infrastructure for zero and near-zero emission vehicles to support broader deployment of clean vehicles
- Goal: Provide District support to broaden fueling infrastructure network for zero and near-zero-emission vehicles to facilitate broader deployment and prioritize funding through existing District programs to install one alternative fuel fueling station in/near Shafter
- Incentives to be invested:
 - Alternative Fuel Fueling Station: 1 station @ up to \$1,000,000

Construction Emissions: High Speed Rail Construction (NEW)

- Type of Strategy: Partnership
- Purpose: To reduce emissions from High Speed Rail (HSR) construction equipment operating within 7-mile radius
- Goal: Work with CARB and California High Speed Rail Authority to communicate community concerns and receive feedback on appropriate processes to address suggestion that HSR construction within the 7-mile radius use Tier 4 engines in all off-road construction equipment
- Target: Reductions in criteria pollutants and/or Toxic Air Contaminants

Road Dust: Evaluate increasing frequency of street sweeping

- Type of Strategy: Partnership
- Purpose: To evaluate air quality impacts and feasibility of increasing frequency of street sweeping along freeways and streets
- Goal: If found to be effective in reducing particulate emissions, partner with other entities (i.e. City of Shafter, Kern County, and California Department of Transportation) to identify opportunities to increase street sweeping efforts in the community

Road Dust: Road paving improvements

- Type of Strategy: Partnership
- Purpose: To identify opportunities to reduce dust from paved and unpaved roads in the community through road paving improvements
- Goal: Partner with other entities (including City of Shafter, Kern County, and Kern Council of Governments) to identify opportunities, such as Congestion Mitigation and Air Quality funding, to improve road paving efforts in the community where most needed to reduce health impacts

Side Walks (NEW)

- Type of Strategy: Partnership
- Purpose: To identify opportunities to reduce fugitive dust and vehicle miles traveled in the community through the installation of sidewalks near schools and other community centers
- Goal: Establish partnerships (City of Shafter, Kern County, and Kern Council of Governments, and other appropriate agencies) to identify opportunities, such as Congestion Mitigation and Air Quality funding, to implement sidewalks in the community where most needed to reduce health impacts

Lawn and Garden: Provide Enhanced Incentives for Replacement of Residential Lawn and Garden Equipment

- Type of Strategy: Incentive
- Purpose: To provide increased incentives for the replacement of residential lawn and garden equipment in the community through the District's Clean Green Yard Machines Program
- Goal: Increase outreach and access to incentive funding for 100% of equipment cost, resulting in increased participation in the program to replace 280 gas powered lawn and garden equipment units in the community with zero emission alternatives
- Target: Reductions in PM and NOx (quantity of emission reductions to be determined)
- Incentives to be invested: \$100,000 to replace 280 units

Lawn and Garden: Provide Enhanced Incentives for Replacement of Commercial Lawn and Garden Equipment

- Type of Strategy: Incentive
- Purpose: To provide enhanced outreach and access to incentive program for the replacement of commercial-scale lawn and garden equipment in the community through the District's Clean Green Yard Machines program (available to lawn care providers and public agencies)
- Goal: Increase outreach and access to incentive funding resulting in increased participation in the program to replace 30 commercial grade gas powered lawn equipment units with zero emission alternatives
- Target: Reductions in PM and NOx (quantity of emission reductions to be determined)
- Incentives to be invested: \$40,000 to replace 30 units

Public Fleets: Enhance Outreach and Access to Incentive Funding for Public Fleet Vehicles

- Type of Strategy: Incentive
- Purpose: To provide increased outreach and access to incentive funding for the replacement of older, high polluting public fleet vehicles with cleanest available vehicles operating within and surrounding Shafter.
- Goal: Work closely with public agencies, including City of Shafter and Kern County, to replace light-duty vehicles through existing District incentive programs, including the Public Benefit Grants Program.
- Target: Reductions in PM_{2.5} and/or Toxic Air Contaminants (quantity of reductions dependent on vehicle type and program)
- Incentives to be invested: \$100,000 per-vehicle incentives will be dependent on vehicle type and program

Older/High Polluting Cars

Passenger Cars: Host Local Tune-In Tune-Up Events Within Community

- Type of Strategy: Incentive
- Purpose: To host local Tune In Tune Up events with the community to reduce emission from older, high polluting cars
 - Program provides incentives for emission related repairs of high emitting vehicles through weekend Tune In Tune Up events
- Goal: Funding currently available in District Budget for at least one event in community, increase community participation in the program to repair high emitting vehicles, find funding to hold additional events within community boundaries
- Target: 4.6 tons NO_x, 3.1 tons VOCs (based on average emission reductions expected per project)
- Incentives to be invested: \$400,000 for events and 500 vehicle repairs

Passenger Cars: Provide Enhanced Outreach and Access to Incentive Options

- Type of Strategy: Incentive
- Purpose: To provide enhanced outreach and access to financial incentives to replace older autos in the community through a NEW pilot incentive funding program for Shafter residents
- Goal: Funding currently available in District Budget, increase community participation in the program to replace at least 100 high emitting vehicles operating in Shafter with lower-emissions or zero-emissions (electric or plug-in hybrid) vehicles by providing increased incentives for low-income, qualified applicants (up to \$10,000 extra incentive on top of existing incentives, minimum range of 120-150 miles)
- Target: 1.08 tons NO_x, 0.03 tons PM_{2.5}, and 0.24 tons VOCs (based on average emission reductions expected per project)
- Incentives to be invested: \$1,950,000 to replace 100 vehicles

Passenger Cars: Provide Incentive Funding For Electric Vehicle Infrastructure

- Type of Strategy: Incentive
- Purpose: To provide incentive funding to support the deployment of electric vehicle charging infrastructure in the community
- Goal: Increase participation in the program to **deploy 17 new electric vehicle chargers within the community** in order to support electric vehicle deployment
- Target: Support emission reductions associated with electric vehicle deployment
- Incentives to be invested: \$100,000 for 17 electric vehicle chargers

Passenger Cars: Increase Educational Training for Electric Vehicle Mechanics

- Type of Strategy: Incentive
- Purpose: To increase educational training for electric vehicle mechanics and to support the deployment of additional electric vehicle repair facilities in the community as feasible
- Goal: Increase participation in electric vehicle mechanics training that would provide services to vehicles operating within the community
- Target: Support emission reductions associated with electric vehicle deployment
- Incentives to be invested: \$30,000 for 2 training sessions

Implement Shafter Car Share Program

- Type of Strategy: Outreach/Incentive
- Purpose: To reduce PM and NOx emissions in the community by implementing a car share program in Shafter
- Goal: Launch a car share program (e.g. Miocar, Green Commuter) in the Shafter community. Funding will support the cost of vehicles, infrastructure, and subsidized ridership cost
- Target: Reduction in PM and NOx (quantity of reductions to be determined)
- Incentives to be invested: \$250,000 to support the launch of a car share program in the Shafter area

Community EV “Test Drive” Program

- Type of Strategy: Outreach/Incentive
- Purpose: The purpose of this trial program would be to ensure that an electric vehicle would meet the needs of an individual or family prior to making the switch to an electric vehicle by providing funding for a local partner to operate an electric vehicle “Test Drive” program for Shafter residents
- Goal: Deploy 10 battery electric vehicles with a range of at least 150 miles and associated charging infrastructure for residents who would like to ‘check out’ battery electric vehicles for up to 4 weeks
- Incentives to be invested: \$200,000

Residential Burning

Residential Wood Burning: Provide Enhanced Incentives to Replace Wood Burning Devices

- Type of Strategy: Incentive
- Purpose: To provide enhanced financial incentives to replace existing wood burning devices and pellet stoves with natural gas or electric technologies (including electric heat pumps)
- Goal: Increase outreach and access to incentive funding resulting in increased participation in the program to replace 100 wood burning devices in the community with cleaner alternatives
- Target: 98 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$600,000

Residential Wood Burning: Educate Public About Harmful Impacts

- Type of Strategy: Outreach & Education
- Purpose: To educate community residents about the impacts of wood burning and resources available to help transition to natural gas and electric devices
 - Includes information on Check Before You Burn program/Rule 4901
- Goal:
 - Increase in Burn Cleaner applications in Shafter
 - Host 4 public workshops at Shafter branch of Kern County Library/Shafter Learning Center
 - Circulation of infographics in at least 6 community spaces

Wood Burning Fireplaces/Heaters: Enhanced Enforcement of Wood Burning Curtailments

- Type of Strategy: Enforcement
- Purpose: To limit the potential for localized PM_{2.5} impacts associated with the failure to comply with mandatory episodic wood burning curtailments under District Rule 4901
- Goal: District staff will conduct at least four hours of surveillance within the Shafter community on each declared curtailment day for the next 5 winter seasons to enforce the requirements of Rule 4901

Residential Open Burning: Reduce Illegal Activity

- Type of Strategy: Outreach
- Purpose: To reduce illegal burning of residential waste through outreach and education
- Goal:
 - Host 4 workshops at libraries, community centers, health centers, and schools on the health effects/air quality impacts of burning trash
 - Invest in geo-targeted outdoor ads in areas with frequent violations
 - 2 billboards
 - 2 street furniture (bus shelters, kiosks, benches, phone booths, etc.)
 - 1 bus routed through relevant areas (zero-emissions preferred)
 - 2 postcard mailers to county residents in rural areas

Residential Open Burning: Enhanced Enforcement to Reduce Illegal Burning of Residential Waste

- Type of Strategy: Enforcement
- Purpose: To limit the potential for localized PM_{2.5} and toxic impacts associated with illegal open burning of residential waste
- Goal: In addition to the District's existing surveillance and complaint response efforts, District staff will conduct targeted surveillance efforts within the Shafter community and surrounding areas at least once per quarter for the next 5 years

Heavy Duty Mobile Sources

Trucks, Buses, and Locomotives

Heavy Duty Trucks: Provide Enhanced Incentive Funding for Zero and Near-Zero Emission Technology

- Type of Strategy: Incentive
- Purpose: To provide enhanced outreach and access to incentive funding for zero and near-zero emissions clean truck technologies that operate within the community (regional, long haul)
- Goal: Replace 60 older, heavy duty diesel trucks operating in Shafter with near-zero emission heavy duty trucks
- Target: 196.6 tons NO_x, 0.54 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$6,000,000

Heavy Duty Trucks: Support the Deployment of Zero Emission Yard Trucks and TRUs

- Type of Strategy: Incentive
- Purpose: Provide incentives to support the deployment of clean yard trucks, transportation refrigeration units (TRUs), and related infrastructure at warehouses and other facilities within the community with priority on zero emission technologies
- Goal: Deploy 30 new zero emission yard trucks or transportation refrigeration units, along with associated infrastructure
- Target: 0.09 tons NO_x, 5.97 tons PM_{2.5} (based on conservative emission reductions expected per project)
- Incentives to be invested: \$4,000,000

Heavy Duty Diesel Trucks: Enhanced Enforcement of the Statewide Anti-Idling Regulation

- Type of Strategy: Enforcement
- Purpose: To limit the potential for localized PM_{2.5} and toxic air quality impacts associated failure to comply with the state's anti-idling regulation
- Goal: Partner with CARB and the community to identify heavy duty diesel truck idling hot spots, especially those near sensitive receptors such as schools, to target enforcement efforts of the state's regulation within the community. At least 1 targeted anti-idling enforcement sweep will be conducted each quarter for the next 5 years.

School Buses: Enhance Outreach and Access to Incentive Funding for New School Buses

- Type of Strategy: Incentive
- Purpose: To provide increased outreach and access to incentive funding for the replacement of older, high polluting school buses with new zero or near-zero-emission school buses operating within and surrounding Shafter.
- Goal: Replace 8 school buses, operated by Richland SD, Kern High SD with zero-emission battery-electric school buses that operate within the community
- Target: 2.6 tons NO_x, 0.26 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$3,200,000 (funding up to \$400,000 per bus)

Transit Buses: Incentive Program for Transit Bus Replacement for Dial-A-Ride

- Type of Strategy: Incentive
- Purpose: To reduce emissions in PM2.5 and Toxic Air Contaminants by supporting the use of zero-emission vehicle technology for public transit.
- Goal: Provide incentives to replace 2 electric vehicles for Dial-a-ride in Shafter, including funding for necessary supporting infrastructure.
- Target: Reductions in PM2.5 and/or Toxic Air Contaminants (quantity of reductions to be determined)
- Incentives to be invested: Up to \$400,000

Locomotives: Enhance Outreach and Access to Incentive Funding for New Locomotives

- Type of Strategy: Incentive
- Purpose: To provide increased outreach and access to incentive funding for the replacement of older, high polluting locomotives operating within and surrounding Shafter with new clean engine technologies.
- Goal: Replace 2 Tier 0 locomotives with Tier 4 locomotives
- Target: 126 tons NO_x, 2.8 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$5,200,000 (funding up to \$2,600,000 per locomotive)

Locomotives: Provide Incentives for Electric Railcar Mover/Switchers for Rail Facilities

- Type of Strategy: Incentive
- Purpose: To provide increased outreach and access to incentive funding for the replacement of older, high polluting locomotives operating within and surrounding Shafter with new clean engine technologies.
- Goal: Replace 3 older, high-polluting switchers with new, cleaner, advanced technology/hybrid switcher locomotives at railyards and other facilities within Shafter
- Target: 57 tons NO_x, 1.5 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$4,100,000 (funding up to \$1,340,875 per locomotive)

Industrial Sources

Flares: Amend Rule 4311 to Require Ultra-low NOx controls where Technologically & Economically Feasible

- Type of Strategy: Regulatory
- Purpose: To amend Rule 4311 to require ultra-low NOx flare emission limitations for existing and new flaring activities to the extent that such controls are technologically achievable and economically feasible
 - District has already initiated rule development process, with rule adoption anticipated in 2020
- Goal: Reduce NOx emissions from flares subject to requirements of amended Rule 4311 in Shafter
- Target: Estimated reduction of 1.5 tons NOx per year (flares do not produce significant PM2.5 emissions)

Stationary Sources: Evaluate feasibility of funding further emissions reductions from oil and gas production operations

- Type of Strategy: Incentive
- Purpose: To evaluate the feasibility of an incentive program for oil and gas production operations to fund installation of technologies that further reduce emissions
- Goal: Work with oil and gas production operations in the Shafter area to identify potential emission reduction opportunities, through examining the feasibility of the following strategies, identifying available grant funding to assist implementation:
 - Electrifying pump jacks that are currently operating with internal combustion engines
 - Other emissions sources identified for committee consideration moving forward
- Target: Reductions in PM 2.5 and combustion air toxics

Stationary Sources: Enhanced Inspection Frequency

- Type of Strategy: Enforcement
- Purpose: To limit the potential for air quality impacts associated with the failure to comply with emission standards established by District permit, rule, or regulation
- Goal: District staff will inspect each facility that has had an emission violation over the past 3 years at least twice per calendar year for the next 5 years or until the facility has 4 consecutive inspections without an emission violation, whichever occurs first

Stationary Sources: Pilot Training Program for Conducting Self-Inspections at Gas Stations

- Type of Strategy: Compliance Assistance
- Purpose: To limit the potential for air quality impacts associated with the vapor recovery defects at gasoline dispensing stations
- Goal: Develop a new pilot training program to instruct gas station operators on conducting thorough self-inspections of the vapor recovery systems to aid in the identification and timely repair of vapor recovery system defects. The District will offer to provide the hands on training to each gas station operator in the community.

Stationary Sources: Provide Incentives to Install Advanced Control Technology

- Type of Strategy: Outreach, Incentive
- Purpose: To provide incentives for stationary sources within the community to install advanced control technology, beyond existing controls, that would not otherwise be economically feasible to install
 - State currently developing funding guidance for such projects
 - Will identify types of facilities not otherwise identified in CERP, work with willing partners to implement controls
- Goal: Funding availability, and number and type of projects, will be developed, with input of steering committee, when state funding guidelines are available for stationary source funding
- Target: Reductions in PM_{2.5} and/or Toxic Air Contaminants (quantity of reductions to be determined)

Agricultural Operations

Dairy Feed Mix Electrification: Provide Incentives for Electric Dairy Feed Mixing Equipment

- Type of Strategy: Incentive
- Purpose: To provide a higher level of incentives for electric dairy feed mixing equipment and associated equipment (feed trucks, wheel loaders, feed pushers) for dairy operations near the community of Shafter
- Goal: Fund electric feed mixing equipment for 5 dairies located near Shafter
- Target: 350 tons NO_x, 18 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$6,500,000

Nut Harvesting: Provide Incentives for Low-Dust Technology Nut Harvesters

- Type of Strategy: Incentives
- Purpose: To provide increased outreach and access to incentive funding for the replacement of conventional nut harvesting equipment operating on ag land surrounding Shafter with new, low-dust nut harvesting equipment
- Goal: Replace 25 pieces of conventional nut harvesting equipment with new, low-dust harvesting equipment
- Target: 42.5 tons NO_x, 0.34 tons combustion PM_{2.5}, 90 tons fugitive PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$2,500,000

Agricultural Open Burning: Provide Incentives for Alternatives to Agricultural Burning

- Type of Strategy: Incentive
- Purpose: To limit the potential for localized PM_{2.5} impacts associated with open agricultural burning by providing enhanced access to funding for the District's Alternative to Agricultural Open Burning Incentive Program for growers within Shafter and the surrounding area
- Goal: Fund up to 2,000 acres of alternative practices
- Target: 210 tons PM_{2.5}
- Incentives to be invested: \$1,000,000

On-Field Agricultural Practices: Promote Implementation of Conservation Tillage Practices

- Type of Strategy: Outreach and Education
- Purpose: To further reduce the potential for localized fugitive particulate matter (PM) emissions associated with on-field agricultural practices
- Goal: Work with local agricultural groups to conduct focused outreach to promote more widespread implementation of conservation tillage practices such as cover cropping, no till, low till, strip till, and precision agriculture

Ag Engines: Provide Incentives to Replace Diesel Agricultural Pump Engines with Electric Motors

- Type of Strategy: Incentive
- Purpose: To provide increased incentive funding, up to 90% of cost, for the replacement of existing diesel or natural gas agricultural pump engines with electric motors within and surrounding Shafter, including capital funding for equipment and electric line extension
- Goal: Fund replacement of 10 existing diesel agricultural pump engines with electric motors near the community of Shafter.
- Target: 90 tons NO_x, 4 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$345,000

Ag Engines: Work with PUC & Utilities to Develop Preferred Utility Rate Structure for Electric Ag Pump Motors

- Type of Strategy: Policy/Advocacy
- Purpose: To work with the Public Utilities Commission (PUC) and utilities to develop preferred utility rates for replacing existing diesel agricultural pump engines with electric motors
- Goal: Advocate for the establishment of a preferred rate structure from the PUC and utilities for electric ag pump motors
- Target: Reductions in PM2.5 and/or Toxic Air Contaminants (quantity of reductions to be determined)

Ag Equipment: Provide Incentives to Replace Diesel Ag Equipment with the Cleanest Available Equipment

- Type of Strategy: Incentives
- Purpose: To provide increased outreach and access to incentive funding for the replacement of older, high polluting ag equipment (e.g. tractors) operating within and surrounding Shafter with new, cleaner equipment through the District's existing Heavy-Duty Engine Incentive Program
- Goal: Replace 100 pieces of diesel ag equipment with new, cleanest available equipment
- Target: 750 tons NO_x, 60 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$5,000,000

Dairy Trucks: Provide Incentives for the Replacement of Dairy Trucks with Zero or Near-Zero Emission Trucks

- Type of Strategy: Incentives
- Purpose: To provide increased outreach and access to incentive funding for the replacement of diesel dairy trucks operating in and around Shafter with new, zero- or near-zero emission trucks
- Goal: Replace 20 older, diesel dairy trucks with new zero or near-zero-emission trucks
- Target: 128 tons NO_x, 0.4 tons PM_{2.5} (based on average emission reductions expected per project)
- Incentives to be invested: \$2,000,000 (funding amounts up to \$100,000 per truck)

Dairy Digesters: Support dairy operations near Shafter in installing dairy digesters

- Type of Strategy: Outreach and Incentive
- Purpose: Support dairy operations near the City of Shafter in installing dairy digesters, which capture emissions of methane for productive use in energy production
- Goal: Work closely with CDFA and industry representatives to ensure that digesters funded through new State programs are designed and implemented to be protective of air quality (i.e., pipeline injection, mobile source fuel projects)
- Target: No reduction in criteria pollutants as a result of this measure, in fact an increase in criteria pollutants can result from digesters that are not designed in a manner that mitigates or eliminates criteria pollutants

Alternative Manure Management Practices: Support Dairy Farms Near Shafter in Implementing Alternative Manure Management Strategies

- Type of Strategy: Outreach and Incentive
- Purpose: Support dairy farms near Shafter with the implementation of alternative manure management strategies that help further reduce the emissions of VOCs, ammonia, and methane, through funding and educational outreach about programs available through state agencies
- Goal:
 - Number and type of projects, and funding availability, will be developed with steering committee input when state funding guidelines are available
 - The District will work with local agricultural groups to conduct outreach to promote alternative manure management strategies

Pesticides

- **Update from CARB:** DPR and CARB are committed to including in the CERP actions to address pesticides and are working together to draft strategies to be included by the end of August

Exposure Reduction Strategies

Air Filtration Systems in Community Schools

- Type of Strategy: Incentive, Exposure Reduction
- Purpose: To incentivize the purchase and installation of advanced air filtration systems in schools and daycares
- Goal: Pilot program- Meet with administrators/staff to survey current equipment; help fund upgrades to high-efficacy filters when HVACs permit; fund portable air cleaners for schools with older HVACs
- Incentives to be invested: Approximately \$100,000 for WINIX air cleaners, plus replacement HEPA filters and MERV-14 filters

HAL Schools: Increase Participation

- Type of Strategy: Outreach, Exposure Reduction
- Purpose: To reduce children's exposure to unhealthy air by increasing enrollment of schools in the Healthy Air Living Schools program
- Goal:
 - Meet with staff from both school districts in Shafter
 - Seek adoption of ROAR guidelines at both school districts in the area
 - Attend 4 school events, parent organization meetings
 - Partner with district-based family services to offer info and materials

Vegetative Barriers: Provide Incentives for Installation of Vegetative Barriers Around/Near Sources Of Concern

- Type of Strategy: Incentive, Exposure Reduction
- Purpose: To provide incentives for the installation of vegetative barriers around/near sources of concern to reduce particulate matter, odor, and other emissions, as feasible
- Goal: Work closely with the community, city, California Department of Transportation, Natural Resource Conservation Service and others to investigate and identify areas suitable for installation of vegetative barriers. Type of projects will be developed with input of steering committee, and funded as funding sources are identified
- Target: Quantity of reductions to be determined

Exposure Reduction: Mitigate indoor exposure to air pollution through weatherization and enhanced energy efficiency

- Type of Strategy: Incentive, Exposure Reduction
- Purpose: To reduce indoor exposure to air pollution in residences by incentivizing energy efficient weatherization upgrades
- Goal: District to work with partners at California Department of Community Services & Development to assist low-income community members in accessing state's Low Income Weatherization Program (LIWP) and Weatherization Assistance Program (WAP) incentives
- Target: Host 1 community meeting where California Department of Community Services & Development attends and educates community on benefits of weatherization and assists with enrolling community members in LIWP or WAP

Urban Greening/Forestry: Identify opportunities for increased urban greening and forestry in the community

- Type of Strategy: Partnership, Exposure Reduction
- Purpose: To increase urban greening and forestry in the community through partnerships with other entities
- Goal: Partner with other entities (i.e. City of Shafter, Natural Resources Agency, CAL Fire) to identify new or existing resources or programs (Per Capita Program, Urban & Community Forestry Grant Program) that can provide funding to increase urban greening and forestry in the community by planting up to 1000 trees
- Target
 - Quantification of air quality benefits from urban greening small, variable
 - Studies have shown several other community benefits, including some reduction of PM2.5 and VOC's, heat island mitigation, and community beautification

Idling-Reduction Strategy: Protect Sensitive Receptors

- Type of Strategy: Outreach, Exposure Reduction
- Purpose: To reduce the exposure of sensitive individuals to vehicle emissions at schools and other areas serving children and seniors
- Goal:
 - Distribute 10 sets of English/Spanish “No Idling” signs to schools, libraries, senior centers, parks, nursing homes, pediatricians, daycares, and medical centers
 - Develop and distribute idle-reduction infographics at each location
 - Develop and deliver 4 presentations about the impacts of vehicle exhaust, HAL Schools and available resources

Community Air Quality Outreach Strategy

- Type of Strategy: Outreach, Exposure Reduction
- Purpose: To provide additional information to the community about real-time air quality conditions and measures the public can take to protect themselves during poor air quality episodes
- Goal:
 - Launch social media campaigns based on myRAAN, air quality education (Facebook, Twitter, Instagram)
 - Partner with local civic organizations and other community organizations to host workshops on a variety of air quality topics at libraries, community centers, health centers, and schools.
- Target: Increased community awareness regarding air quality conditions and available tools through myRAAN registrations, app downloads, social media followers

Sharing Clean Air Efforts and How Communities Can Get Involved

- Type of Strategy: Outreach
- Purpose: To increase awareness of community air quality improvement programs and available incentives by hosting outreach events within the community
- Goal:
 - District will work with community to host workshops and symposiums to share air quality information on air quality improvement topics at libraries, community or senior centers, health centers, and schools. Topics may include CGYM, Burn Cleaner, DCSJ, TITU, HAL Schools

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