

Emission Reduction Credit Program Public Advisory Workgroup

December 2, 2021

Overview



CREDITING EMISSION REDUCTIONS FROM PORTABLE
EQUIPMENT

CASE STUDY

Crediting Emission Reductions from Portable Equipment

Portable Equipment Registration Programs

- Consistent with State law, CARB and local air districts operate portable equipment registration programs
- In lieu of obtaining traditional stationary source permits, these are voluntary programs to register and regulate portable equipment
- State Portable Equipment Registration Program
 - PERP regulations are found in Title 13, Section 2450, et seq
- District Portable Equipment Registration Program
 - District Rule 2280 (Portable Equipment Registration)
- Emissions limitations for portable equipment are specified in the applicable portable equipment registration regulations as well as the State portable diesel engine air toxic control measure

Portable Equipment Requirements

- A “Portable” emissions unit is defined as:
 - Any emissions unit that, by itself or in or on a piece of equipment, is designed to be and capable of being carried or moved from one location to another
 - Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, platform, or mounting
- Portable equipment registered in the District PERP may:
 - Operate throughout the San Joaquin Valley Air Basin
 - Cannot reside at any single location for more than 6 consecutive months
- Portable equipment registered in the State PERP may:
 - Operate throughout the state without obtaining permits from any of California's 35 air districts
 - Cannot reside at any single location for more than 12 consecutive months

Crediting Emission Reductions from Portable Equipment

- Evaluating the banking of Emission Reduction Credits (ERCs) from portable equipment that are registered under the:
 - CARB Portable Equipment Registration Program (State PERP), or
 - San Joaquin Valley Air Pollution Control District Portable Equipment Registration Program (District PERP)
- Follow “traditional methodology” as generating ERCs for stationary sources
 - Portable equipment performs the same function and is operated in the same method/fashion as stationary source equipment, but not operated as part of a stationary source
 - Main operational difference being the authorization and ability to operate at various sites for a given duration of time

Calculating Emission Reductions from Portable Equipment

- Quantification of Emissions Reductions from Portable Equipment can be calculated using the same methodology as stationary source equipment
 - Actual Emission Reductions (AER) required to meet same integrity criteria for being Real, Quantifiable, Surplus, Permanent, and Enforceable as outlined in District Rule 2201, Section 3.2
 - Will use Baseline Period definition in District Rule 2201, Section 3.9
 - Only operating hours occurring within the San Joaquin Valley will be eligible
 - Records will be required, such as operating hours at each location

Case Study

Case Study - State PERP

- An owner of a portable Tier 3 diesel-fired engine with a State PERP operated within the boundaries of the District for a portion of the past 5 years, and has replaced their existing engine with a propane/natural gas-fired engine equipped with a 3-way catalyst system
- The engine owner intends to continue to operate the engine to perform the same tasks and in the same manner as before the replacement
- The owner has provided the District with records that show the number of hours the engine operated at each site for the past 5 years, and how long the equipment remained at a single site before it was relocated
- The owner also provided the District with certified emission factors for both the diesel-fired and propane-fired IC engine



Case Study - Integrity Check

- The District is able to make a determination that the Actual Emission Reductions (AERs) are Real, Quantifiable, Surplus, Permanent, and Enforceable as outlined in District Rule 2201, Section 3.2 with the following information/records:
 - Certified/guaranteed EFs for both diesel and propane engines
 - Time spent operating within the District
 - Actual diesel engine hours of operation during baseline period in the District
 - Proof of rendering diesel engine permanently inoperable
 - AER must be surplus of current engine requirements (Tier 4F certified engines)



Case Study - AER Calculation

	Existing Engine	Replacement Engine	Tier 4 Standard
EF (g-NOx/bhp-hr)	2.53	0.017	0.29
Horsepower	247	230	175 - 300
Hrs of Operation	2,500	n/a	--
Hrs of Operation within District	2,000	2,000	--

- AER = HAE - PE2, Where:
 - HAE = Surplus historical actual emissions within the District

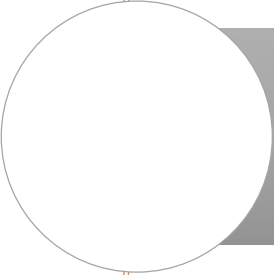
$$= 247 \text{ bhp} \times 0.29 \text{ g-NOx/bhp-hr} \times 2,000 \text{ hrs/yr} \div 453.6 \text{ g/lb} = \underline{\underline{316 \text{ lb-NOx/yr}}}$$
 - PE2 = Post project potential emissions

$$= 230 \text{ bhp} \times 0.017 \text{ g-NOx/bhp-hr} \times 2,000 \text{ hrs/yr} \div 453.6 \text{ g/lb} = \underline{\underline{17 \text{ lb-NOx/yr}}}$$
- AER = 316 lb-NOx/yr - 17 lb-NOx/yr = **299 lb-NOx/yr**
 (Prior to ERC banking and discounting by the 10% Air Quality Improvement Deduction)

Next Steps



Continue refining the portable ERC program guidelines



Continue to identify and evaluate new methods to create surplus creditable emission reductions



Continue to collaboratively work with EPA/CARB

Comments/Questions