Emission Reduction Credit Program
Public Advisory Workgroup

June 3, 2021

Overview

- PREVIOUS MEETING SUMMARY
- CREDITABLE REDUCTIONS FROM ORPHAN SHUTDOWNS
- MOBILE SOURCE EMISSION REDUCTION CREDITS
- ERC COST UPDATE
- NEXT STEPS

Previous Meeting Summary

Previous Meeting Summary

- Given current estimates, there are approximately 2.94 tpd of VOC (21%) and 2.42 tpd of NOx (16%) in the external ERC bank that meet federal surplus requirements
- Approximately 0.48 tpd of federal VOC offsets and 0.29 tpd for NOx have been required annually (5 year average)
- Need to identify options to generate sufficient quantity of surplus credits to support federal offsetting needs
  - Preliminary analysis projects possible future shortage of VOC and NOx ERCs
  - Limited opportunities to generate additional ERCs through traditional means
  - Need to look to non-traditional sources and methods

Creditable Emission Reductions from Orphan Facility Shutdowns

Historic Treatment of Orphan Facility Shutdowns

- Emission reductions from unbanked facility shutdowns
- Prior policies valued orphan shutdowns at:
  - Actual emission reduction if record of actual emissions was available, or
  - 50% of permitted potential to emit if record of actual emissions was not available
- Orphan shutdowns surplus adjusted on an annual basis, but not surplused initially
- Used as additional creditable emission reductions for demonstrating equivalency
- Orphan facility shutdowns were provisionally removed from the system in September 2020 while reevaluating practices

Future Orphan Shutdowns (OSD) Concepts

- Emission reductions associated required to meet ERC criteria (Quantifiable, Permanent, Real, Enforceable, Surplus)
- Exploring potential to make OSD reductions available to facilities to meet offsetting obligations
- Exploring what potential value/avenues there may be for the use of shutdowns where the District does not have a record of actual emissions
- Exploring crediting of equipment unit shutdowns, not just facility shutdowns
- New state criteria and toxic reporting regulation will aid with documentation of actual emissions

Criteria Pollutant and Toxics Emissions Reporting (CTR)

- Regulation for the Reporting of Criteria Air Pollutants and Toxic Air Contaminants (CTR):
  - EI reporting for criteria pollutants and toxic air contaminants from specified, permitted facilities required by state mandate
- Regulation effective Jan 1, 2020 for large stationary sources
  - Sets up annual, statewide reporting of criteria pollutant and air toxic emissions
  - Establishes uniform estimation methods and data reporting requirements
- Requirements for remaining source categories will be phased in between 2023 and 2026

Evaluation of Orphan Shutdown Projects

- Reviewed 5 years (2014-15 through 2018-19) to estimate future supply of surplus creditable reductions from OSD
  - 286 OSD projects identified in total
  - 174 OSD projects with EI data (61%)
  - Utilized most recent 2-year average (within a 5 year period from the date of permit surrender) to determine the emissions reductions
- Sampled 40 OSD projects to perform a surplus-at-time-of-use evaluation
  - Different facility types/sizes, number of permit units, amount of emissions reductions, and shutdown years
  - Approx. 66% and 50% of aggregate NOx and VOC reductions, respectively, from the 174 OSD projects

OSD Surplus Evaluation Results

- Of the 40 OSD projects evaluated, 10 required a surplus-at-time-of-use adjustment
- When aggregated, adjustments lowered NOx and VOC reductions by 9% and 25%, respectively, over the 40 projects
- Applying percentages to the emission reductions from all 174 OSD projects with emission inventory data reduces the 5 year average as follows:
  - 3.0 tpy NOx => 2.8 tpy NOx
  - 10.4 tpy VOC => 7.8 tpy VOC
- Evaluation provides a reasonable estimate of initial surplus value of orphan shutdowns

OSD Surplus Evaluation Results

Tracking Year	# of Orphan Shutdowns (total)	# of Orphan Shutdowns (w/ Emissions Inventory)	OSD Emission Inventory (tpy)		OSD w/ inventory w/ Surplus-at-time-of-use (tpy)	
			NOx	VOC	NOx	VOC
2014-2015	17	9	0.75	0.43	0.68	0.32
2015-2016	76	47	2.31	7.48	2.10	5.61
2016-2017	61	35	8.21	12.27	7.47	12.20
2017-2018	71	42	1.39	12.71	1.27	9.53
2018-2019	61	41	2.58	15.15	2.35	11.36
Total	**286**	**174**	**15.24**	**52.03**	**13.9**	**39.0**
5 yr Avg	**57**	**35**	**3.05**	**10.41**	**2.8**	**7.8**

OSD Surplus Evaluation Results

- Used finding to estimate potential emissions reduction credit for 112 OSD projects that did not have emission inventory data
- Estimate an additional 0.7 tpy NOx and 4.0 tpy VOC on average should future OSD projects have emission inventory data
- When taken together, estimate 3.5 tpy of surplus NOx and 11.8 tpy of surplus VOC on average from OSD projects
- This represents approx. 3% of the federal NOx offsets and 7% of the federal VOC offsets have been required annually over the past 5 years

Mobile Source
Emission Reduction Credits (ERC)

Mobile Source ERCs

- District is evaluating potential opportunities to generate ERCs through non-traditional methods, such as mobile source ERCs
- Working to understand opportunities and challenges associated with mobile source ERCs
  - Life of emissions reductions – mobile source projects do not have the same life as stationary sources
  - Permanence/Enforceability of emissions reductions
  - Type of mobile source reductions

Mobile Source ERCs

- Currently reviewing existing programs at other agencies
  - Texas Commission on Environmental Quality (TCEQ)
  - San Diego County Air Pollution Control District (SDCAPCD)
  - Maricopa County Air Quality Department – Arizona
- Looking to understand the framework on how these agencies established programs that meet the ERC criteria (Quantifiable, Permanent, Real, Enforceable, Surplus)
- Working closely with CARB and EPA throughout this process
- Methodologies will need to be approved by CARB and EPA

ERC Cost Update

ERC Costs Update (VOC)

- Last PAW meeting:
  - VOC ERCs historically sold for approx. $4,000 - $5,000 per ton
  - At the time, one 2021 ERC transaction for surplus VOCs sold for $28,000/ton
- Three recent 2021 ERC transactions for VOC ERCs
  - Two transactions sold for $75,000/ton
  - One transaction sold for $47,500/ton
- Still not definitive, but the cost of surplus credits appear to be increasing

Next Steps

- Looking for feedback on the concepts evaluated
- Continue to assess the pros/cons of other concepts
- Scheduling next PAW meeting
- Continue to collaboratively work with EPA/CARB

Comments/Questions