PORTSIDE	Vehicles Portside LCV (Construction, Wholesale, Manufacturing, Transportation)			Vehicles Portside SUT/MUT (Transportation)			Scenario	Vehicle Count	Unit Cost	Total Cost	PM REDUCED (TONS/YR)	REDUCTION COST		NOX REDUCED (TONS/YR)	REDUCTION COST	
	Total Vehicles	VMT		Total Vehicles	VMT		Incentive	1361	$ 45,900	$ 62,469,900	0.12	$ 537,160,041	per ton	6.95	$ 8,982,458	per ton
	1361	**38,178,194**	**Miles**	**86**	**1,573,526**	**Miles**	ISR	86	$ 465,000	$ 39,814,044	0.06	$ 639,144,350	per ton	4.52	$ 8,813,398	per ton
BORDER COMMUNITY	Vehicles Border Community LCV (Construction, Wholesale, Manufacturing, Transportation)			Vehicles Border Community SUT/MUT (Transportation)			Scenario	Vehicle Count	Unit Cost	Total Cost	PM REDUCED (TONS/YR)	REDUCTION COST		NOX REDUCED (TONS/YR)	REDUCTION COST	
	Total Vehicles	VMT		Total Vehicles	VMT		Incentive	2003	$ 45,900	$ 91,937,700	0.11	$ 801,468,013	per ton	6.86	$ 13,402,250	per ton
	2003	**37,657,866**	**Miles**	**562**	**7,275,207**	**Miles**	ISR	562	$ 465,000	$ 261,410,631	0.29	$ 907,641,754	per ton	20.89	$ 12,515,808	per ton
EL CAJON	Vehicles El Cajon LCV (Construction, Wholesale, Manufacturing, Transportation)			Vehicles El Cajon SUT/MUT (Transportation)			Scenario	Vehicle Count	Unit Cost	Total Cost	PM REDUCED (TONS/YR)	REDUCTION COST		NOX REDUCED (TONS/YR)	REDUCTION COST	
	Total Vehicles	VMT		Total Vehicles	VMT		Incentive	3491	$ 45,900	$ 160,236,900	0.17	$ 916,047,291	per ton	10.46	$ 15,318,259	per ton
	3491	**57,423,929**	**Miles**	**203**	**2,010,186**	**Miles**	ISR	203	$ 465,000	$ 94,296,420	0.08	$ 1,184,937,706	per ton	5.77	$ 16,339,544	per ton
ESCONDIDO	Vehicles Escondido LCV (Construction, Wholesale, Manufacturing, Transportation)			Vehicles Escondido SUT/MUT (Transportation)			Scenario	Vehicle Count	Unit Cost	Total Cost	PM REDUCED (TONS/YR)	REDUCTION COST		NOX REDUCED (TONS/YR)	REDUCTION COST	
	Total Vehicles	VMT		Total Vehicles	VMT		Incentive	3268	$ 45,900	$ 150,001,200	0.17	$ 901,084,624	per ton	9.95	$ 15,068,051	per ton
	3268	**54,648,396**	**Miles**	**79**	**728,680**	**Miles**	ISR	79	$ 465,000	$ 36,932,765	0.03	$ 1,280,300,169	per ton	2.09	$ 17,654,532	per ton
SD COUNTY	Vehicles SD County LCV (Construction, Wholesale, Manufacturing, Transportation)			Vehicles SD County SUT/MUT (Transportation)			Scenario	Vehicle Count	Unit Cost	Total Cost	PM REDUCED (TONS/YR)	REDUCTION COST		NOX REDUCED (TONS/YR)	REDUCTION COST	
	Total Vehicles	VMT		Total Vehicles	VMT		Incentive	53748	$ 45,900	$2,467,033,200	3.31	$ 744,855,049	per ton	198.07	$ 12,455,561	per ton
	53748	**1,087,305,269**	**Miles**	**3331**	**50,587,348**	**Miles**	ISR	3331	$ 465,000	$1,549,080,633	2.00	$ 773,514,903	per ton	145.23	$ 10,666,283	per ton

Analysis Conclusion and Recommendations

This analysis compares two scenarios for estimating mobile source emissions reductions (and associated costs) of NOx and PM2.5 from electrifying diesel/gasoline-powered commercial vehicles. The first scenario is an incentive-based program that offers to replace light commercial vehicles (<8,500 lbs GWR) for businesses recognized by the State of CA as Construction, Wholesale, Manufacturer, and Transportation NAICS codes within the AB617-recognized Portside and Border Communities, the Cities of El Cajon and Escondido, which according to CalEnviroScreen share similar socio-economic factors as other AB617 communities as well as elevated ambient Ozone levels. The second scenario is the current envisionment of an Indirect Source Rule that matches the scope of vehicle classes (medium/heavy duty trucks) and stationary facilities as listed in SCAQMD Rule 2305.

The results of the analysis shown above and supported by the information in the following sheets suggest that an incentive program aimed at electrifying light commercial vehicles rather than an ISR would provide a better overall reduction in NOx and PM2.5 as well a better reduction cost on a per ton basis. It should be noted, however, that promulgating either solution would be at extreme cost to the APCD and regulated community for a relatively marginal reduction in overall pollutants. That said, a program aimed at providing financial assistance to small business owners operating within either of the communites listed would likely provide some material benefit to those who would not otherwise be able to electrify their fleets ahead of the timelines outlined by the State and Portside Community CERP/MCAS.

This analysis was done referencing emissions data from EMFAC (Modeled year 2022), SANDAG 2022 Commercial Vehicle survey data, Go-Biz data, CARB Advanced Clean Fleets estimate of affected vehicle classes, International Council on Clean Transportation, US Energy Information Association, and United States IRS (for commercial clean vehicle tax credit)

References and Assumptions:

1) EMFAC 2021 Model Output for Year 2022, modified to include only vehicles reasonably domiciled in San Diego County (see Refined EMFAC Tab). Determined NOX and PM2.5 exhaust emission rate on per VMT basis for diesel and gas-powered vehicles

2) SANDAG 2022 Commercial Vehicle Survey, for all data relating to average vehicle count by class and industry type, number of visits to/from facility per employee per business by industry type, VMT per trip and number of trips per vehicle class and industry type

3) Go-Biz data for Portside Community (drawn), Border Community (drawn), City of El Cajon, City of Escondido, and SD County, Business establishment data by name, NAICS and employee count. Used to determine count of businesses and vehicle count

4) ICCT 2022 White Paper reporting average costs of electric semi truck in 2025, informed by actual costs for EVs purchased by NASSCO in Q3 2023 as part of Port Pilot Project Grant, recent Q1 2024 tariffs on EVs and critical minerals by the Biden Administration, Q4 Department of Treasury clarification on incentive qualifications for OEMs using materials from Foreign Entities of Concern, and professional working knowledge of the state of the global battery industry. https://theicct.org/wp-content/uploads/2022/02/purchase-cost-ze-trucks-feb22-1.pdf

5) EIA Q4 2023 Price Report on EV sales https://www.eia.gov/todayinenergy/detail.php?id=61004

6) CARB regulation summary of affected vehicles classes (12% Class 2b-3, 52% Class 4-8 Vocational, 67% Class 7-8 Tractor. https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary. Assumed average rate of total SUT/MUT vehicles and used the remainder of vehicles that would be "unaffected" and eligible for this analysis.

7) 10% of LCV fleet as diesel-powered with remainder powered by Gasoline