RSU 21 KENNEBUNK (1) 2005

CIASS 8 (2) 2007

DIESEL - DIESEL

9/27/18 deg

(2) 2008 Section 7: Application Scoring Matrix (2) 2009

Score Assigned	Attachment	Attachment Description
10	А	Mitigation Action Description: Related to Maine's Beneficiary Mitigation Plan
20 ang 817.	В	NOx Emission Reduction: NOx emission reductions estimate using EPA's Diesel Emission Quantifier
10	С	Health Benefits: Maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
10	D	Action Location: Within an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.
0	E	Class 1 Areas: Benefits a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area.
10	F	Verified Funding: Match or leveraged funding for cost sharing secured. Budget provided.
\$ 700,000 TOTAL - 140,000 MATCH =	560,000 PE	
(0	G	Action Schedule: Action implemented within two years of the award date. Schedule provided.
10	Н	Benefit Period: Sustained emission benefits over the ten-year Trust Effective Period. Maintenance plan provided.
10	ı	Relevant Experience and Compliance Certification: Existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

* 9 WE - E N - WHISE II

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#5 50

Gates, Judy

Kennebunk

From:

Steve Marquis <smarquis@rsu21.net>

Sent:

Friday, September 14, 2018 3:11 PM

To:

Gates, Judy

Subject:

Maine VW Environmental Mitigation Action

Attachments:

SCO_Busines18091415090.pdf; SCO_Busines18091415090.pdf

Good Afternoon Ms. Gates,

I appreciated your time this afternoon and allowance to send our application per your attention. Please find attached.

I hope you have a great weekend,

Sincerely,

Steve

Stephen D. Marquis, Ph. D. Director of Operations RSU 21 207-985-1100



Maine Volkswagen Environmental Mitigation Action Round 1 Application for Appendix D-2 Eligible Actions

(For MaineDOT Use Only)
Date Application
Received

9/14/18

Beneficiary's Project ID 23901.10

Funding Request #

24

- All applications for Round 1 funding are due by September 15, 2018.
- A fillable application template is available at www.maine.gov//mdot/vw/application
- Use the list of attachments in Section 3 to ensure that your application is complete.
- Funding approvals for action(s) may be whole or partial.
- A timeline for Maine's Round 1 application process can be found at www.maine.gov/mdot/vw/application.
- For information on Maine's Diesel Emission Reduction Act (DERA) Program, go to http://www.maine.gov/dep/air/mobile/cleandiesel.htmls.
- For information on Zero Emission Vehicle Supply Equipment (ZEVSE), go to www.efficiencymaine.com.
- Submit any questions through the website at www.maine.gov/mdot/vw/application/fags.
- Information on the current base price for Maine school buses can be found at http://www.maine.gov/doe/transportation/programs/buspurchase.html

Section 1: General Information

Action Title: Class 4-8 Sci	hool Bus Replac	cements	and the first state of the stat			
Action Location: Town/Territory: K	Kennebunk		County: Yo	rk		
Type of Action: Repower:	Replacer	ment: 🗵				, 1,
Action Proponent: Stephen D. M.	arquis		4allilatida in and the			
Action Proponent Mailing Address	s: Regional Sch	ool Unit 21 17	7 Alewive Ro	oad		
City: Kennebunk	Sta	ate: ME	Zip: 04043		County: York	
Daytime Phone: (207)985-1100	Alternate Pho	ne: (207)710-7	7908	Ema	ail: smarquis@rsu21.net	
Authorized Agent (if different from	Action Propon	ent): Dr. Stepho	en D. Marqui	is		
Authorized Agent Mailing Address	s: Regional Sch	ool Unit 21 17	7 Alewive Ro	oad		
City: Kennebunk	Sta	ate: ME	Zip: 04043		County: York	
Daytime Phone: (207)985-1100	Alternate Pho	ne: (207)710-7	7908	Ema	ail: smarquis@rsu21.net	

Section 2: Eligibility Criteria

The following categories are **eligible mitigation actions** pursuant to Appendix D-2 of the Environmental Mitigation Trust Agreement (https://www.maine.gov/mdot/vw/app/Maine_VW_Eligible_Mitigation_Actions_1-8.pdf) and reflect basic eligibility criteria for consideration under this program. See Maine's Beneficiary Mitigation Plan (www.maine.gov/mdot/vw/BMP_final_2-12-18.pdf) for details on eligibility. Check all that apply. Leave checkboxes blank for actions that don't apply. List individual vehicles or equipment using the table on the following page.

Check all that apply	Eligible Miligation Actions
	1992-2009 engine model year Class 8 Local Freight Trucks and Port Drayage Trucks repowered with any new diesel or alternate fueled engine or all-electric engine, or replaced with any new diesel or alternate fueled or all-electric vehicle, with the engine model year in which the eligible large trucks mitigation action occurs or one engine model year prior.
X	2009 engine model year or older Class 4-8 school buses, shuttle buses, or transit buses repowered with any new diesel or alternate fueled or alt-electric engine, or replaced with any new diesel or alt-electric vehicle, with the engine model year in which the eligible bus mitigation action occurs or one engine model year prior.
	Pre-Tier 4 freight switcher locomotives that operate 1000 or more hours per year repowered with any new diesel or alternate fueled or all-electric freight switcher certified to meet the applicable EPA emissions standards or other more stringent equivalent state standard.
	Unregulated, Tier 1 or Tier 2 marine engines on ferries or tugs repowered with Tier 3, Tier 4, alternate fueled, or all-electric engine, or upgraded with an EPA certified remanufacture system or an EPA verified engine upgrade.
	Marine shore power systems or components of such systems that enable a compatible vessel's main and auxiliary engines to remain off while the vessel is at berth. Components eligible for reimbursement are limited to: cables, cable management systems, shore power coupler systems, distribution control systems, and power distribution. Subject marine shore power systems comply with international shore power design standards (ISO/IEC/IEEE 80005-1-2012 high voltage shore connection systems or the IEC/PAS 80005-3:2014 low voltage shore connection systems) and are supplied with power sourced from the local utility grid.
	1992-2009 engine model year Class 4-7 local freight trucks repowered with a new diesel, alternate fueled, or all-electric engine, or replaced with any new diesel, alternate fueled, or all-electric vehicle, with the engine model year in which the eligible medium trucks mitigation action occurs or one engine model year prior.
	Tier 0, Tier 1, or Tier 2 diesel powered airport ground support equipment; and uncertified or certified to 3 g/bhp-hr or higher emissions spark ignition engine powered airport ground support equipment repowered with an all-electric engine, or replaced with the same airport ground support equipment in an all-electric form.
	Forklifts with greater than 8000 pounds of lift capacity and port cargo handling equipment repowered with an all-electric engine, or replaced with the same equipment in an all-electric form.

urrent /ehicle Class	Current Tier (if applicable)	Current Model	Current Model Year	Mileage	Current Fuel Type	Proposed Fuel Type	Associated equipment
8	applicable)	Freightliner	2008	177195	Diesel	Diesel	Title U
8		Freightliner	2005	188839	Diesel	Diesel	3 38
8		Freightliner	2008	181194	Diesel	Diesel	
8		Freightliner	2009	206036	Diesel	Diesel	Z T AUL
8		Freightliner	2007	154858	Diesel	Diesel	917, PU
8		Freightliner	2007	162025	Diesel	Diesel	187/1

Section 3: Action Overview and Instructions

The following information provides the reviewers with background on the proposed action and will be considered as part of final decisions on what actions are funded in any given year. If an attachment is not applicable to the proposed action, that action is not disqualified from funding; however, Action Proponents are encouraged to provide accurate and concise

answers to as many questions as possible and note why an attachment is not relevant to their proposal.

	The second name of the local n	estions as poss	sible and note why an attachment is not relevant to their proposal.
Check if attached	Scoring (for MainebOT (fee)	Attachment	Attachment Description
X	All a	Α	Mitigation Action Description: Attach a no more than two-page narrative describing the action and how it relates to Maine's Beneficiary Mitigation Plan and label as "Attachment A".
X		В	NOx Emission Reduction: Estimate the NOx emission reductions from the action in terms of dollar per ton of NOx using EPA's Diesel Emission Quantifier found at https://cfpub.epa.gov/quantifier/index.cfm?action=main.home or for heavy-duty vehicles: http://afleet-web.es.anl.gov/hdv-emissions-calculator/ Attach a separate summary calculation worksheet generated by the Quantifier for each vehicle or piece of equipment and label as "Attachment B".
X		С	Health Benefits: Describe any health benefits <u>maximized</u> by the action <u>beyond</u> calculated NOx emission reductions as "Attachment C". Examples of maximized health benefits include: reductions in particulate matter and/or greenhouse gases; net reduction of diesel fuel use; or idle reduction strategies.
Х		D	Action Location: As "Attachment D", indicate whether the action will occur in an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.
	NA	Е	Class 1 Areas: Using the maps found at https://www.maine.gov/dep/air/meteorology/class1. note the location of the proposed action to indicate whether it will benefit a designated federal Class 1 Area, specifically Acadia National Park, Roosevelt Campobello International Park, or the Moosehorn Wilderness Area located within the Moosehorn National Wildlife Refuge Area. Include the map as "Attachment E".
X		F	Verified Funding: As "Attachment F", verify that the action has secured funding for cost sharing or leveraging by providing a commitment letter or signed agreement from a financial institution or budget committee for cost share or leveraged funding. Also, using the template in Section 4 of this application, include a general project budget indicating the amount of match to be provided by the Action Proponent.
Χ		G	Action Schedule: The action must be implemented within two years of the award date. Using the template provided in Section 4 of this application, provide schedule and major milestones, labeled as "Attachment G".
X		Н	Benefit Period: The action must result in sustained emission benefits over the ten-year Trust Effective Period. Provide a concise description of how benefits will persist through 2027 and a maintenance plan for eligible vehicles/equipment funded under this program as "Attachment H".
X		I	Relevant Experience and Compliance Certification: By signing provisions in "Attachment I", the Action Proponent and Authorized Agent (if applicable) verify that there is existing administration and programmatic structure in place to implement diesel emission reduction or offset actions.

ATTACHMENT A

Mitigation Action Description: Attach a no more than two-page narrative describing the action and how it relates to Maine's Beneficiary Mitigation Plan and label as "Attachment A".

RSU 21 would like to replace 7 buses ranging from model year 2005 through model year 2009 with replacement buses from model years 2019 and 2020.

The towns that comprise RSU21, Arundel, Kennebunk, and Kennebunkport, are keenly interested in serving as stewards of our environment and champions of good health through active engagement in practices that serve to reduce adverse environmental and wellness impact. Most recently, RSU21 has completed sweeping upgrades to our physical plant in the form of energy efficient systems, green technologies, and safe schools. To this end, RSU21 believes that the financial incentives provided by the Maine Volkswagen Environmental Mitigation Action, will enable us to further our efforts in environmental stewardship and improved healths benefit achieved through the replacement of aging buses.

Replacing 7 buses from our fleet over the next two years will have an immediate impact on the air quality in Southern Maine. The reduction of harmful diesel emissions through bus replacement will reduce adverse health impact on human lives, and the connection is particularly strong in Southern Maine, where most livelihoods depend on the exploitation of natural resources and our tourism industry. Our older buses are significantly less efficient than current models given the U.S. Environmental Protection Agency (EPA) established standards for the sulfur content of diesel fuel and for emissions from new diesel engines. These newer replacement engines with advanced exhaust emission control systems can reduce vehicle particulate emissions by up to 90% and emissions of nitrogen compounds (NOx) by 25%–50%. Even with these advances, diesel fuel still contributes to air pollution in the United States because it will take a long time for newer and cleaner diesel vehicles to replace older vehicles. The replacement of 7 less efficient buses will address this challenge.

School buses travel about four billion miles each year, providing the safest transportation to and from school for more than 25 million American children every day. However, diesel exhaust from these buses has a negative impact on human health, especially for children who have a faster breathing rate than adults and whose lungs are not yet fully developed.

While new buses must meet EPA's tougher emission standards, many older school buses continue to emit harmful diesel exhaust. The VW mitigation action is designed to help communities reduce emissions from older diesel school buses. School districts, fleet owners and operators, bus drivers, parents and students all have a role in helping to reduce diesel emissions from school buses. An award of this nature for RSU21 will serve as a real game changer for our students and greater community as we educate people about the dangers of pollutant and associated health impacts through effective methods to replace the oldest school buses in our fleet. Older, more polluting school buses can lead to significant health risks for students who typically ride these buses for extended periods of time each day. Children are more susceptible to air pollution than healthy adults because their respiratory systems are still developing and they have faster breathing rates. Asthma, which affects 6.3 million American school children, is the most common long-term childhood disease in America, making newer, cleaner buses an urgent priority.

Attachment B

NOx Emissions Reduction

The reduction of NOx emissions goal is to reduce the overall formation of ground-level ozone. The U.S. EPA believes that the replacement of older diesel engines can reduce NOx emissions.

We anticipate that our proposed replacement of 7 buses will result in emissions reductions as provided below.

Emission Results and Health Benefits for Project: RSU21 VW Buses

Emission Results \Box

Here are the combined results for all groups and upg	rades entered :	for your project. ¹				
Annual Results (short tons)2	NOx	PM2.5	HC	CO	CO ₂	Fuel ³
Baseline for Upgraded Vehicles	0.244	0.011	0.022	0.084	60.7	5,400
Amount Reduced After Upgrades	0.206	0.010	0.018	0.068	3.0	270
Percent Reduced After Upgrades	84.4%	94.3%	81.4%	81.1%	5.0%	5.0%
Lifetime Results (short tons)2						
Baseline for Upgraded Vehicles	1.464	0.054	0.125	0.466	384.7	34,200
Amount Reduced After Upgrades	1.222	0.051	0.098	0.366	19.2	1,710
Percent Reduced After Upgrades	83.5%	93.0%	78.8%	78.5%	5.0%	5.0%
Lifetime Cost Effectiveness (\$/short ton reduced)						
Capital Cost Effectiveness ⁴ (unit & labor costs only)	\$220,932	\$5,326,866	\$2,746,150	\$738,620	\$14,035	
Total Cost Effectiveness ⁴ (includes all project costs)	\$589,152	\$14,204,977	\$7,323,067	\$1,969,653	\$37,427	

¹ Emissions from the electrical grid are not included in the results.

 $^{^2}$ 1 short ton = 2000 lbs.

³ In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

⁴ Cost effectiveness estimates include only the costs which you have entered.

Maine VW Environmental Mitigation Action

RSU21 Attachment B

STEPHEN MARQUIS 9/12/18

RSU21 7 Bus replacement ove 2 year period

Summary Report from the Diesel Entissions Quantifier

Total	Onroad	Onroad	Omoad	Onroad	Onroad	Onroad	Onroad	smerquis@rsu21.net 000-000-0000 Type Mo
	B.3	• • • • • • • • • • • • • • • • • • • •						81.21.ma 90 Ndo
	2009	2009	2006	2008	2007	2007	2005	& ~ ≺ 21 \$
	79.10%	79.10%	79.10%	79.10%	79.10%	79.10%	89.60%	.net Baseline SANDX per year Mod Yr Reduced shi trelyr
								Baseline of Ve per year NOx, sht instyr
8,4937	0.0617	0.0617	0.0617	0.0617	0.0617	0.0817	0.1235	of Veh
								Baseline of Veh Amt Reduc per year NOx, Year NOx, sht brislyr shi lons
0.4835	0.0488	0.0488	0.0488	0.0488	0.0488	0.0488	0.1107	
3.5	0	0.5	2	2	9	2	9.	Lifetime Lifetime A Beseive NOx Reduced sht tons NOx, sht
3,5785	0.5662	0.5562	0.4935	0,4935	0.4318	0.4318	0.6175	NO R R S
2.8957	0.4392	0.4392	0.3904	0.3904	0.3416	0.3416	0.5533	Lifetime And Reduced NOx, shi tons
57								AT ELEMENTS
	198,106.83	198,108.83	222,871.87	222,871.87	254,711.63	254,711.63	157,245.93	CapCost Effectiveness \$/eht ton, Retro Veh NC
								CapCost Cap Cost Lifetime Amt Effectiveness Effectiveness Percent Reduced \$4sht bor. % PM2.5 \$4short ton. Reduced NOx, shi tons Retro Veh NOx reduced Retro V PM2.5 HC, %
	10% 51	10% 51	10% 58	10% 58	88 %04	99 %Ot	98.00% 1	2 5 G U
	,897,750	47.40% 51,897,758.30	47.40% 58,384,912.62	47,40% 58,384,912.82	47.40% 88,725,516.48	47.40% 66,725,516.48	,754,86	Cap Cost Effectiveness S/short ton, Retro V PM2
	47.40% 51,897,758.30 55.40% 5,449,258.04	1.30 58					1,754,863.14 91.40% 1,146,630.20	72.5 HC
	5.40% 5	5.40% 5	5.40% 6	5.40% 6	5.40%	5,40% 7	1.40% 1	A
	,449,25	55.40% 5,449,258.04	55.40% 8,130,398.08	55.40% 6,130,398.06	55.40% 7,006,169.11	55.40% 7,000,109.11	,146,63	Cepital Cost Percent Effectiveness Percent Reduced Selection, Reduce HC, % Retro Veh HC CO, %
								8 -
	55.40%	55.40%	55.40%	55,40%	55.40%	55.40%	91,20%	2 ~
	1,443,234.27 13.00%	1,443,234,27 13,00%	1,623,637.94	1,623,637.94	1,655,587.93	1,855,587,93	311,5	Cepital Cost Effectiveness Sahort ton, Retro Veh Co
	H.27	M.27					311,582.07 13.00%	7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	3.00%	13.00%	13.00%	13.00%	13.00%	13.00%	13.00%	educad 02, %
20.475	2,925	2.925	2.925	2.925	2.925	2.925	2.825	Capital Cost Amount Lifetine BL Effectiveness Percent Reduced of Vehicles Lifetime Am Subnortion, Reduced perfyeer Retrofited Reduced Retro Veh CO CO2, % CO2, shi to CO2, shi to CO2, shi to
	81	u	Bi	स	85	54	Si	Lited d of Ve r Refit
1192.5	202.5	202.5	1	186	157.5	157.5	1125	me BL Mitted
5	N	Ŋ			8	N	_	Lifetime A Reduced CO2, sht
155,025	26.325	26,325	23.4	23.4	20.476	20.475	14.625	
10.		- <u>4</u>			<u></u>	_		Lifetime Annal Emitted After Re Retrofitted Veh COZ, short ton
1037,475	176.175	176.175	156.6	156.6	137.025	137.025	97.875	until unter Red d Veh
	33	يد	3.7	3,7	4.2	å.	Gi Gi	Capital Cost Amount Lifetime BL Effectiveness Percent Reduced of Vehicles Lifetime Annal Emitted After Rei Effectiveness Sulhout ton, Reduced perfees Retroffited Reduced Reprofited Veh Suhort ton Retro Veh CO CO2, % CO2, shit CO2, shit to CO2, short ton CO2, short ton
	3,304.84	3,304.84	3,717.95	3,717.95	4,249.08	4,249.08	5,948.72	CO2

RSU21 7 Bus replacement ove 2 year period

Cost Per Replacement 67000

Replacement year 2019 and 2020

Annual Miles Per Vehicle 18000

Maine VW Environmental Mitigation Action RSU21 **Attachment B**

2005 (1 Bus)

Group Name: RSU21 VW Buses 2 year plan

Type Onroad Target School Bus **Class or Equipment School Buses** Quantity 1

Engine Model Year 2005 **Upgrade Year** 2019 **Remaining Life 5**

Fuel Type ULSD Annual Fuel Gallons 2,000 **Annual Miles Traveled 18,000 Annual Idling Hours 135**

Edit Group Copy This Group Delete

Upgrades to RSU21 VW Buses 2 year plan

Action Upgrade		New Model Year Annual Gallons Red	Annual Gallons Reduced Cost per l		per Unit Percent Rec				Juction	
Acada i	oppede	ISSN WAREI ISNI	Militar Gallers Reduced	Upgrade	Labor	NOL	PM2.5	КС	со	CO2
Edit Delete	Vehicle Replacement - Diesel	2019	260	\$87,000	\$0	89.6	98	91.4	91.2	۷.

2007 (2 Buses)

Type Onroad **Target** School Bus Class or Equipment School Buses Quantity 1

Engine Model Year 2007 Upgrade Year 2019 Remaining Life 7

Fuel Type ULSD Annual Fuel Gailons 2,000 **Annual Miles Traveled 18,000 Annual Idling Hours 135**

Edit Group Copy This Group Delete

Upgrades to RSU21 VW Buses 2 year plan

Action Upgrade	New Model Year	Annual Gallons Reduced	Cost pe	r Unit		Pero	ent Redu	ction		
Action	oppede	THE MOUSE INSI	Almaet Genotis Reduces	Upgrade	Labor	NO	PM2.5	НС	co	co2
Edit <u>Delete</u>	Vehicle Replacement - Diesel	2019	260	\$87,000	50	79.1	47.4	55.4	55.4	

Maine VW Environmental Mitigation Action RSU21 **Attachment B**

2008 (2 Buses)

Type Onroad **Target School Bus Class or Equipment** School Buses Quantity 1

Engine Model Year 2008 Upgrade Year 2020 Remaining Life 7

Fuel Type ULSD **Annual Fuel Gallons 2,000 Annual Miles Traveled 18,000 Annual Idling Hours 135**

Copy This Group Delete

Upgrades to RSU21 VW Buses 2 year plan

Action	Upgrade	New Model Year	Annual Gallons Reduced	Cost per Unit			Pero	ent Redu	ction	
Action	Opgrade	Hew Model (ea)	Animal delimis reduced	Upgrade	Labor	NOx	PM2.5	нс	co	CO ₂
Edit Delete	Vehicle Replacement - Diesel	2020	260	\$87,000	\$0	79.1	47.4	55.4	55.4	

2009 (2 Buses)

Type Onroad **Target School Bus Class or Equipment** School Buses Quantity 1

Edit Group | Capy This Group | Delete

Engine Model Year 2009 Upgrade Year 2020 Remaining Life 8

Fuel Type ULSD Annual Fuel Gallons 2,000 **Annual Miles Traveled 18,000 Annual Idling Hours** 135

Upgrades to RSU21 VW Buses 2 year plan

Action	Upgrade	New Model Year	Annual Gallons Reduced	Cost pe	r Unit		Perci	ent Redu	ction	
ACUON	opgrade	HEN WOOEL IEST	Attitual Gallons Reduced	Upgrade	Labor	NO ₂	PM2.5	НС	co	CO ₂
Edit Delete	Vehicle Replacement - Diesel	2020	260	\$87,000	\$0	79.1	47.4	55.4	55.4	

RSU21 Attachment C Health Benefits

RSU21 is situated centrally in York County, Maine. The impact of pollution and subsequent Ozone depletion has been a cause for concern within this region. As a direct response, the EPA has been actively collecting Ozone data for the Southern Maine region in the community of Kennebunkport (RSU21 member) for many years. This region of the state has experienced overall increases in NOx due to heavy traffic along the Maine Turnpike corridor, commercial fishing industry, Turnpike rest area, Maine Department of Transportation facility, and heavy tourism.

It is believed that replacement of aging buses will serve as a catalyst for change in behavior and understanding of the harmful effects of Ozone depleting pollutants, resulting in small but measurable improvements in health benefit. Ozone Impacts on Human Health and Ecosystems Exposure to ozone has been linked to a variety of health effects, the severity of which depends on concentration, length of exposure, and breathing rate. At levels found in many urban areas, ozone can aggravate respiratory diseases such as asthma, emphysema, and bronchitis, and can increase susceptibility to respiratory infections. More serious effects include emergency department visits, hospital admissions, and premature mortality.

As a tipping point of sorts for educational opportunities and outreach, it is believed that the calculations associated with diesel qualifier is not a full representation of the associated health benefits that will be realized as a direct result of an award.

Health Benefits Results

County and State	Annual Diesel PM2.5 Reduction (short tons)	Annual Benefits	Annualized Unit
York, Maine	0.010	\$3,000	-
Cumberland, Maine	0.001	\$450	-
Total	0.011	\$3,500	\$100,000

RSU21 Attachment C Health Benefits

Emission Results and Health Benefits for Project: RSU21 VW Buses 2 year plan

Emission Results

Health Benefits

Emission Results

Here are the combined results for all groups and upgrades entered for your project. I

tiere are and communed resource for the product and abbitrace curered for Sons brokes							
<u> Annual Results (s</u>	hort tons ²	NOx	PM2.5	нс	CO	CO ₂	Fuel ³
Baseline for Upg	raded Vehicles	0.494	0.012	0,036	0.134	157.5	14,000
Amount Reduced	d After Upgrades	0.403	0.011	0.026	0.096	20.5	1,820
Percent Reduced	After Upgrades	81.7%	88.4%	72.1%	71.8%	13.0%	13,0%
Lifetime Results (short tons)2						
Baseline for Upg	raded Vehicles	3.332	0.068	0.224	0.838	1,102.5	98,000
Amount Reduced	d After Upgrades	2,700	0.058	0.154	0.574	143.3	12,740
Percent Reduced	After Upgrades	81.0%	85.1%	68.7%	68.5%	13,0%	13.0%
Lifetime Cost Effe	ctiveness (\$/short ton reduced)						
Capital Cost Effe (unit & labor cost		\$225,535	\$10,541,415	\$3,956,391	\$1,061,074	\$4,249	
Total Cost Effecti (includes all proje		\$258,866	\$12,099,260	\$4,541,080	\$1,217,883	\$4,877	

¹ Emissions from the electrical grid are not included in the results.

² 1 short ton = 2000 lbs.

³ In gallons; fuels other than ULSD have been converted to ULSD-equivalent gallons.

⁴ Cost effectiveness estimates include only the costs which you have entered.

ATTACHMENT D

Action Location: As "Attachment D", indicate whether the action will occur in an area with a disproportionate quantity of air pollution from diesel fleets, such as ports, rail yards, terminals, school depots/yards, and freight distribution areas.

According to the American Lung Association, York County currently earns a grade of "D" for breathability. Within York County reside the residents of Arundel, Kennebunk, and Kennebunkport (RSU21). Kennebunkport serves as a primary hub for Ozone testing and associated NOx levels at Parson's Way. The Environmental Protection Agency is currently reviewing the safe ozone standard, now set at 75 parts per billion, to determine whether the standard should be reduced to 60 parts per billion. Kennebunkport currently achieves ratings well beyond 75 parts per billion on a regular basis as indicated by testing data collected by the EPA since at least 2005.

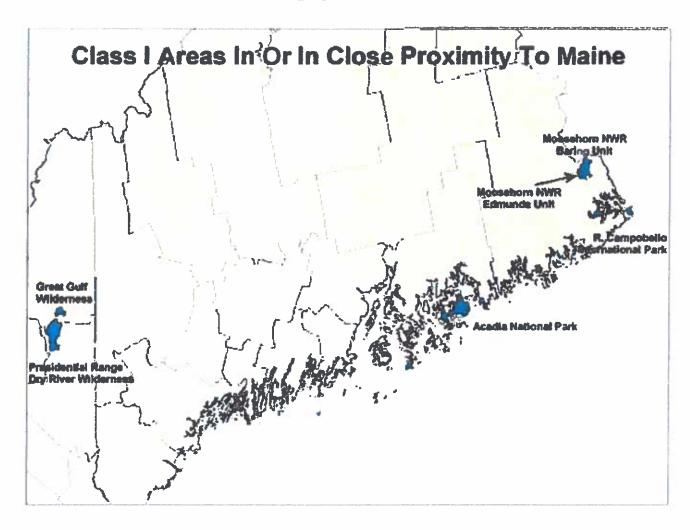
Specific to our request, RSU21 and associated towns comprised within play home to a disproportionate quantity of air pollution from diesel fleets given our placement as a central entry point through which the majority of tourists travel when entering Maine, the location of highway and rail service that intersects our communities for travel and commerce, and the impact of diesel powered marine vehicles that are the heartblood of our economy beyond tourism.

Action Location Hubs:

- 1. Tourism along coastline
- 2. Turnpike traffic heading North
- 3. Industrial Turnpike Rest Stop
- 4. Commercial and recreational marine impact
- 5. Maine Department of Transportation Hub
- 6. Home to several large transport companies
- 7. Central rail line for Amtrak and freight traffic.

ATTACHMENT E

Not Applicable



ATTACHMENT F

As part of Attachment F, include a letter of commitment for balance of base price of vehicle or equipment from a financial institution or authorized financial administrator. Also, complete the following table.

BUDGET SUMMARY

	Budget Summary		
1	Total Estimated Cost of the Proposed Action	\$699,000.00	
2	Minimum required cost share or leverage funding for this action Percentage: 20% Source: Regional School Unit #21	\$139,800.00	
3	Actual cost share and cost overage committed by the Action Proponent (may include local funding, grants awarded, contributions, etc.) Percentage:	\$0.00	
4	Funds requested from Maine's VW Environmental Mitigation Settlement	\$559,200.00	

Note: The total of the funds requested from Maine's VW Environmental Mitigation Settlement funds plus the actual non-VW cost share or leveraged funding committed by the Action Proponent must equal the total estimated cost of the proposed project identified on line F-1.

Note: The standard fund distribution for selected actions will consist of the cost share or leveraged funding delivered prior to transfer of committed Maine VW Environmental Mitigation Settlement funds, which will be paid upon proof of completion of the action or vehicle delivery.

ATTACHMENT G

The milestones included in this template are provided as guidance. Action Proponents may substitute other milestones that suit their purpose.

Milestone	Estimated Date
MaineDOT Requests Round 1 Proposals for Actions to be funded by VW Environmental Mitigation Settlement	9/15/18
Action Proponent or Agent Submits Proposal to MaineDOT	9/15/18
MaineDOT Provides Written Approval of Action Proponent's Proposal	10/31/18
Action Proponent Enters Contract with MaineDOT	10/31/18
MaineDOT verifies funding approval by incorporating Action into Maine Beneficiary Mitigation Plan	10/31/18
Trustee Acknowledges Receipt of Project Certification and Funding Direction	11/15/18
Action Proponent Obtains Cost Share, Notifies or Certifies to MaineDOT	12/1/18
Action Installation(s)/Delivery	6/1/19
Submit Proof of Delivery or Work Completed to MaineDOT by providing copies of the vehicle title and receipt for vehicle, equipment, or service.	6/1/19 and 6/1/20
Submit Proof of Scrapping of Replaced Vehicle or Engine to MaineDOT	6/1/19 and
MaineDOT Remits Committed Funding to Action Proponent	7/1/19 and 7/1/20
Due date of first Status Report and Maintenance Record to MaineDOT (six months after funding award)	12/1/19 and 12/1/20
MaineDOT Reports Action Completion to Trustee	12/1/20

ATTACHMENT H

Benefit Period: The action must result in sustained emission benefits over the ten-year Trust Effective Period. Provide a concise description of how benefits will persist through 2027 and a maintenance plan for eligible vehicles/equipment funded under this program as "Attachment H".

Reducing NOx emissions in Southern Maine will have a positive impact on improving public health while also having a positive financial impact realized through lower fuel cost and medical costs associated with pollution. The benefits will endure well beyond 2027 as a direct result of enhanced education and understanding of the harmful effects of Ozone depleting materials that are harmful for life and the overall wellness of our planet.

Specifically speaking to our anticipated maintenance plan for eligible vehicles and equipment funded under this program, RSU21 will provide documentation that will include:

- 1. Records from Dolphin Fleet Management, that chronicles service based on mileage/time.
- Software tracking of fuel usage, parts replacement, overall maintenance and man hours needed to properly service our fleet.
- 3. The continued use of our idle policy, continued use of timed electric block heaters to reduce idle times, and ongoing use of fuel fired coolant heaters intended to reduce idle time.

ATTACHMENT I

Authorized Agent Certification

The Authorized Agent certifies that they have been authorized by the Project Proponent to submit this application, that the Project Proponent agrees to all the program requirements, and that the information provided is an accurate representation of the project.

Action Proponent's Signature:	Alegha D. Mary	
Authorized Agent's Signature: (if different from Action Proponent) Date:		

Action Proponent Signature

The Action Proponent certifies that the action(s) is/are accurately described in this application. Signature indicates that the action(s) comply with all requirements of the Volkswagen Environmental Mitigation Settlement, provides the designated level of cost share funds, and a willingness to enter an agreement with the Maine Department of Transportation requiring the Action Proponent to administer the project abiding to federal, State, and local requirements. The Action Proponent also accepts responsibility for submitting progress reports during the term of the project and providing future maintenance of the completed action through 2027.

Action Proponent(s): 5+ephen D. Werzus	Title:	Diretor RSUZI	est	Operations
Phone#: 207-985-1100 207-710-7908	Email:	5 Marquis	e rs	v21.net
Signature(s) D. M.	<u>-</u>		9/10	1/18
Signature(s)		D	ale •	