CITY OF SOMERS PT.

State of New Jersey
Department of Environmental Protection

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

PROJECT SOLICITATION

OVERALL GOAL

The State of New Jersey, as a potential beneficiary of the Trust established pursuant to the national Volkswagen settlement, intends to use its allocation from the mitigation trust to efficiently implement projects that reduce oxides of nitrogen (NOx) emissions in a cost effective and technically feasible manner. The implemented projects must meet the criteria of the Consent Decree. New Jersey is issuing this solicitation for project ideas to ensure a broad range of project ideas are considered. Additional opportunities will be provided for public input during the upcoming months.

Submissions must be received by January 31, 2018 and must contain all the information outlined in the "Project Proposals" section of this document.

ELIGIBLE PROJECTS

A general summary is below. Click here for comprehensive list and associated definitions.

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
1. Class 8 local freight trucks & port drayage trucks	Repower and replacement	Up to 40% for repower with diesel or alternative fuel or up to 75% (up to 100% if government owned) for repower with electric. Electric charging infrastructure costs are eligible expense. Up to 25% for replacement with diesel or alternative fuel or up to 75% (up to 100% if government owned) for electric replacement. Electric charging infrastructure costs are eligible expense.
2. Class 4-8 school bus, shuttle bus or transit bus	Repower and replacement	Same as row 1
3. Freight switching locomotives	Repower and replacement	Same as row 1
4. Ferries/Tugs	Repower	Same as row 1
5. Oceangoing vessels	Shorepower	Up to 25% for shore side infrastructure if non-government owned (up to 100% if government owned)

6. Class 4-7 local freight trucks	Repower and replacement	Same as row 1.
7. Airport ground support equipment	Repower and replacement	Up to 75% to repower or replace with electric (up to 100% if government owned). Electric charging infrastructure costs are eligible expense.
8. Forklifts and Port Cargo Handling Equipment	Repower and replacement	Up to 75% to repower or replace with electric (up to 100% if government owned). Electric charging infrastructure costs are eligible expense.
9. Electric vehicle charging stations or hydrogen fueling stations for light duty vehicles only		Up to 100% to purchase, install and maintain infrastructure if available to public at *government owned* property. Up to 80% to purchase, install and maintain infrastructure if available to public at *non-government owned* property. Up to 60% to purchase, install and maintain infrastructure at a workplace or multi-unit dwelling that is not available to the general public. Up to 33% to purchase, install and maintain infrastructure for publicly available hydrogen dispensing that is high volume or up to 25% for lower volume.

PROJECT PROPOSALS

Proposals must be submitted by close of business on January 31, 2018. Electronic submittals are preferred and should be sent to VWComments@dep.nj.gov however paper submittals will also be accepted and should be sent to:

NJDEP
Division of Air Quality
Mail code 401-02E
Trenton, NJ 08625-0420
Attn: VW Settlement

All proposals must contain the following information; incomplete applications will not be considered. If your project is selected, you may be contacted for additional detailed information. Send questions to VWComments@dep.nj.gov

To enter information electronically use Adobe Reader

CONTACT INFORMATION

Organization Name	City of Somers Point
Organization Address	Municipal Building, 1 West New Jersey Avenue
City, State Zip Code	Somers Point, NJ 08244
Contact Person	Wes Swain
Title/Position	City Administrator
Phone	(609) 927-9088
E-mail	wswain@spgov.org

PROJECT NAME	EVCS Installation in Somers Point, NJ

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☑

PROJECT PRIORITY Priority # 1 of 1 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET

Provide total estimated project budget, include source and amount of cost share if applicable.

Funding is requested to purchase, install and maintain five Level 2 EVCS that are rated at 25 mph or more. Total cost $100,000.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? New Jersey & Pennsylvania

Estimated size of population benefitting from the emission reductions? 5 million

Estimated useful life of the project? 10 years

Number of engines/vehicles/vessels/equipment included in the project? ~~4~~ EVCSs 5

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 0.04 TPY

Methodology Used? CMAQ analysis

Particulate matter (PM 2.5) benefits? 0.00 TPY

Methodology Used? CMAQ Analysis

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

NA

Project partners, if any? City of Somers Point, Somers Point Green Team, Erco Ceilings & Tiles, Somers Point Diner
Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5. Electric cars produce fewer greenhouse gases, depending on the source of the electric power. Even when generated from coal-burning plants, electric cars would reduce carbon dioxide emissions by as much as 22 percent when compared to cars. Increase use of electric cars reduce the amount of smog-forming pollutants by as much as 32 to 99 percent.
Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones. Procurement many take 60 days and installation should be completed in 30 days.
Demonstrated success in implementing similar projects? There are many demonstrated successes in implementing similar projects. For example, Hunterdon Medical Center installed a dual charging station at the hospital in collaboration with Raritan Township using a $10,000 Sustainable Jersey grant. It is available 24 hours a day and it used by hospital employees and those who work or frequent the area.
If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure. The Somers Point EVCSs will be located adjacent buildings where electric power is readily available.
Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details. No, however, the City has applied to the Electrify America.
Please provide any additional information that supports this project. This project has been supported by the governing body as demonstrated by the attached resolution. Letters of support are provided by the County Executive, Senator Chris Brown and Assemblymen Mazzeo and Amato.

Two additional pages have been provided as supplemental space to answer any of the questions above.

VThe sites of the proposed installation are described below.

Publicly Owned Sites

1. City Hall (1 West New Jersey Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the City Hall. Electrical service will be run from the building to the parking spaces. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

2. Gateway Theater Parking Lot (corner of Higbee Avenue and Bay Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the Gateway Theater. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

3. Somers Avenue Parking Lot (corner of Somers Avenue and Bay Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the Gateway Theater. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

Privately Owned Sites

4. Somers Point Diner (8 MacArthur Boulevard) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the Somers Point Diner. This Diner is located at the base of the Ocean City Route 52 Bridge and is very accessible. Electrical service will be run from the building to the parking spaces. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

5. Erco Ceiling & Tiles (5 Chestnut Street) A Level 2, pedestal charging station will be installed in the parking lot adjacent to the City Hall. This business is located at Exit 29 of the Garden State Parkway. Electrical service will be run from the building to the parking spaces. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

NJDEP, VW Settlement Grant

Installation of Electric Vehicle Charging Stations (EVCS)

City of Somers Point, Atlantic County

Funding Request - $100,000

Action Plan & Timeline

Impact of Project - Describe how the completion of this project will advance your energy conservation, energy efficiency, energy resilience or renewable energy efforts. Also address how the project will augment existing green team efforts and/or be a catalyst to advance your energy initiatives.

Somers Point is located just south of Atlantic City and west of Ocean City. Somers Point is a gateway community connecting the Garden State Parkway to Absecon Island and Ocean City. Many of the resort community visitors must drive through Somers Point to get to that destination.

This EVCS project will continue the City's effort to encourage alternative vehicles, to reduce emissions and to reduce the use of fossil fuels. This will not only help to make Somers Point a sustainability leader but will also accommodate and attract electric vehicle owners to this community. By implementing this project, the City will qualify for the Public Electric Vehicle Charging Infrastructure Action through Sustainable Jersey.

PROJECT BUDGET Provide total estimated project budget.

Funding is requested to purchase, install and maintain five Level 2 EVCS that are rated at 25 mph or more. These EVCS will be installed at the various locations throughout the City. The total cost is $100,000. This cost includes a 5 year network and maintenance fee.

Project Description

Somers Point is a bayfront community with has a year year-round population of 10,795 which grows to over 15,000 in the summer. Somers Point is just west of Atlantic City and Ocean City, growing tourist destinations that attracts more than twenty million visitors each year, many of whom drive electric vehicles. EVCSs have been installed throughout the State of New Jersey; however, there is a significant deficiency of stations, especially in destination locations like Somers Point. The nearest charging stations are at the Borgata Casino Hotel, Golden Nugget Casino Hotel and the Wave Parking Garage all in Atlantic City but they are only available to customers of those facilities. There are very few publicly accessible EVCSs in Atlantic County.

The sites of the proposed installation are described below.

Publicly Owned Sites

1. City Hall (1 West New Jersey Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the City Hall. Electrical service will be run from the building to the parking spaces. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

2. Gateway Theater Parking Lot (corner of Higbee Avenue and Bay Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the Gateway Theater. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

3. Somers Avenue Parking Lot (corner of Somers Avenue and Bay Avenue) - A Level 2, pedestal charging station will be installed in the parking lot adjacent to the Gateway Theater. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

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5. Erco Ceiling & Tiles (5 Chestnut Street) A Level 2, pedestal charging station will be installed in the parking lot adjacent to the City Hall. This business is located at Exit 29 of the Garden State Parkway. Electrical service will be run from the building to the parking spaces. The charging stations will be installed on a concrete base and two parking spaces will be marked for use by electric vehicles.

Project Partners?

City of Somers Point, Somers Point Green Team

Evaluation - Describe how the impact of the project will be measured. This grant does not require a rigorous or formal evaluation process. However, grant recipients are expected to report on specific and/or measurable results or outcomes and other non-quantifiable impacts.

The EVCS will be part of a network of stations so it will be advertised via the internet and GPS.

Estimated emission benefits expressed in tons per year of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Electric cars produce fewer greenhouse gases, depending on the source of the electric power. Even when generated from coal-burning plants, electric cars would reduce carbon dioxide emissions by as much as 22 percent when compared to cars. Increase use of electric cars reduce the amount of smog-forming pollutants by as much as 32 to 99 percent.

The following assumptions were used to calculate emissions benefits:

- EVCS will be used eight hours per day, 300 days per year
- EVCS charges 25 miles per hour
- Cost of EVCS is $20,000 per unit
- EVCS will offset four trips per day at 20 miles/trip for a conventional light-duty vehicle
- Each offset trip would have covered 20 miles at average speed of 35 mph

- The average fleet-level emission rates for travel at 35 miles per hour are 0.338 grams per mile for NOx and 0.013 grams per mile for $PM_{2.5}$;
- Project lifetime is ten years
- Emission rates are 0.33 grams/mile for NOX and 0.013 grams/mile for $PM_{2.5}$

Annual VMT Reduction: 20 miles/trip x 4 trips/day x 300 days per year = **24,000 miles**

Annual Emission Benefit (grams):
NOX: 0.33 x 24,000 = **7,920 grams/year** x 5 EVCS = **39,600 grams/year**
$PM_{2.5}$: 0.013 x 24,000 = **312 grams/year** x 5 EVCS = **1,560 grams/year**

Project Lifetime Emission Benefit (ten years):
NOX: 39,600 grams/year x 10 = **396,000 grams**
$PM_{2.5}$: 1,560 grams/year x 10 = **15,600 grams**

Explain how the EVCS will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and PM 2.5.

Project Lifetime Emission Benefit (ten years):
NOX: 39,600 grams/year x 10 = **396,000 grams = .43**
$PM_{2.5}$: 1,560 grams/year x 10 = **15,600 grams = 0.017**

NOX: $100,000/0.43 tons = $232,558/ton
$PM_{2.5}$: $100,000/0.017 tons = $5,882,352/ton

Since this grant submission is for five EVCS, the proposed project will result in lifetime emissions reductions of 0.43 tons for NOX and 0.017 tons for $PM_{2.5}$. When the project cost is divided by the emission benefit, a cost effectiveness of $232,558/ton for NOX and $5,882,352/ton for $PM_{2.5}$ is yielded.

Data Source/Methodology: CMAQ Analysis
https://www.fhwa.dot.gov/ENVIRonment/air_quality/cmaq/reference/cost_effectiveness_tables/report/costeff02.cfm
https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_43.html

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.

Based on discussions with local suppliers of EVCSs, procurement many take 30 days and installation should be completed in 30 days.

Demonstrated success in implementing similar projects?

There are many demonstrated successes in implementing similar projects. For example, Hunterdon Medical Center installed a dual charging station at the hospital in collaboration with Raritan Township using a $10,000 Sustainable Jersey grant. It is available 24 hours a day and it used by hospital employees and those who work or frequent the area.

The demand exists in that there are 10,000 electric vehicles on the road in New Jersey and fewer than 1,000 charging stations, many of which are not accessible to the public.

There are many demonstrated successes in implementing similar projects. In Atlantic County eight EVCSs have been installed at a local supermarket however they are limited to use by Teslas. Charging stations are also located at Borgata Casino Hotel, Golden Nugget Casino and the Wave Parking Garage but they are not open to the public. All of these stations are frequently used.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

The Somers Point EVCSs will be located adjacent to buildings, so electric power is readily available.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

No, however, the City has applied for Electrify America funding. Somers Point's EVCSs were not funded in the first cycle of funding by Electrify America.

Please provide any additional information that supports this project.

This project has been supported by the governing body as demonstrated by the attached resolution. Letters of support are provided by the County Executive Dennis Levinson, Senator Chris Brown and Assemblymen Mazzeo and Amato.

Describe locational/regional importance

Somers Point is located just west of Atlantic City and Ocean City, a tourism destination that attracts over 20 million visitors annually. As a destination community it is essential that the City offer EVCSs. The Atlantic County and Cape May County region generates over $13 billion in tourism related revenues annually based on data collected by the New Jersey Division of Travel and Tourism.

DVRPC has released estimates for PHEV/AEV sales for southeast PA (https://www.dvrpc.org/Reports/12055A.pdf). Southeast Pennsylvania is closely connected to southern New Jersey and accounts for a large portion of visits and travel to the region, particularly along the Shore. The Delaware Valley Regional Planning Commission predicts that by 2020 there will be more than 17,000 electric vehicles deployed in the five southeastern counties in Pennsylvania. These counties are anticipated to account for a higher proportion of EVs than any other region of Pennsylvania. Given the income characteristics of early and likely electric vehicle adopters and the prevalence of second homes in Atlantic and Cape May Counties, it is likely that Somers Point faces significant latent electric vehicle charging station demand, and the provision of charging stations in a destination Jersey Shore community will provide visibility and emissions benefits for the community.