



State of New Jersey

Department of Environmental Protection

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

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 <i>government owned</i> property. Up to 80% to purchase, install and maintain infrastructure if available to public at <i>non-government owned</i> 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 Atlantic City
Organization Address	City Hall, 1301 Bacharach Boulevard
City, State Zip Code	Atlantic City, NJ 08401
Contact Person	Ben Kaufman
Title/Position	Planning Director
Phone	(609) 347-5404
E-mail	bkaufman@cityofatlanticcity.org

PROJECT NAME	EVCS Installation in Atlantic City
---------------------	---

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 two dual head Level 2 EVCS that are rated at 25 mph or more. These EVCS will be installed at the City Hall and Gardners Basin. Total cost \$40,000.

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 2**

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? **0.03** 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

<p>Project partners, if any? City of Atlantic City, Atlantic City Green Team</p>
<p>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.</p> <p>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.</p>
<p>Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.</p> <p>Procurement may take 60 days and installation should be completed in 30 days.</p>
<p>Demonstrated success in implementing similar projects?</p> <p>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.</p>
<p>If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.</p> <p>The Atlantic City EVCSs will be located adjacent to municipally owned buildings, so electric power is readily available.</p>
<p>Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.</p> <p>No, however, the City has applied for funding through Electrify America.</p>
<p>Please provide any additional information that supports this project.</p> <p>This project has been supported by the governing body as demonstrated by the attached resolution. Letters of support are provided by the County Executive, the Greater Atlantic City Chamber of Commerce, Senator Chris Brown and Assemblymen Mazzeo and Amato.</p>

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

Atlantic City is a national destination 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 Atlantic City. The nearest charging stations are at the Borgata Casino Hotel, Golden Nugget Casino Hotel and the Wave Parking Garage but they are only open to patrons.

The sites of the proposed installation are described below. The City Hall location is adjacent to areas where people work. Employees spend one-third of their day with their car sitting in the parking lot while working. This makes workplaces ideal locations for electric vehicle owners to charge throughout the workday. The Historic Gardners Basin location sees considerable traffic from year-round use and seasonal use of its marina, restaurants, and aquarium.

City Hall (1301 Bacharach Boulevard)

A dual Level 2, pedestal charging station will be installed in the parking lot adjacent to the Library. 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. The Atlantic Avenue business district is located a block away and contains a dozen shops and restaurants.

Gardners Basin (800 New Hampshire Avenue)

A dual Level 2, pedestal charging station will be installed at the site of Gardners Basin parking lot. The charging stations will be located in the parking lot adjacent to the Center near the electric room and they will be relatively unobtrusive. 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 Atlantic City, Atlantic County

Request = \$40,000 for two dual port charging stations

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.

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 Atlantic City an energy leader but will also accommodate and attract electric vehicle owners to this attractive island community. This action will add to other steps taken in the City to reduce reliance on fossil fuels including the energy audits that have been completed for all the City's buildings. 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 two dual head Level 2 EVCS that are rated at 25 mph or more, ChargePoint dual port model number CT 4021 or equal. These EVCS will be installed at the City Hall and Gardners Basin parking lots. The total cost is \$40,000. This cost includes a 5 year network and maintenance fee.

The City has applied to Electrify America for funding.

Project Description

Atlantic City is a national destination 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 Atlantic City. The nearest charging stations are at the Borgata Casino Hotel, Golden Nugget Casino Hotel and the Wave Parking Garage but they are only open to patrons.

The sites of the proposed installation are described below. The City Hall location is adjacent to areas where people work. Employees spend one-third of their day with their car sitting in the parking lot while working. This makes workplaces ideal locations for electric vehicle owners to charge throughout the workday. The Historic Gardners Basin location sees considerable traffic from year-round use and seasonal use of its marina, restaurants, and aquarium.

City Hall (1301 Bacharach Boulevard)

A dual Level 2, pedestal charging station will be installed in the parking lot adjacent to the Library. 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. The Atlantic Avenue business district is located a block away and contains a dozen shops and restaurants.

Gardners Basin (800 New Hampshire Avenue)

A dual Level 2, pedestal charging station will be installed at the site of Gardners Basin parking lot. The charging stations will be located in the parking lot adjacent to the Center near the electric room and they will be relatively unobtrusive. 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 Atlantic City, Atlantic City 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 dual 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: $0.33 \times 24,000 = 7,920$ grams/year x 2 EVCS x 2 chargers per EVSE= **31,680 grams/year**

PM_{2.5}: $0.013 \times 24,000 = 312$ grams/year x 2 EVCS x 2 chargers per EVSE= **1,248 grams/year**

Project Lifetime Emission Benefit (ten years):

NOX: 31,680 grams/year x 10 = **316,800 grams**

PM_{2.5}: 1,248 grams/year x 10 = **12,480 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: 31,680 grams/year x 10 = **316,800 grams = 0.349 tons**

PM_{2.5}: 1,248 grams/year x 10 = **12,480 grams = 0.013 tons**

NOX: \$40,000/0.349 tons = \$114,613/ton

PM_{2.5}: \$40,000/0.013 tons = \$3,076,923/ton

Since this grant submission is for four EVCS, the proposed project will result in lifetime emissions reductions of 0.349 tons for NOX and 0.013 tons for PM_{2.5}. When the project cost is divided by the emission benefit, a cost effectiveness of \$114,613/ton for NOX and \$3,076,923/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.

Procurement may 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.

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 Atlantic City EVCSs will be located adjacent to municipally owned 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 funding through 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

Atlantic City is a tourism destination that attracts over 20 million visitors annually. Atlantic City is a barrier island community that attracts visitors from throughout the country. Many of the visitors and summer residents drive to the shore and it is felt that EVCSs are an essential service.

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 it is likely that Atlantic City 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.

RESOLUTION

City of Atlantic City

Resolution of Support from Local Governing Body Authorizing the Electric Vehicle Charging Station Grants

WHEREAS, a sustainable community seeks to optimize quality of life for its residents by ensuring that its environmental, economic and social objectives are balanced and mutually supportive; and

WHEREAS, the City of Atlantic City strives to save tax dollars, assure clean land, air and water, improve working and living environments; and

WHEREAS, the City of Atlantic City is participating in the Sustainable Jersey Program and the installation of electric vehicle charging stations is one of the encouraged actions; and

WHEREAS, the New Jersey Department of Environmental Protection is offering grants to deploy electric vehicle charging stations throughout the State;

WHEREAS, cars and trucks account for about thirty percent of ozone-forming precursors in New Jersey's air and the State feels that it is critical that emissions from transportation be reduced to protect public health; and

WHEREAS, there are 10,000 electric vehicles on the road in New Jersey, with fewer than 1,000 charging stations, many of which are not accessible to the public; and

WHEREAS, the grants available include the "Pays to Plug In" electric vehicle program and a second program funded by a federal settlement with Volkswagen for emissions violations.

THEREFORE, BE IT RESOLVED, that the City Council of the City of Atlantic City has determined that City of Atlantic City should apply for the aforementioned grants.

BE IT FURTHER RESOLVED, that Mayor and City Clerk are authorize to the submission the aforementioned grant applications and the resulting grant agreement if the City is successful in securing these grants.