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

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PROJECT NAME	Municipal Microgrid Ultrafast EV Charging Cluster

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 # of 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.

Project funded in two phases: ($2M Ph1 - initial site prep and pilot with (2) 300kW EVSE chargers installed with network integration) | ($3M PH2 - expansion with large 5MW battery, AV tech, and (2) additional 300 kW EVSE. Goal is 20% share

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

Geographic area where emissions reductions will occur? Passaic, Hudson, and Essex Counties

Estimated size of population benefitting from the emission reductions? 85,000

Estimated useful life of the project? 15 years

Number of engines/vehicles/vessels/equipment included in the project? 400

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? 420.00 TPY

Methodology Used? 70 mg per mi Light Duty Vehicle x 100k miles

Particulate matter (PM 2.5) benefits? 180.00 TPY

Methodology Used? 30 mg per mi (incl exh and brake)

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

Yes - EVs in ridesharing systems with ultrafast charging and autonomous vehicle navigation in urban settings. Also creates opportunities for jobs that provide valet services at the concentrated high speed refueling centers.

Project partners, if any?

Working toward obtaining support from Passaic and Atlantic Counties and in outreach to the TCDER community for potential microgrid use expansion.

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.

The direct reduction of these emissions comes from the replacement of (15,000x400) =600,000 VMT per year with zero emission EVs. The charging stations will service 80 vehicles each day to dispense 50 kwHr each, or 4 MWhrs translating to support for 16,000 all electric miles. The generation mix from the microgrid power sources will be more clean than the general wholesale power mix.

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

PHASE 1 - <begin June 2018> Site Survey / Location Selection (120 days) Detailed design and sourcing (120 days) Permit Secured (90 days) Construction and Powering (90 days) Pilot Operation Data collection (180 days)

PHASE 2 - <begin June 2019> Site Expansion Design and sourcing (90 days) Permit Secured (90 days) Construction, Integration, Powering (90 days) Autonomous Pilot Design (120 days) Ongoing network availability and effectiveness metrics reporting planned.

Demonstrated success in implementing similar projects?

Businovation LLC has been involved with EV charging systems since the early days of the transportation electrification movement. Positions at Ecotality for the EV Project and Chargepoint for the DC Fast Charging bi-coastal network design, as well as involvement with several major utility and national lab DER programs exploring the advanced integration of grid-EV. Strong involvement in standards development and participation in NJ Energy Master Plan, Energy Storage, and EV Stakeholder Working Grp

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

The critical aspect of this connects with ideas that are moving forward under the NJ BPU EV Stakeholders work as well as thoughts expressed by ChargeEVC. The distinction here is that the Ultra High Power EVSE (150kW+) is much more aligned to locating in groupls along electric utility primary lines, and offers the opportunity for a new regulatory construct that brings collaborative solutions to balance this new fuel delivery with the growing demand for renewable energy and grid resilience.

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

Not at this time, but have identified early interest in supporting this type of program from utilities and counties. Needs further collaborative discourse and early interest expressed by NJ BPU, NJ DEP, and others to bring together.

Please provide any additional information that supports this project.

Businovation, LLC is currently subcontracted to Leidos Engineering for the Middletown TCDER Microgrid Feasibility study, and is exploring opportunity to incorporate this concept within (or adjacent to) that program in Monmouth County as well.

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

Note: Secondary benefits from this facility will be the advancement of economic opportunity in the Passaic County region that comes from being known as an EV ultra-hub that would support commercial and commuter traffic with electric drive. The advantages of allowing a PSEG large battery investment and participation with a microgrid serving critical infrastructure will open up new avenues to energy efficiency and economic growth.

The current work underway for the Middletown TC DER Microgrid Feasibility Study is recognizing that the Rt 35 Jersey Shore corridor is at a critical intersection point for major transport routes, and so locating the facilities there would also be an excellent leverage to existing programs that support resilient grid operation.

In the upcoming months there will be a strong advance in the involvement of utilities toward building out the NJ EV charging infrastructure. The obvious strong intersection for skills, capital, common interest, and societal benefit will be at these ultra high power charging levels and this will be money well spent with a strong return in public health and energy efficiency.

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