

**Connecticut Department of Environmental Protection:
Truck Stop Electrification Project**

Applicant: Connecticut Department of Environmental Protection (CTDEP)

Partners: Connecticut Department of Transportation (ConnDOT)
Private Truck Stop Owner(s)
Vendor for Administrative Services

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Applicant Eligibility: State Agency with Authority over Air Quality

Funding Requested: \$1,500,000

Total Project Cost: \$1,500,000

Project Period: May/June, 2009 - September 30, 2010

Single Project involving several installation sites

Narrative Work Plan:

1. Project Summary:

Project Description: This project will help to establish an idle-free corridor in Connecticut by installing up to 100 electrified parking spaces (EPSs) at several facilities in the state. These truck stop electrification (TSE) units will provide electric power for heating, cooling and personal appliances without idling trucks' diesel engines. The units would be installed in existing spaces at ConnDOT service plazas and privately owned truck stops along highways in New Haven and Fairfield Counties, which are nonattainment areas for the National Ambient Air Quality Standard (NAAQS) for both ozone and fine particulate matter (PM_{2.5}). Site selection preferences will also be given to environmental justice and high population areas. TSE installations will create jobs as the parking areas are modified to accommodate the EPSs and the units are manufactured and installed. Reduced idling saves fuel, another economic benefit. The project will provide significant in-state diesel pollution reduction benefits consistent with the Connecticut Clean Diesel Plan and further stakeholder efforts, utilizing EPSs to implement "an effective diesel reduction strategy for Connecticut's on-road fleets." TSE facilities were also included among the amenities ConnDOT recommended to meet future fleet needs in its 2007 2007 Draft "Improving Safety, Services and Revenue: The Case for a Major Overhaul of Connecticut's Rest Area and Service Plaza System."

In Connecticut, on-road heavy-duty diesel vehicles account for 92% of emissions of PM_{2.5} from on-road, diesel vehicles, or almost 518 tons per year. With respect to oxides of nitrogen (NO_x), an ozone precursor, these vehicles emit 25,115 tons or 22% of NO_x produced by on-road diesel sources annually. A significant amount of that pollution occurs when an engine idles, which the U.S. Environmental Protection Agency (EPA) estimates to be 2,400 hours each year. A reduction in unnecessary idling removes a large quantity of the greenhouse gas, carbon dioxide (CO₂), advancing state and federal climate change goals. Installation of TSE units at existing truck stops and service plazas will eliminate the longest periods of idling, when drivers take their federally mandated rest periods, and create pollution reductions that directly benefit Connecticut.

Certified Technologies: TSE, also referred to as electrified parking spaces, has been verified as an idle reduction technology eligible for funding under EPA's National Clean Diesel Campaign.

Expected Lifetime: While TSE technology has evolved rapidly over the last few years so that the newest units have not been in use long enough to provide firm lifetime numbers, manufacturers project that the current technologies will last a minimum of ten years. Unlike retrofit units that are installed on trucks and therefore limited by the remaining lifetime of each vehicle, stationary units have lifetimes independent of and exceeding the trucks that use them.

Roles and Responsibilities: CTDEP will partner with ConnDOT and their service plaza operators, one or more private truck stop owners, and a project manager to administer the installation of TSE facilities in Connecticut. Project administration will be assigned to a Vendor under contract with the Department of Administrative Services (DAS) for administration of projects related to air pollution from mobile sources. Initial project plans include industry representatives and environmental advocates providing assistance in education and outreach efforts to promote the availability of the facilities and the benefits of their use.

- CTDEP will: 1) select a Vendor for project administration; 2) oversee the budget; and 3) prepare and submit quarterly/interim and final reports in accordance with EPA/DERA funding requirements.
- A Vendor will plan and implement the project including the following tasks: 1) developing a work plan with a schedule and timeline; 2) ensuring adherence to the schedule and resolving challenges; 3) coordinating with ConnDOT and selected private owners to: a) select sites and locations; b) schedule site surveys; c) design sites; d) secure permits if required; and e) provide utilities for the sites; 4) procuring contractors for installation; 5) overseeing and completing installation of TSE facilities; and 6) submitting quarterly/interim and final reports to CTDEP for approval, including drawdown dates and amounts, and ARRA job creation documentation, following EPA/DERA requirements.
- A project advisory group of industry representatives, environmental advocates and state and local organizations will be identified to promote the availability and benefits of EPSs.

Detailed Timeline for the Project:

**Table 1: Connecticut Truck Stop Electrification (TSE) Program
Work Plan for May 2009 – September 2010**

<u>Task</u>	<u>Target Completion Date</u>	<u>Status</u>
RFP Development with DAS for Project Administration Contract	December 2008	Complete
Selection of Qualified Vendors & Issue of State Contracts	February 2009	Complete
Develop Criteria for Site Selection	April 2009	Complete
Develop Scope of Work to Evaluate Vendors for Project Management	April 2009	In Progress
Selected Vendor will develop Work Plan for completion of the project including, minimally, the following tasks: <ul style="list-style-type: none"> - Surveying (weeks 1-3) - Site design & alteration if necessary (weeks 1-5) - Construction contractor selection (weeks 5-8) - Obtaining permits (weeks 6-14) - Power transformer: Specify, order & install (weeks 3-15) - Electrical installation (weeks 14-17) - Barrier installation (weeks 14-20) - Equipment installation (weeks 19-23) 	June 30, 2009	
Vendor will coordinate with ConnDOT & Private Owner(s) to implement Work Plan and complete the project.	By July 30, 2010	
Promotional activities to encourage use as sites are completed	TBD	
Vendor prepares and submits quarterly/interim reports on project progress and outcomes, including job creation, drawdown dates & amounts, to CTDEP for approval and submittal to EPA	One month ahead of EPA due dates	
Vendor Final Project Report Submitted to CTDEP for approval	September 1, 2010	
CT DEP submits Final Report to EPA	October 29, 2010	

Long Term Sustainability: Unlike the installation of emission controls or other technologies on vehicles, all of the benefits of replacing existing truck parking spaces with electrified spaces remain in Connecticut for the lifetime of the facility. It is projected that with normal maintenance and technology upgrades, the lifetime of an electrified parking space is at least ten years. And since technology advancements have minimized maintenance challenges over time, it is possible that the actual lifetime will be prolonged beyond the 10-year projection.

ConnDOT and Private Owner(s) will retain ownership of the technology after the conclusion of the assistance agreement period, that is, the period covered by this grant. The facilities will continue to provide income and jobs for operation and maintenance throughout the life of the EPSs, with replacement anticipated as the technology continues to advance.

Restrictions for Mandated Measures: This Project does not implement existing federal, state or locally mandated legislation.

2. Recovery Act Funding Priorities:

Job Creation: This project will create jobs in the manufacture, development, installation and management of the TSE facilities. The significant fuel savings resulting from TSEs also benefits the 1,000 motor freight companies in Connecticut. The successful demonstration of TSE facilities at ConnDOT service plazas will provide a template and incentives for the development of similar facilities at other service plazas and private truck stops in the region, creating additional jobs.

Assist those most impacted: The decrease in diesel emissions in and around environmental justice communities, where residents are impacted by both the current economic conditions and high levels of air pollution, will lower the incidences of heart and lung diseases, including asthma and bronchitis. For affected individuals, health care costs will decrease and productivity will increase.

Spur technological advances: TSE installations at highway service plazas will provide more opportunities to demonstrate the latest technologies and incentives for the industry to develop improvements to meet the specific needs of these public facilities.

Long-term Economic Benefits: Any project that moves Connecticut toward attainment of the health-based NAAQS presents the possibility of economic benefits associated with decreased levels of regulation required under the federal Clean Air Act. There are also long-term economic benefits from improved health resulting from decreases in exposure to diesel pollution. TSE installations yield significant greenhouse gas reductions, which will have economic benefits in reducing the impacts of climate change.

Rapid commencement: For this project, the Connecticut procurement process is complete and contracts are in place for administration of mobile source projects, including TSE development.

Track, measure, and report: CTDEP has the experience in meeting EPA reporting requirements that can readily include the economic recovery elements required if this application is successful.

3. National Programmatic Priorities:

Maximize Public Health Benefits: Two million Connecticut residents breathe unhealthy air. Decreasing the amount of time that diesel trucks idle will reduce emissions of diesel exhaust, including PM_{2.5} and the ozone precursors, NO_x. Exposure to both ozone and PM_{2.5} has been linked to premature death from heart or lung disease. EPA has also classified diesel exhaust as a probable human carcinogen. Fine particles, inhaled into the lungs, can aggravate existing heart and lung conditions to cause cardiovascular symptoms, arrhythmias, heart attacks, chronic obstructive pulmonary disease, asthma attacks and bronchitis. Studies have not found a safe exposure level for PM_{2.5}; in other words, adverse health effects would be expected from any PM_{2.5} exposure. These facts support efforts to reduce PM_{2.5} from all sources as much as possible.

Two recent studies, one by the National Resources Defense Council¹ and one by a consortium of researchers in Boston,² have concluded that, “Trucking industry workers who have had regular exposure to vehicle exhaust from diesel and other types of vehicles on highways, city streets, and loading docks have an elevated risk of lung cancer with increasing years of work.”³ Reducing the exposure from truck idling for rest periods will improve Connecticut truck drivers’ health.

Diesel exhaust also has environmental impacts. CO₂ is produced in direct proportion to the amount of fuel combusted and is a major contributor to climate change. Particulate matter from diesel engines is a component of haze, which restricts visibility. In addition, diesel exhaust contributes to ozone formation and acid rain. New research is reconfirming the contribution of black carbon from diesel exhaust to global warming. The idle reductions resulting from this project will contribute to the long term environmental health of the region.

Are Most Cost Effective: The overall cost effectiveness of the supplemental funding program will depend upon the usage of the units. For purposes of comparison, the EPA Diesel Emissions Quantifier was used to project the benefits possible if 100 units were installed and utilized 75 percent of the time, or 18 hours daily, a maximum estimate, and the benefits resulting if the units were used 45 percent of the time, or 10.8 hours daily. The results of that exercise, compiled in Table 2, reveal a range of costs for the reduction of a ton of PM from \$39,871 for maximum usage to \$66,451 if usage is minimal. This compares favorably with the cost effectiveness of retrofits (≈\$150,000/ton PM for 100 DOCs) but highlights the importance of outreach to the trucking industry to ensure full utilization of the EPSs and maximize benefits from the program.

Table 2: Lifetime Cost Effectiveness* of Truck Stop Electrification of 100 Spaces

Maximum Benefit: 100 spaces, 18 hrs/day	NO _x	PM	HC	CO	CO ₂
Amount reduced Lifetime (tons)	1,319.65	37.62	0	0	77,711.01
Capital Cost Effectiveness (\$/ton)	\$1,137	\$39,871			\$19
Minimum Benefit: 100 spaces, 10.8 hrs/day	NO _x	PM	HC	CO	CO ₂
Amount reduced Lifetime (tons)	791.79	22.57	0	0	46,626.61
Capital Cost Effectiveness (\$/ton)	\$1,894	\$66,451			\$32

¹ Bailey, D., Goldman, Z., Minjares, M.; “Driving on Fumes: Truck Drivers Face Elevated Risks from Diesel Pollution;” NRDC Issue Paper. December 2007.

² Garshick, E., Laden, F., Hart, J. E., Rosner, B, Davis, M.E., Eisen, E.A. and Smith, T.J.; “Lung Cancer and Vehicle Exhaust in Trucking Industry Workers;” Environ Health Perspect. 2008 October; 116(10): 1327–1332.

³ Ibid., Abstract, Conclusion.

*Based on an average estimate of \$15,000 per space for purchase and installation

Are in Areas with High Population and Poor Air Quality: All of Connecticut is in nonattainment for the 8-Hour Ozone NAAQS and Fairfield and New Haven Counties, in the Southwest, are part of a New York/New Jersey/Connecticut nonattainment area for PM_{2.5}. The transportation corridors within New Haven and Fairfield counties contain some of the most highly populated urban centers in the state, most notably New Haven, Bridgeport and Waterbury, as well as the unbroken chain of cities that line the coast of Long Island Sound. Eight of the twenty existing ConnDOT service plazas and private truck stops that could be electrified are located along the heavily-populated I-95 corridor in these two counties.

Are in Areas Disproportionately Impacted by Air Pollution: Six of Connecticut's seven privately owned truck stops are within or immediately adjacent to environmental justice communities, as are ten of the twelve ConnDOT service plazas. Environmental justice communities are characterized, in part, by disproportionate air pollution impacts. Some of the impacts to these communities result from their location near diesel transportation hubs, including ports, rail yards and major highway intersections. The busy transportation corridor affecting these communities transits Southwest Connecticut as it connects New England with the rest of the United States. The pollution from this corridor augments air pollution transported from New York City, East Coast population centers, power plants and other sources in the Midwest, and from barges, ships and ferries accessing Connecticut's ports from Long Island Sound.

Include Certified Control Technologies with Long Expected Useful Lives: TSE has been verified as an idle reduction technology eligible for funding under EPA's National Clean Diesel Campaign. This technology has evolved rapidly over the last few years and newest units have not been in use long enough for firm numbers on useful lives. However, manufacturers project that the current technologies will last a minimum of ten years. Unlike retrofit units that are installed on trucks and therefore linked to the remaining lifetime of each truck, the stationary units have independent lifetimes which can be easily measured for evaluating long term benefits.

Maximize the Useful Life of any Certified Engine Configuration or Verified Technology: As with any mechanical system, TSE units require maintenance, a source of jobs. Earlier systems developed mold in the air conditioning units which, without time-consuming cleaning, fed into the truck cabs. Currently, ultraviolet radiation is used to reduce moisture and mold in the system, decreasing the required maintenance and increasing the life of the unit. Because the technology is still evolving, it is anticipated that modifications and upgrades will become available during the lifetime of the TSE facilities and that the unit lifetimes will be extended.

Conserve Diesel Fuel: Reducing excessive idling significantly decreases fuel usage at the same time that it cuts back on diesel air pollution. The average long haul tractor trailer idles its engine for 2,400 hours each year, mostly to power a heater or air conditioner while the driver takes his or her mandated rest breaks. That translates to a waste of 144,000 gallons of diesel fuel each year. When the heat or air conditioning is obtained from a kiosk at an electrified truck stop, the idling and resulting fuel use is greatly reduced. The annual cost of that consumed fuel is in addition to an estimated \$250, per vehicle, to cover idling related maintenance. Drivers and fleet owners will see immediate and significant economic benefits from the use of TSE facilities.

**Table 3: Potential Fuel Savings
from Truck Stop Electrification of 100 spaces**

Maximum Benefit: 100 spaces, 18 hrs/day	
Annual	Fuel Savings
Baseline of Fleet (gallons/year)	1,666,700
Percent Reduced (%)	31.5
Amount Saved (gallons/year)	525,600
Lifetime	Fuel Savings
Lifetime Baseline of Fleet (gallons)	22,200,444
Amount saved Lifetime (gallons)	7,000,992
Minimum Benefit: 100 spaces, 10.8 hrs/day	
Annual	Fuel Savings
Baseline of Fleet (gallons/year)	1,666,700
Percent Reduced (%)	18.9
Amount Saved (gallons/year)	315,360
Lifetime	Fuel Savings
Lifetime Baseline of Fleet (gallons)	22,200,444
Amount Saved Lifetime (gallons)	4,200,595

Utilize ultra low sulfur diesel fuel (ULSD): For TSE facilities that also provide fuel, ULSD will be available, as it is throughout the state.

4. Regional Significance:

The establishment of additional TSE facilities at existing truck stops along the transportation corridors in Connecticut will reduce emissions from the long-haul segment of the **freight sector**. Successful installation and operation of facilities, particularly in the public sector, will provide a template for extending and replicating the benefits through additional TSE facilities at highway service plazas. With the goal of creating an idle-free corridor through Connecticut and into the rest of New England, CTDEP will extend the benefits of this project throughout the region.

5. Past Performance: Programmatic Capability and Reporting on Results:

CTDEP has extensive experience with the administration of federal grants and a demonstrated record of successful completion and meeting reporting requirements.

- **The Connecticut Clean School Bus Supplemental Funding Program** was funded with a 2008 EPA/NEDC DERA State Grant of \$295,320 to supplement state legislative funding, as part of \$5,295,320 project to retrofit school buses in Connecticut. To date, \$947,307 has been committed to retrofit 471 buses. The first quarterly report was submitted ahead of the January 31, 2009 deadline.
- **The CTDEP 103 Grant**, which is awarded every year, funds in part, the CTDEP PM monitoring efforts. Progress is adequately documented each year through the Annual Network Review, the Annual PM Report and the Annual SLAMS Report. Each year, the application for the 103 Grant describes in detail how the funds will be appropriated to support the CTDEP PM network.

- **The CTDEP Clean Air Act (CAA) Section 105/Performance Partnership Agreement (PPA) Grant**, which is awarded every year, funds in part, the CTDEP criteria gas and PAMS monitoring efforts. Progress is adequately documented each year through the Annual Network Review and the Annual SLAMS Report.

6. Staff Expertise and Qualifications:

Tracy Babbidge, Director, Planning and Standards, Bureau of Air Management, has overseen the development of the award winning Connecticut Clean Diesel Plan of 2006 and the New Haven School Bus retrofit project, completing 81 buses with supplemental environmental project (SEP) funding. Ms. Babbidge joined CTDEP in 1993 and has worked in the Air Bureau and the Commissioner’s Office. Previously, Ms. Babbidge had served as the Environmental Coordinator for Connecticut Department of Public Works and handled a variety of environmental planning and compliance issues related to the development of state facilities.

Ellen Pierce, Ph.D., Supervising Environmental Analyst, Toxics and Mobile Sources Group, is currently facilitating the effort to retrofit Connecticut school buses under a \$5,295,320 program funded by a combination of EPA/DERA and legislative allocations in 2008. A CTDEP employee since 1993, Dr. Pierce led SEP-funded programs to retrofit school buses in Bridgeport, Hamden and Hartford. She participated in development and coordination of a variety of toxics and criteria pollutant programs, including quality assurance of data and reporting; additionally she is responsible for planning and implementation of the air quality benefits portion of Connecticut’s vehicle inspection and maintenance program including timely submission of EPA-required reports and the successful completion of the State Implementation Plan.

7. Results:

Table 4: Anticipated Outputs and Outcomes

Activities	Outputs	Short, medium, and long-term Outcomes
Replace 100 regular truck parking spaces with electrified spaces (EPSs) at private truck stops and ConnDOT service plazas along highways in Connecticut (See Table 1 for work plan details.)	<p>Technology units installed: 50 dual service towers for 100 EPSs</p> <p>Jobs Created for manufacture, installation and maintenance of TSE facilities</p> <p>Website: project updates and reports to be posted on CTDEP website.</p> <p>Press releases and promotional materials to maximize usage and resulting benefits</p>	<p>Short-term: -Successful establishment of 100 EPSs at several locations -Economic benefits of job creation for installation of facilities -Fuel savings for economic and air quality benefits</p> <p>Medium-term: -Emissions Reductions (see Table 5 below) of up to 2.8 tons/year PM, 99 tons/year of NO_x, and 5,834 tons per year CO₂ -Decrease in haze, ozone, and acid rain -Demonstration of success of EPSs at highway service plazas -Employment opportunities for maintenance of TSE facilities</p> <p>Long-term: -Health Effects: Reduce asthma in and cardiopulmonary diseases in public and truck drivers; increase lung function -Reduce global warming through decreases in black carbon and CO₂</p>

Table 4: Anticipated Outputs and Outcomes

Activities	Outputs	Short, medium, and long-term Outcomes
	Reports: quarterly reports, final report and any interim reports required by EPA	-Economic benefits from improved health -Economic benefits of decreased climate change -Economic benefits from NAAQS attainment

Actual emission reductions for an electrified truck stop depend upon the usage of the units. Each hour of use equals a one hour reduction in idling time. The emission reductions from an estimated maximum usage rate of 75 percent, with all spaces used 18 hours per day is tabulated below and contrasted to the reductions from an estimated minimum usage of 45 percent with all spaces used 10.8 hours per day. This illustrates that promoting the project is critical to its success.

Table 5: Potential Emission Reductions from Truck Stop Electrification of 100 spaces

Maximum Benefit: 100 spaces, 18 hrs/day					
Annual	NO _x ton/yr	PM ton/yr	HC ton/yr	CO ton/yr	CO ₂ ton/yr
Baseline of Fleet	769.26	12.25	25.78	114.89	18,500.37
Percent Reduced (%)	12.9	23.1	0	0	31.5
Amount Reduced Per Year	99.07	2.82	0	0	5,834.16
Lifetime	NO _x tons	PM tons	HC tons	CO tons	CO ₂ tons
Lifetime Baseline of Fleet	10,246.50	163.19	343.44	1,530.31	246,424.93
Amount reduced Lifetime	1,319.65	37.62	0	0	77,711.01
Minimum Benefit: 100 spaces, 10.8 hrs/day					
Annual	NO _x ton/yr	PM ton/yr	HC ton/yr	CO ton/yr	CO ₂ ton/yr
Baseline of Fleet	769.26	12.25	25.78	114.89	18,500.37
Percent Reduced (%)	7.7	13.8	0	0	18.9
Amount Reduced Per Year	59.44	1.69	0	0	3,500.50
Lifetime	NO _x tons	PM tons	HC tons	CO tons	CO ₂ tons
Lifetime Baseline of Fleet	10,246.50	163.19	343.44	1,530.31	246,424.93
Amount reduced Lifetime	791.79	22.57	0	0	42,626.61

8. Leveraged Resources and Project Partners:

Leveraged Resources: Connecticut has a school bus anti-idling law and a three-minute regulatory idling limit in place. In 2008, CTDEP launched a new anti-idling campaign directed at trucks to further increase awareness of the public health benefits and fuel savings resulting from the reduction of excess idling. This included a video, “Wastebusters,” currently featured on the DEP website at www.ct.gov/dep/idlingisfuelish. In addition, CTDEP has a long-standing anti-idling public awareness campaign that includes the posting of signs at highway rest stops and the donation of anti-idling signs to school districts and municipalities that request them.

CTDEP’s proposal will be implemented using one of the existing state contracts that resulted from a competitive procurement process already in place for “On-Call Contract Administration

Services for Emission Reduction Programs for On-Road and Off-Road Vehicles and Equipment.”

Project Partners: As was discussed in Section 1, this project will include an active partnership among CTDEP, a Project Administration Vendor, ConnDOT, and private truck stop owners to establish the TSE facilities. In addition, CTDEP plans to engage a wide range of industry and environmental advocacy groups, along with state and local agencies, to publicize the availability and benefits of the electrified parking spaces. Potential partners in this effort could include the Motor Transport Association of Connecticut, EPA SmartWay Partners, Clean Water Action, Clean Cities, the Connecticut Coalition of Environmental Justice, Environment Northeast, the State of Connecticut Motor Carrier Advisory Committee, the Connecticut Organization of Small Towns and the Connecticut Conference of Municipalities. CTDEP will work closely with the Northeast Diesel Collaborative to ensure that results are communicated and lessons learned are shared with other stakeholders in the region.

9. Budget Detail:

Detailed Itemized Budget: Table 5 summarizes the projected budget for the purchase and installation of approximately 100 electrified parking spaces at several public and private facilities in Connecticut.

Table 5: Project Budget for 100 TSE units at Several Facilities

Budget Category	EPA Allocation
1. Personnel	*
2. Fringe Benefits	\$0
3. Travel	\$0
4. Supplies	\$0
5. Equipment	\$1,500,000.00
6. Contractual: Construction & Installation	*
7. Other:	\$0
Total Direct Costs	\$1,500,000.00
Total Indirect Costs	\$0
Grand Total	\$1,500,000.00

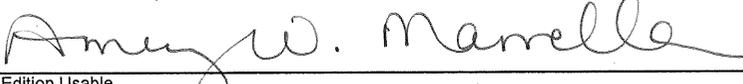
*Administration and installation costs are included in the quoted turnkey price.

Explanation of Budget Framework: It is anticipated that CTDEP will procure administrative support for this program through existing state contracts,⁴ awarded following the state competitive procurement process required by section 4a-57(a) of the Connecticut General Statutes.⁵

⁴ Contracts from the RFP “On-Call Contract Administration Services for Emission Reduction Programs for On-Road and Off-Road Vehicles and Equipment,” can be found on DAS Website at http://www.das.state.ct.us/Purchase/bl_Contract_display_detail.asp?F_Tran_Type=3&F_ID=14169.

⁵ Section 4a-57 can be found at <http://www.cga.ct.gov/2009/pub/chap058.htm#Sec4a-57.htm>.

**APPLICATION FOR
FEDERAL ASSISTANCE**

1. TYPE OF SUBMISSION: Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		Preapplication <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		2. DATE SUBMITTED 15-Apr-09	Applicant Identifier
				3. DATE RECEIVED BY STATE	State Application Identifier
				4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier
5. APPLICANT INFORMATION					
Legal Name: CT Dept. of Environmental Protection			Organizational Unit: Department: CT Dept. of Environmental Protection		
Organizational DUNS: 108352811			Division: Bureau of Air Management		
Address: Street: 79 Elm Street			Name and telephone number of person to be contacted on matters involving this application (give area code)		
City: Hartford			Prefix: Ms.	First Name: TRACY	
County: Hartford			Middle Name:		
State: CT		Zip Code: 06106		Last Name: BABBIDGE	
Country: USA			Suffix:		
6. EMPLOYER IDENTIFICATION NUMBER (EIN): 06 - 6000798			Email: tracy.babbidge@ct.gov		
			Phone Number (give area code): (860) 424-3027	Fax Number (give area code): (860) 424-4063	
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (specify): Other (specify) _____			7. TYPE OF APPLICANT: (See back of form for Application Types) (A) STATE Other (specify)		
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 66 - 039			9. NAME OF FEDERAL AGENCY: US ENVIRONMENTAL PROTECTION AGENCY		
TITLE (of Program): PROGRAM (2009 ARRA)			11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: CT DEP Truck Stop Electrification Project		
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): State of Connecticut			14. CONGRESSIONAL DISTRICTS OF: a. Applicant: Statewide b. Project: Statewide		
13. PROPOSED PROJECT: Start Date: 5/1/2009 Ending Date: 9/30/2010			16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS? a. Yes. <input type="checkbox"/> THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. No. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW		
15. ESTIMATED FUNDING:			17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. No <input checked="" type="checkbox"/>		
a. Federal	\$	1,500,000		.00	
b. Applicant	\$.00	
c. State	\$.00	
d. Local	\$.00	
e. Other	\$.00	
f. Program Income	\$.00	
g. TOTAL	\$	1,500,000		.00	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.					
a. Authorized Representative					
Prefix	First Name: AMEY		Middle Name: W.		
Last Name: MARRELLA			Suffix:		
b. Title: DEPUTY COMMISSIONER			c. Telephone Number (give area code): (860) 424-3009		
d. Signature of Authorized Representative 				e. Date Signed 4/20/09	

BUDGET INFORMATION - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		Total (g)
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	
1. National Clean Diesel Assistance Pgm	66.039			1,500,000	0	1,500,000
2.						0
3.						0
4.						0
5. TOTALS		\$ 0	\$ 0	\$ 1,500,000	\$ 0	\$ 1,500,000

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY					Total (5)
	(1)	(2)	(3)	(4)	(5)	
a. Personnel	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	0
b. Fringe Benefits	0					0
c. Travel	0					0
d. Equipment	0					0
e. Supplies	0					0
f. Contractual	1,500,000					1,500,000
g. Construction	0					0
h. Other	0					0
i. Total Direct Charges (sum of 6a - 6h)	1,500,000	0	0	0	0	1,500,000
j. Indirect Charges	0					0
k. TOTALS (sum of 6i and 6j)	\$ 1,500,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,500,000
7. Program Income	\$	\$	\$	\$	\$	\$

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8.	\$	\$	\$	\$ 0
9.				0
10.				0
11.				0
12. TOTALS (sum of lines 8 - 11)	\$ 0	\$ 0	\$ 0	\$ 0

SECTION D - FORCASTED CASH NEEDS

	Year 1 Funding			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 1,500,000	\$ 375,000	\$ 375,000	\$ 375,000
14. Non-Federal	0	0	0	0
15. TOTALS (sum of lines 13 and 14)	\$ 1,500,000	\$ 375,000	\$ 375,000	\$ 375,000

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16.	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
17.				
18.				
19.				
20. TOTALS (sum of lines 16 - 19)	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000

SECTION F - OTHER BUDGET INFORMATION

(ATTACH ADDITIONAL SHEETS IF NECESSARY)

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§ 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R.900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 or the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (41 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §§276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333); regarding labor standards for federally assisted construction subagreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§ 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE DEPUTY COMMISSIONER
APPLICANT ORGANIZATION State of Connecticut Department of Environmental Protection	DATE SUBMITTED 4/20/09

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS,
LOANS, AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award of documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

AMEY W. MARRELLA, DEPUTY COMMISSIONER

TYPED NAME & TITLE OF AUTHORIZED REPRESENTATIVE

Amey W. Marrella 4/20/09
SIGNATURE OF AUTHORIZED REPRESENTATIVE DATE



United States Environmental Protection Agency
Washington, DC 20460

**Preaward Compliance Review Report For
All Applicants Requesting Federal Financial Assistance**

FORM Approved
OMB No. 2090-0014
Expires 4-30-99

Note: Read Instructions on reverse side before completing form.

I. A. Applicant (Name, City, State) STATE OF CONNECTICUT DEPT. OF ENVIRONMENTAL PROTECTION 79 ELM STREET, HARTFORD, CT 06106	B. Recipient (Name, City, State) SAME	C. EPA Project No.
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II. Brief description of proposed project, program or activity.

III. Are any civil rights lawsuits or complaints pending against applicant and/or recipient?
If yes, list those complaints and the disposition of each complaint.

X Yes __ No

SEE ATTACHED

IV. Have any civil rights compliance reviews of the applicant and/or recipient been conducted by Any Federal agency during the two years prior to this application for activities which would receive EPA Assistance?
If Yes, list those compliance reviews and status of each review.

__ Yes _X_ No

V. Is any other Federal financial assistance being applied for or is any other Federal financial assistance being applied to any portion of this project, program or activity?
If Yes, list the other Federal Agency(s), describe the associated work and the dollar amount of assistance

__ Yes _X_ No

VI. If entire community under the applicants jurisdiction is not served under the existing facilities/services, or will not be served under the proposed plan, give reasons why.

VII. Population Characteristics	Number of People
1. A. Population of Entire Service Area	3,275,000
B. Minority Population of Entire Service Area	576,000
2. A. Population Currently Being Served	3,275,000
B. Minority Population Currently Being Served	576,000
3. A. Population to be Served by Project Program or Activity	3,275,000
B. Minority Population to be Served by Project Program or Activity	576,000
4. A. Population to Remain Without Service	N/A
B. Minority Population to Remain Without Service	N/A

VIII. Will all new facilities or alterations to existing facilities financed by these funds be designed and constructed to be readily accessible to and usable by handicapped persons?
If No, explain how a regulatory exception (40 CFR 7.0) applies.

IX. Give the schedule for future projects, programs or activities (or of future plans), by which service will be provided to all beneficiaries within applicant's jurisdiction. If there is no schedule, explain why.

X. I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

A. Signature of Authorized Official 	B. Title of Authorized Official DEPUTY COMMISSIONER	C. Date 4/20/09
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For the U.S. Environmental Protection Agency

[] Approved [] Disapproved	Authorized EPA Official	Date
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United States Environmental Protection Agency
Washington, DC 20460

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by and Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

AMEY W. MARRELLA, DEPUTY COMMISSIONER

Signature of Authorized Representative

Date

Amey W. Marrella

4/20/05

I am unable to certify to the above statements. My explanation is attached.

Key Contact List

KEY CONTACTS

Authorized Representatives: Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.

Name: **Amey W. Marrella**
Title: **Deputy Commissioner**
Complete Address: **79 Elm Street, 3rd Floor, Hartford, CT 06106**
Phone Number: **(860) 424-3009**
E-Mail Address: **amey.marrella@ct.gov**

Payee: Individual authorized to accept payments.

Name: **Nancy Schweizer**
Title: **Fiscal Administrative Manager**
Complete Address: **79 Elm Street, Hartford, CT 06106**
Phone Number: **(860) 424-3120**
Fax: **(860) 424-4072**
E-Mail Address: **nancy.schweizer@ct.gov**

Administrative Contact: Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, re-budgeting requests, etc.)

Name: **Daniel Moylan**
Title: **Grants & Contracts Manager**
Complete Address: **79 Elm Street, Hartford, CT 06106**
Phone Number: **(860) 424-3125**
Fax: **(860) 424-4072**
E-Mail Address: **daniel.moylan@ct.gov**

Project Manager: Individual responsible for the technical completion of the proposed work.

Name: **Tracy Babbidge**
Title: **Director, Planning & Standards**
Complete Address: **79 Elm Street, Hartford, CT 06106-5127**
Phone Number: **860-424-3027**
Fax: **860-424-4063**
E-Mail Address: **tracy.babbidge@ct.gov**