

New Technology Research and Development (NTRD) Program

July 29, 2004

Applications Selected to Receive FY04 Funding

Application Number	Applicant Name	Grant Description (as approved to be funded)	Total Amount Approved	Project Type	Purpose
2004-1-002N	Catalytica Energy Systems, Inc.	Development Testing of a retrofit device (Selective Catalytic Reduction (SCR)) for on-road engines, with claims of 50% NOx reductions. Funding requested for conducting preliminary emissions tests and the collection of field use data needed to determine durability and applicability of this device for use on heavy-duty vehicle applications.	\$331,630	Testing and/or Development	Reduces emissions from On-Road Vehicles
2004-1-003N	University of Texas, Benny Freeman	Development of novel polymeric membrane materials that have high H2 permeability, high H2/CO and H2/CO2 selectivities, and high thermal stability in order to reduce the cost of high-purity H2 production needed for advancing the development of fuel cell technology.	\$392,213	Testing and/or Development	Increases understanding of fuel cells
2004-1-008N	University of Texas, David Allen	Study on ozone transportation will add six ozone monitors at strategic locations in east and north Texas to measure background levels during the 2005-2006 field study. The information collected could be used to support a 126 petition requesting another state to reduce pollution, to evaluate the effectiveness of controls in place in Texas, and to determine transport within the state. The study proposes to have the temporary monitors in place for several months. Many of the locations proposed have never had ozone monitors. The placement of the monitors will not have a regulatory impact or attainment status due to the limited duration of the study.	\$395,691	Study	Increases understanding of ozone transportation
2004-1-016N	Power Research Inc.	Verification of a diesel fuel additive. The results of this testing could be submitted to the TCEQ as a request for approval of the PRI-D treated diesel as an alternative diesel formulation to be considered equivalent to Texas Low Emission Diesel (TxLED).	\$50,224	Verification and/or Deployment	Diesel Fuel additive to lower NOx emissions.
2004-1-020N	Capital Metropolitan Transportation Authority	Development and certification of a hybrid transit bus. Partnership with S&S, Allison, and Cummins to construct 2 hybrid-electric diesel buses, evaluate new emissions reducing technologies, and seek certifications of a new hybrid-electric diesel bus.	\$1,073,600	Testing and/or Development with certification	Reduces emissions from metropolitan transit buses
2004-1-024N	HydroFuels Systems, Inc	Verification of a retrofit device (Aqua Vapor System) for on-road engines, which uses water injection to lower NOx emissions for on-road vehicles.	\$699,375	Verification and/or Deployment	Reduces emissions from On-Road Vehicles
2004-1-031N	Converter Technology Incorporated (CTI)	Verification of an Exhaust Gas Recirculation (EGR) System with claims of 70% NOx reductions.	\$703,764	Verification and/or Deployment	Reduces emissions from On-Road Vehicles
2004-1-032N	ROTEC Design Ltd.	Verification of a retrofit device (FreedomAir) with claims of 65% NOx reduction.	\$354,600	Verification and/or Deployment	Reduces emissions from On-Road Vehicles and stationary engines
2004-1-045N	GE Rail	Verification of a locomotive rebuild from Tier 0 to Tier 2. The final development and certification of a low NOx retrofit (rebuild) system to be deployed on Switcher locomotives equipped with EMD 645E engines will be performed. The objective is to achieve EPA Tier 2 NOx levels on EMD Switcher locomotives; a reduction of approximately 42% of the Tier 0 level and 50% of non-regulated locomotives could be achieved.	\$738,000	Verification and/or Deployment	Reduces emissions from Locomotive Switchers
2004-1-049N	Eaton Corporation	Development of hydraulic hybrid technology for on-road vehicles. Concept of technology is proven on light duty trucks. This system is targeted at class 2B through Class 8 commercial vehicles.	\$666,815	Testing and/or Development	Reduces emissions from On-Road vehicles
2004-1-053N	Cummins West, Inc. dba Claire Advanced Emission Controls	Verification testing as well as advanced product development tests on the Lonestar system.	\$1,200,000	Verification and/or Deployment	Reduces emissions from On-Road vehicles

2004-1-054N	EnviroFuels, LP.	Verification of a diesel fuel additive for locomotives. EPA verification test of EnviroFuels' BlueMarble Diesel Fuel Catalyzer for locomotives. If verified this fuel could be used to lower NOx emissions from locomotive engines.	\$65,887	Verification and/or Deployment	Diesel Fuel additive to lower NOx emissions from Locomotives.
2004-1-057N	ORYXE Energy International, Inc.	Verification of OR-D2 (fuel additive) using a test protocol approved by the TCEQ and the EPA.	\$179,211	Verification and/or Deployment	Diesel Fuel additive to lower NOx emissions.
2004-1-058N	Oshkosh Truck Corporation	Development of a hybrid refuse collection vehicle. Funding is for the construction of a refuse collection vehicle incorporating a hybrid electric drive train and an automated side loader body.	\$560,028	Testing and/or Development	Reduces emissions from refuse vehicles
2004-1-063N	Texas Engineering Experiment Station	Development of a Selective Non-Catalytic Reduction for coal fired power plants using a novel fuel called feedlot biomass (or cow manure) as reburn fuel since it contains N as urea which is released as NH3. Thus it can serve both as reburn fuel and as a SNCR agent. Initial results show 80-90% reduction of NOx.	\$326,607	Testing and/or Development	Reduces emissions from coal fired power plants
2004-1-068N	Lubrizol Corporation	Verification testing of PuriNOx fuel with DOC (Purimuffler) after treatment devices to lower NOx and PM emissions.	\$320,000	Verification and/or Deployment	Reduces emissions from On-Road Vehicles
2004-1-071N	Eastern Research Group, Inc.	Study to evaluate the NOx benefits associated with TxLED use in heavy-duty diesel equipment. This project is an extension of a current effort to evaluate the impact of TxLED on emissions performance and maintenance of selected equipment in the TxDOT vehicle fleet (TxDOT project #4576).	\$291,749	Study	Increase understanding of impact of TxLED