New Jersey Energy Master Plan
Strategy Template
2005-2020

Fleet Hybrid Electric Vehicle Incentive Program

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<tr><td colspan="2">SUBMITTED BY
Name of Organization: PSEG</td></tr>
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<tr><td colspan="2">Objective: To decrease fuel use and air emissions associated with publicly and privately owned fleets through the use of Hybrid Electric Vehicle Technology in support of Goal 1, To Provide New Jersey with Secure, Safe, and Reasonably Priced Energy Supplies and Services, Resource Management. The proposed program would also reduce NOx and particulate emissions in New Jersey, which could help bring New Jersey into attainment, and reduce the creation of greenhouse gases in the State in support of Goal 3, Environmental Protection and Impact.</td></tr>
<tr><td colspan="2">Strategy: New Jersey should take a leadership role by creating a long-term demand for Hybrid Electric Vehicle Technologies (HEV) through the use of a new incentive program for vehicle fleets in the state.

Over the longer term, transition from currently available commercial HEV's to Plug-in Hybrid Electric Vehicle (PHEV) technologies for fleet applications. PHEVs could reduce petroleum consumption even further over today's commercial HEVs.</td></tr>
<tr><td colspan="2">Responsible Parties: Board of Public Utilities and NJ Department of Environmental Protection in partnership with Auto Manufactures, Auto Dealers and fleet vehicle owners, such as Utility Companies (Electric, Gas, Cable, Communications, Water), Municipalities, Package and Goods Delivery (UPS, Fed Ex), NJ Transit, Fuel Supply and Fuel Manufacturers, Educational Institutes, and outside organization such as but not limited to the Hybrid Truck Users Forum, and the Electric Power Research Institute (EPRI).

PSEG owns and operates over 2000 vehicles, including approximately 1100 passenger cars. PSEG is a leader in supporting HEV and PHEV technology and currently belongs to the Hybrid Truck Users Forum and supports PHEV research being conducted at EPRI and would continue to take a leadership role.</td></tr>
<tr><td colspan="2">Timeline for Action:
• 2007: Create new incentives for use of HEVs and PHEVs in private and public fleets.
• 2008-2020 – Implement program</td></tr>
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Strategy Outcome: Once the incentive program is established, fleet owners would be more willing to move forward with fleet purchases of HEVs and, when commercial, PHEVs. Benefits include:

- Reduced Fuel Usage: Current HEVs yield approximately a 30% reduction in gasoline consumption compared with conventional vehicles. PHEVs are even better with a reduction in gasoline use of approximately 50%.[1] (This number will tend to be higher in New Jersey because its largely urban commuting patterns benefit most from PHEV vehicles.)
- Reduced Air Pollution in Cities: HEVs realize CO2, NOx and particulate emission reductions, which are closely linked with the reduction in fuel use. Much of this benefit could occur in urban areas, because hybrid technology achieves its greatest efficiency in the stop and go type traffic common in urban areas. For example, if 20% of fleet vehicles in the state were converted to PHEVs, it could save 9.5 million gallons of gasoline and avoid over 93,000 tons of CO2 emissions.
- Reduced Noise Pollution: Truck HEVs can work under electric operation mode, which will in turn reduce noise pollution in urban environments.

[1]Electric Power Research Institute (2001). "Comparing the Benefits and Impact of Hybrid Electric Vehicle Options," EPRI, Palo Alto CA, 10003496892.

Implementation cost

Incentives are needed in the near term to make HEV and PHEV vehicles economic and to stimulate their integration into vehicle fleets in the State. As demand increases and the technology matures, prices will drop over time and the need for incentives will lessen. Incentives totaling $2,000 - $5,000 per vehicle would be required for passenger cars currently available. Larger rebates would be required for trucks, buses and PHEV vehicles.

Source of Funding:

Several existing programs in the State could be expanded, modified and/or combined with new programs to offer the needed incentives. Options include:

- Expansion of the Alternative Fuel Vehicle (AFV) Rebate and Alternative Fuel Infrastructure Rebate: Currently available only to local governments, state colleges and universities, school districts, and government authorities, this program should be funded and expanded to include private fleet owners.

- Introduction of a new program that would reduce or eliminate state sales tax and/or provide a corporate income tax credit for HEV and PHEV vehicles purchased by fleet owners.

- Introduction of a new program that would grant emission and/or renewable energy credits to fleet owners for fuel and emissions savings achieved by HEV and PHEV vehicles in their fleets.

Funding sources	Yes	No
Private sector funds	x	
Public sector funds	x	
Consumer/ratepayer Funds		

Indicators:

There are currently about 140,000 fleet passenger vehicles operating in New Jersey[2]. If 10% of these were converted to hybrid technology by 2012, it could save 2.77 million gallons of gasoline per year and avoid more than 27,000 tons of CO2 emissions per year.[3] Emissions of NOx , particulates and hydrocarbons would also be reduced.

Source:

[2] http://www.fleet-central.com

[3] Calculation based on a Ford Escape Hybrid versus a conventional Ford Escape driven for 15,000 miles per year (http://www.fueleconomy.gov/).

A. Current state of indicator:

	B. Indicator projection to 2020: PHEV technology could achieve even greater reductions. If by 2020, 20% of these fleet vehicles were converted to PHEVs, it could save 9.5 million gallons of gasoline and avoid over 93,000 tons of CO2 emissions from gasoline consumption. Additionally, a growing percentage of the electricity used to power the PHEVs would come from renewable sources of energy.