Print Form

New Jersey Energy Master Plan

Strategy Template

2005-2020

Instructions

Use this document as a template for providing suggestions on strategies/actions for specific objectives provided in **Section 2: Goals, Objectives, and** *Performance Measures. Using this page as an instruction guide, fill in the blank tables for each recommended strategy separately and email it to* energymasterplan@bpu.state.nj.us

Objective

List the objective from **Section 2: Goals, Objectives, and Performance Measures** for which the strategy is submitted. .

Strategy

Provide a description of the actions needed to achieve the objective.

Responsible Party

Provide the name(s) of the agency or organization responsible for the implementation of the strategy.

Timeline of action

List the incremental timeline of action for each strategy up to 2020.

Strategy outcome

List the expected incremental outcome(s) (results) of the strategy up to 2020.

Implementation cost

Provide the implementation cost.

Source of Funding

Provide source of funding to implement the strategy.

Indicators

List the suggested indicator(s) proposed to measure performance. Provide the data source of the indicator(s)

A. Current state of indicator

List the current value of the indicator

B. Indicator Projection to 2020

Provide projected value of the indicator by 2020 to meet the expected outcome.

SUBMITTED BY			
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Objective

To drive widespread adoption of Plug In Hybrid Electric vehicle use as part of a comprehensive Price Responsive Demand Side management program featuring low "off peak" electricity rates. The goals are to reduce hydrocarbon emissions from burning gasoline and diesel fuel by displacing this combustion need with cleaner and more cost effective electricity (consumed overnight), which also helps utilities level their base load, and reduce peak loads.

Strategy

Pilot several evaluation studies within the service territories of the major electric service providers. Strategy is to shift the public perception toward managing their TOTAL energy consumption (transportation, electric, and heating) in an integrated and price responsive manner. Shifting transportation energy use away from combustion to a nightly recharge / daily discharge mode, and throttling energy consumption at peak load times

Responsible Party

Comverge will provide the program design, hardware installation, and performance evaluation for basic price-responsive energy control technology used in the homeowner's electricity consumption, while the utilities should enable special TOU rates and custom billing that drive price responsive electricity consumption. The cars can be made available at subsidized rates through Toyota, GM, or Mitsubishi, all of whom have announced the general production of this technology starting in 2007.

Timeline of action

2/1/2007 - Complete public hearings and select program for activation.
3/1/2007 - Adopt plan and select test communities / populations. Gain utility agreement for rate structures.
4/1/2007 - Negotiate agreements with automotive manufacturers for pilot participation and subsidies.
6/1/2007 - Market to (500) and enroll (150) customers for evaluation pilot. Conduct baseline energy use eval.
9/1/2007 - Evaluate energy consumption patterns, obtain participant feedback. Identify target populations.
1/1/2008 - Design broader rate structure for targeted populations, create market offers. Begin program rollout.

Strategy outcome

Evaluation should prove in the economics, and demonstrate widespread feasibility of incenting >20% of state residents to incorporate price responsive electric consumption technology, focusing on A/C loads and electric vehicle recharge, into their personal home and transportation solutions by 2020. If there are significant increases in the cost of gasoline (through underlying oil/refinery cost increases or additional taxation) these solutions should exhibit enhanced returns on investment, and thereby prove to be even more popular. 1/2 with PEHV.

Implementation cost

PILOT ONLY
Estimated infrastructure costs: ($650 Tstat + Gateway) ($15,000 PEHV 50% of enrolled)
Estimated Installation Service Costs: ($250 per Tstat/GW enrolled)
Program Management ($50/targeted Marketing/Enrollment) ($100/enrolled Project Administration)
Additional costs for custom billing, participant inquiries, and program evaluation.

Source of Funding

This should be a mix for the Pilot - with the bulk of the hybrid vehicle subsidy coming from the car manufacturers (as a marketing expense) and the Comverge equipment and services paid for by Public Sector... the longer term would shift to mostly private sector, since the economies will carry it as a viable economic alternative. An small increase in the gasoline tax could close any gaps and drive desired longer term behavior changes.

Funding sources	Yes	No
Private Sector Funding	☒	
Public Sector Funding	☒	
Consumer/Ratepayer Funds		☐

Indicators

A measure of avoided HC emissions would be a basic indication of the success of the program. In addition, the measurement of load shed/shift (in kW-hr per participant) is critical. The contribution of stored power back to the grid at times of peak load is also possible - this is a feature of a recently announced PG&E program described in the link below:

Source

http://blogs.business2.com/greenwombat/2006/11/a_plugin_prius_.html

A. Current state of indicator

TBD - need basic research on average commuter/recreational miles driven, average age and efficiency estimates for representative vehicles, and expected percentage of total motive power provided by the electric propulsion systems. In addition, need to baseline the equivalent pollution released for production and transmission of the stored power during recharge, to calculate net gain.
Regarding A/C peak load shed, this is currently is very small on average for each NJ resident, and distributed generation at the residential level is negligible. An important qualitative indicator is the public perception of the viability and desirability of this alternative-energy concept, which would initially yield very low solution penetration.

B. Indicator Projection to 2020.

This program could effectively be accepted as a mainstream bundled home and transportation energy management solution by 20% of the general state population, with higher adoption clustered along those communities with active public transportation, which also reinforces the State Master Development Plan. A net individual energy reduction of 10% would be a realistic target. Another important metric would be the average percent shift (20%?) from peak to off-peak power consumption. A total of ____ tons of atmospheric pollutants would have been avoided, and cumulative net fuel cost savings of $ ___ million. NJ Admin Code 14:4-8.8 may govern the issuance and tracking of RECs for use with solar, as these technologies mature and become integrated in the longer term solution .