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BILL NO.: **House Bill 164**
Electric Companies-Demand Response Pilot
Program for Charging Electric Vehicles

COMMITTEE: **Economic Matters**

HEARING DATE: **March 3, 2011**

SPONSOR: **The Speaker (By Request – Administration)**
and Delegates Jameson, Cardin and Stein

POSITION: **Informational**

House Bill 164 requires the Public Service Commission to establish a demand response pilot program for electric customers to recharge electric vehicles during off-peak hours. The Office of People's Counsel offers these informational comments regarding the bill.

The program must be established by June 30, 2013. The bill requires the Commission to "make every effort" to include two electric companies in the pilot program, and to develop incentives for residential, commercial and governmental customers to recharge electric vehicles in a manner that will increase the efficiency and reliability of the electric distribution system and lower electricity use at times of high demand. The bill lists certain types of incentives that can be considered by the Commission. Finally, the Commission is required to report to

the Governor and General Assembly on the results of the pilot program by February 1, 2015.

The bill would amend Section 7-211 of the Public Utilities Law, which includes the energy use and peak demand reduction requirements of the EmPower Maryland law enacted in 2008. This law requires the electric companies to develop three-year plans to meet the EmPower Maryland goals, and the Commission to assess whether the plans are “adequate and cost-effective in achieving the electricity savings and demand reduction targets specified by law.” Section 7-211(h)(7). The next set of plans must be filed with the Commission by September 1, 2011.

House Bill 164 describes a pilot program to encourage customers to recharge electric vehicles during off-peak hours, and thus lessen the possible impact of the additional electricity use to charge the vehicles. Promotion of electric vehicles will actually increase electricity use, but with the intention of reducing greenhouse gas emissions in contrast to gasoline powered vehicles. The pilot program is an attempt to test ways to move the charging to off-peak hours to avoid the negative and costly consequences of vehicle re-charging during on-peak hours, when electricity demand is high.

The bill lists certain categories of incentives which the Commission may, but is not required to, adopt. These include time-of-day pricing, credits for distribution charges, and rebates for the cost of the charging system. Time-of-day pricing for re-charging of electric vehicles make sense in providing the

appropriate incentive (or disincentive) to voluntary purchasers of these vehicles to charge them in off-peak hours. The pricing scheme also can be designed in ways that avoid impacts on other customers or customer classes from the additional electricity use. The extension of credits on customer distribution charges is not as clear to OPC, but may be an appropriate tool to the extent that customers' electric vehicles are actually used as a type of distributed generation and the credit is cost-effective for the customer class. The Administration has proposed tax credits for electric vehicle charging equipment in a separate bill (House Bill 163), and OPC views that approach as more appropriate than utility company rebates, to the extent that electric companies seek residential ratepayer recovery for the cost of those rebates.

The bill also requires the incentives to be designed in a manner that will increase the efficiency and reliability of the system. Given the increase in total electric usage as a result of promoting electric vehicles, the electric vehicles will increase efficiency and reliability to the extent that they can act as distributed generators. This would occur if the electric vehicles are able to use their batteries for electricity storage, and return some of the stored electricity to the electricity grid during times of peak demand. Given the current state of technology, it is not clear to OPC that these latter capabilities will be available at the time the pilot program is launched.

The Administration has proposed other legislation (House Bill 167) create an Electric Vehicle Infrastructure Council to address the myriad of issues related to integration of electric vehicles into communities and in particular, into the

electricity grid. This pilot program may provide some helpful data on the efficacy of certain approaches to encourage off-peak re-charging of electric vehicles. The potential challenges of additional electricity demands from re-charging of electric vehicles during high usage time periods must be addressed before there is significant adoption of electric vehicles in Maryland and elsewhere.