

BRINGING ELECTRIC VEHICLES TO MARYLAND



Report and Recommendations
of the
Maryland Electric Vehicle Infrastructure Council

December 2012

26 EVIC members included representatives from all stakeholder groups:



- ▶ Automobile manufacturers and dealers
- ▶ Manufacturers of electric vehicle charging equipment
- ▶ Utilities
- ▶ Academic Institutions
- ▶ State and local governments
- ▶ Environmental and energy experts
- ▶ Public

Existing EV Ownership and Infrastructure



- ▶ As of November 2012, 778 registered PEVs
 - Majority located in Montgomery, Anne Arundel, Howard and Baltimore Counties
- ▶ More than 200 Level 2 charging Stations, 73 at State facilities
- ▶ Walgreen's – 31 Level 2 chargers
- ▶ University of Maryland – 41 Level 2 chargers



Council's Objectives

Develop an action plan to successfully integrate EVs into State's transportation network

- ▶ **Permitting:** State-wide standards for streamlined permitting and installation of EV charging stations
- ▶ **Public Outreach:** Recommendations for public outreach to increase consumer awareness and demand for EVs
- ▶ **Incentives:** Recommendations for monetary and other incentives to support EV ownership and maximize private sector investment in EVs



Council's Objectives

- ▶ **Fleet Purchases:** Develop policies to support fleet purchases of EVs
- ▶ **Multi-Family Charging Solutions:** Recommendations for multi-family/urban charging
- ▶ **Clean Energy Charging:** Recommend policies to support EV charging from clean energy sources
- ▶ **Pricing Displays:** Recommend method for display of pricing information at public charging stations
- ▶ **State-wide Charging Station Infrastructure Plan**

The Council's Final Report Included:



- ▶ An ***Action Plan*** to expand the adoption of plug-in electric vehicles (PEV) with near term, intermediate and long term goals
- ▶ A ***State-wide Infrastructure Plan*** to guide public investment in the development of a charging infrastructure network

Action Plan Recommendations



- ▶ Extension of Excise Tax Credit
 - Credit of up to \$2,000 against the motor vehicle excise tax for certain PEVs
 - Extend the program's expiration date to July 1, 2016
- ▶ Extension of EV Charging Station Income Tax Credit
 - Allows State income tax credit up to \$400 or 20% of cost of EV charging equipment
 - Extend the program for an additional three years through December 2016
- ▶ HOV Lane Use Permits for PEVs: Extend use permits through September 30, 2020

Action Plan Recommendations

State Fleets – Goals



- ▶ Light duty zero emission vehicles should be at least 10% of fleet purchases by 2020
- ▶ Light duty zero emission vehicles should comprise a minimum of 25% of fleet purchases emission by 2025
- ▶ Department of Budget and Management (DBM) to investigate:
 - Potential for leasing PEVs
 - Bulk purchase agreements with local governments
 - Bulk purchase or lease agreements with the Northeast corridor states

Action Plan Recommendations



Education and Outreach

- ▶ A State website for Maryland-specific PEV information and resources
- ▶ Educational workshops and webinars for developers, property managers and HOAs about the benefits of providing charging for residents
- ▶ Guidance documents for local governments:
 - Based on the TCI templates for Infrastructure Planning Guide for Local Governments
 - Urban and multi-dwelling unit charging solutions and best practices for local governments

Action Plan Recommendations



Policy and Coordination

- ▶ Extend the Council through 2015
- ▶ Create a Task Force within the Council to further study workplace, multi-dwelling unit & urban charging challenges
- ▶ Create a State Agency Task Force to develop policy for employee PEV charging at State facilities, including use of existing electrical outlets
- ▶ Engage local governments in integrating PEV infrastructure into existing regional and local planning processes, e.g., regional transportation plans, nonattainment area action plans, local comprehensive plans and zoning and building codes

Action Plan Recommendations

Local Government Solutions

- ▶ Revise zoning and planning codes
 - permit on-street PEV charging
 - require PEV parking spaces in new developments and re-development
 - include siting and design guidelines
- ▶ Review historic district restrictions for provisions effectively prohibiting PEV charging stations
- ▶ Build on municipal parking permit model for residential on-street parking to facilitate on-street charging
- ▶ Implement measures to discourage overstaying to maximize access to public chargers



Action Plan Recommendations



Urban Charging:

- ▶ Investigate options for wiring existing publically and privately owned garages for charging
- ▶ Pilot Projects:
 - Up to 46% of Maryland residents do not have access to a private electrical outlet
 - Pilots could demonstrate options for shared use of EV charging in parking facilities – allowing urban residents to park & charge at night; employees & business patrons during day

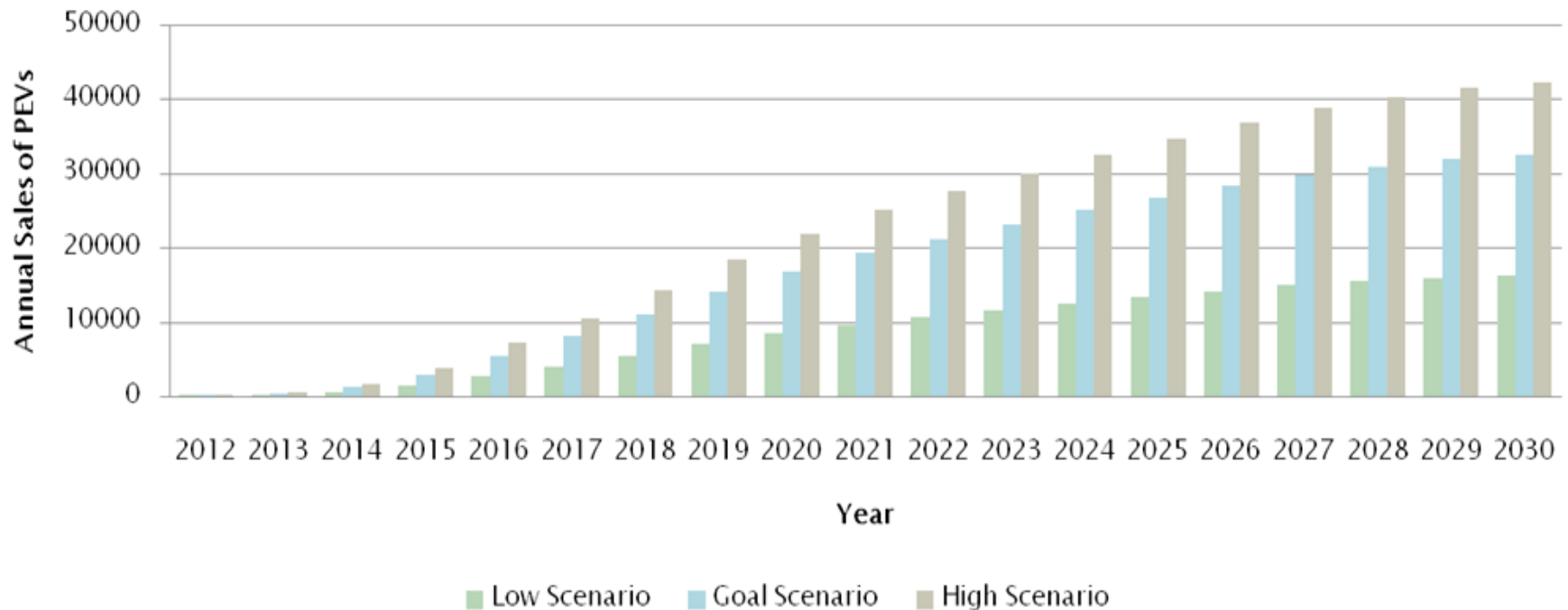
Infrastructure Plan



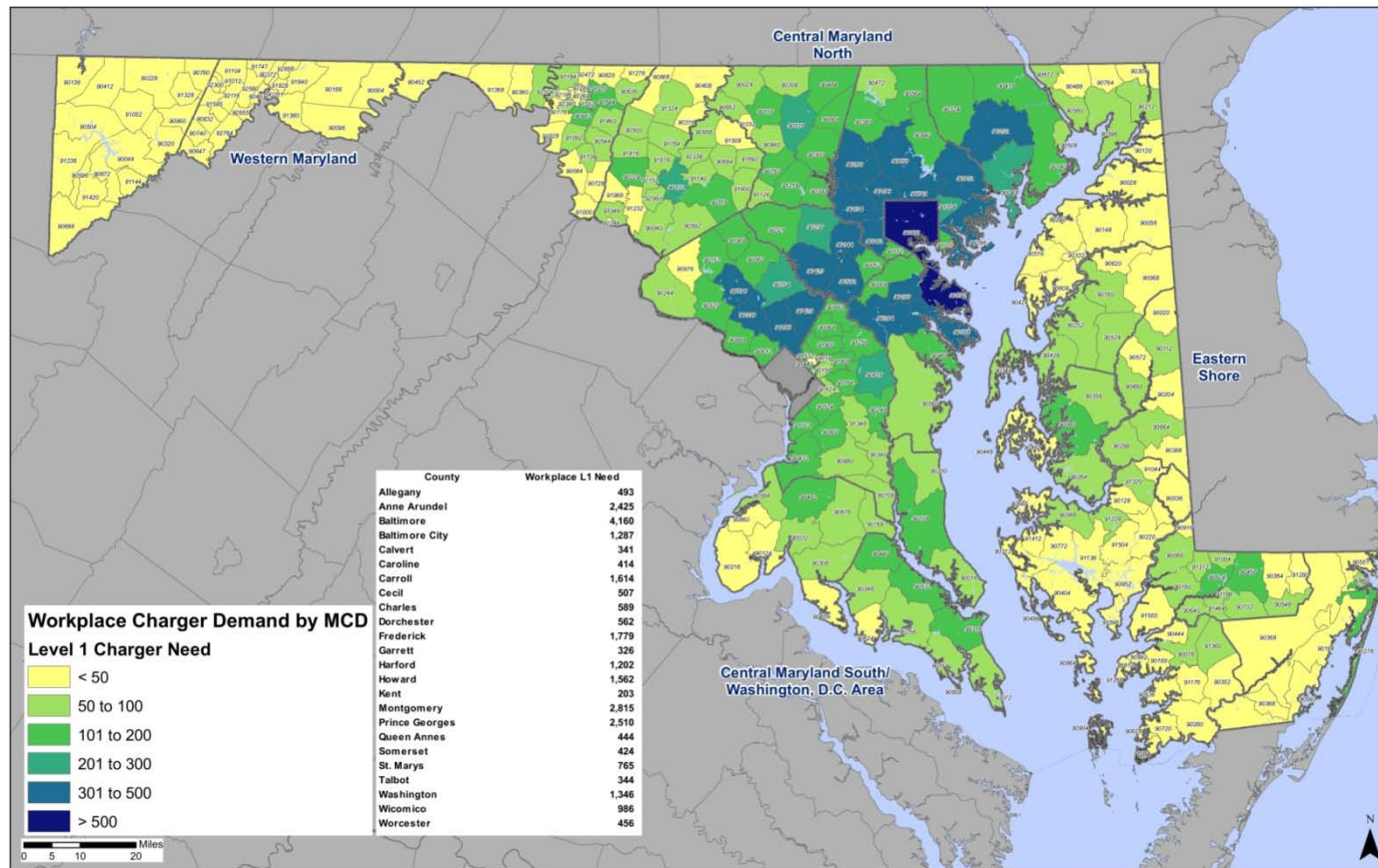
- ▶ Promotes establishment of PEV charging infrastructure to support goal of 60,000 PEVs on the road by 2020
- ▶ Total chargers needed State-wide (excluding home chargers) is estimated to be 35,190 to meet demand
 - 120 locations at rest areas, on major roads and at tourism destinations to accommodate tourism and travel
 - Many chargers expected to be installed by private sector parking managers in parking garages, shopping malls, large employers that provide parking

Scenarios for EV Growth in Maryland

Low, Medium (Goal) and High EV Sales Scenarios for Maryland

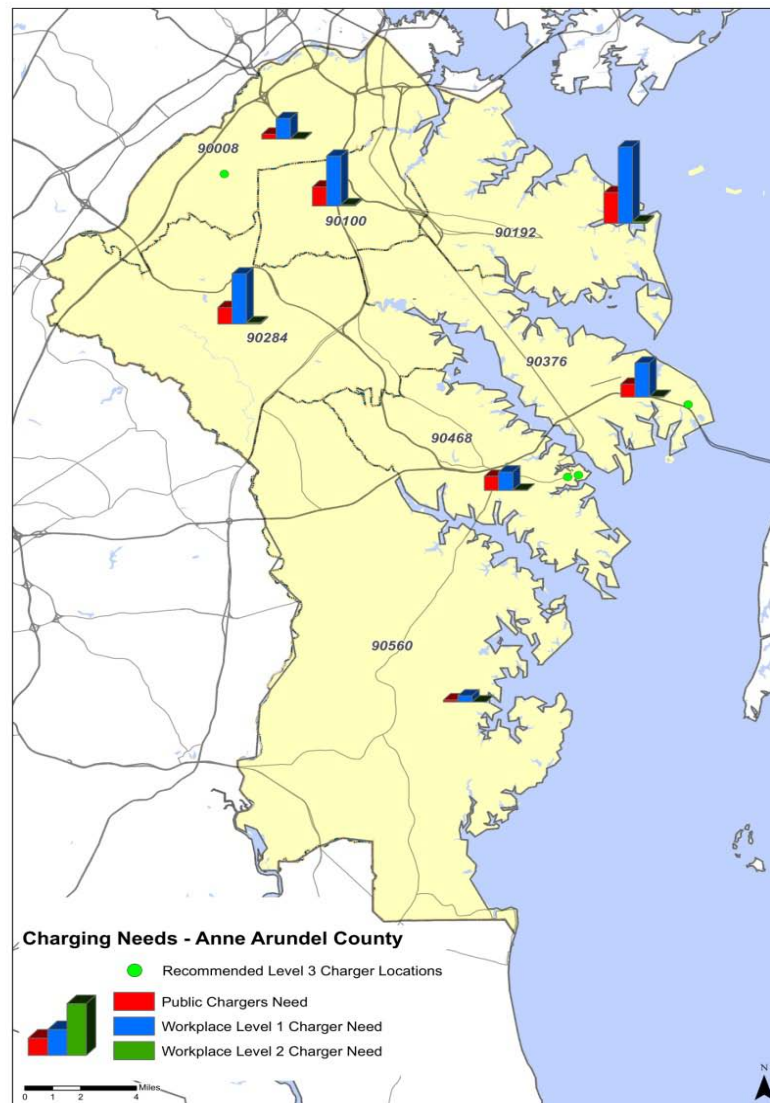


Demand by MCD – Level 1 State-wide



Example of Demand – Anne Arundel County

- ▶ Demand by Charger Type
 - Level 1 (work place)
 - Level 2 (work place)
 - Public Charging
- ▶ Identified Locations for
- ▶ Through/Visitor Fast charge Placement



EV Legislation



2012 Legislation

- ▶ Amendments to PIA law allowing MVA to share EV owner personal information with utilities for system reliability purposes
- ▶ Amendments to Public Utilities Article to exclude EV charging station companies or providers from definition of “electricity supplier” and “public service company”

2013 Pending Legislation

- ▶ Extend income and excise tax credits
- ▶ Extend permitted use of HOV lanes
- ▶ Amend and relocate existing definitions of “qualified electric plug-in vehicle” and “plug-in vehicle”

Recommendations for Future Research



- ▶ Impact of PEVs on transportation system; need for development of revenue mechanisms that are tied to use of system, such as VMT charges
- ▶ Battery technology, disposal, end-of-life usage
- ▶ Need for ban on restrictive covenants
- ▶ HOV reciprocity legislation
- ▶ Prohibition on use of designated PEV parking



Link to Council's Final Report :

http://www.mdot.maryland.gov/Office_of_Planning_and_Capital_Programming/Electric_Vehicle/Documents/Final_Report_Full_Document.pdf

QUESTIONS OR COMMENTS ?