Planning for Wind Energy

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Maryland Energy ADMINISTRATION
Powering Maryland's Future

“Planning for Maryland Wind” Contents

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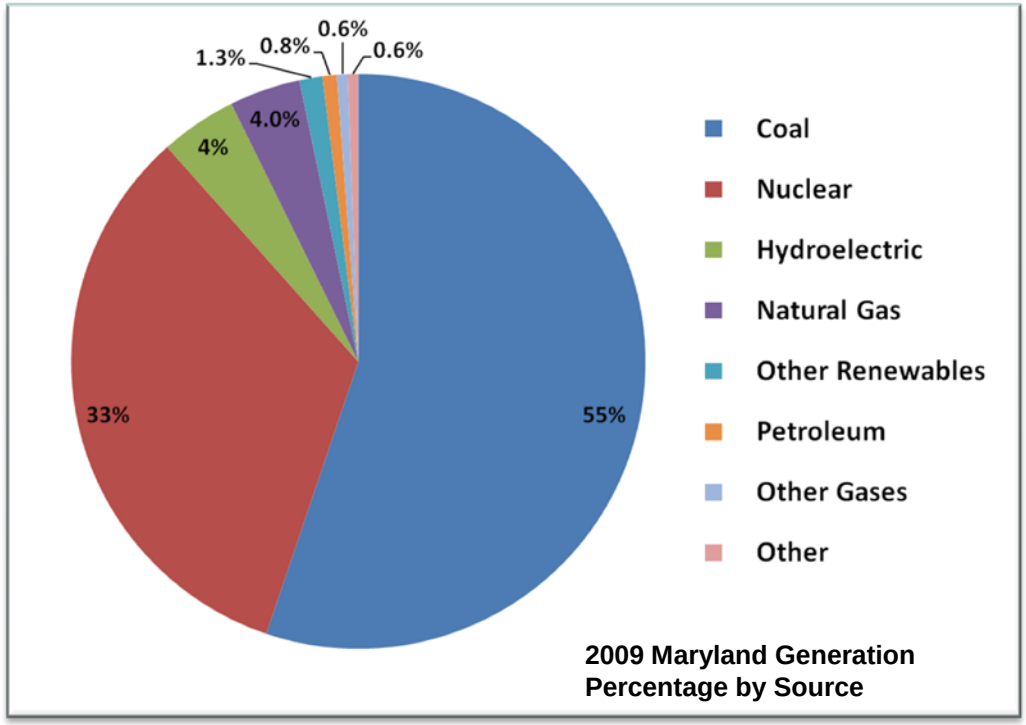
Maryland Fuel Mix

- Maryland still relies heavily on an aging fleet of fossil fuel plants for electricity generation.
- The Maryland Renewable Portfolio Standard requires that Maryland get 20% of its energy from renewable sources by the year 2022.
- Land-based wind power offers one of the most affordable, scalable and deployable renewable energy sources available in the region.



EIA, *Maryland Electricity Profile 2009*, Table 5, available at: http://www.eia.doe.gov/cneaf/electricity/st_profiles/maryland.html

Utility Scale Installations in Maryland

- In late 2010, Constellation Energy completed the first utility scale wind project in Maryland – the 70 megawatt *Criterion* wind park on Backbone Ridge in Garrett County.

- In August 2011, Gestamp Renewables completed the 50 megawatt *Roth Rock* wind farm just a few miles south.

Photo courtesy Constellation Energy

Photo courtesy Gestamp Wind

Western Maryland Wind Energy

- These combined projects represent an installed capacity of 120 megawatts from 48 turbines – enough to power over 35,000 homes.

- Additional projects are planned in this region, but limited Appalachian ridgeline and high ecological density make proper siting in this area more challenging.

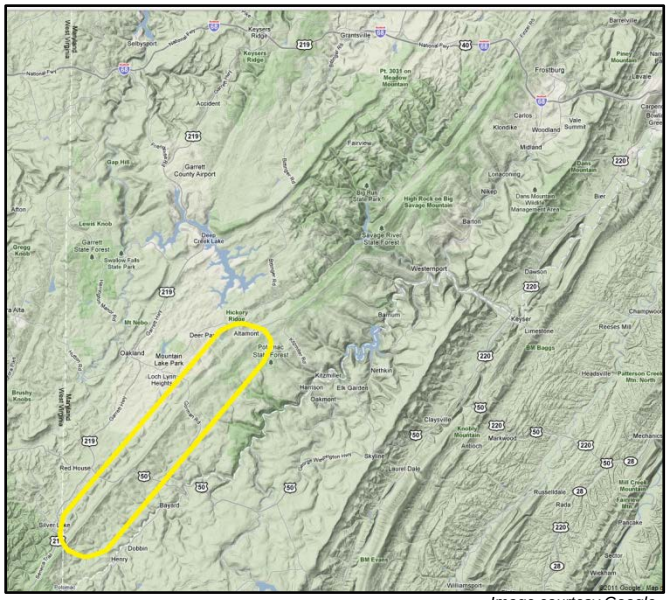


Image courtesy Google

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Early Interest in the Eastern Shore

- By 2008, climate models, early data from the MEA Anemometer Loan Program and strong participation in MEA *Windswept* grant program for small wind turbines suggested a potentially untapped resource on the Eastern Shore.

- MEA worked with the City of Crisfield to develop better local wind data to support plans for community wind project.

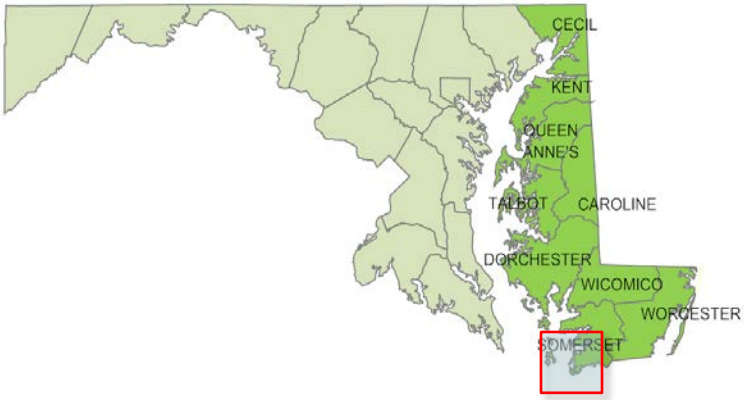


Image courtesy Google

Testing the Winds on the Lower Eastern Shore

- An anemometer system were installed at the top of the Crisfield water tower – the highest point close to the proposal area.

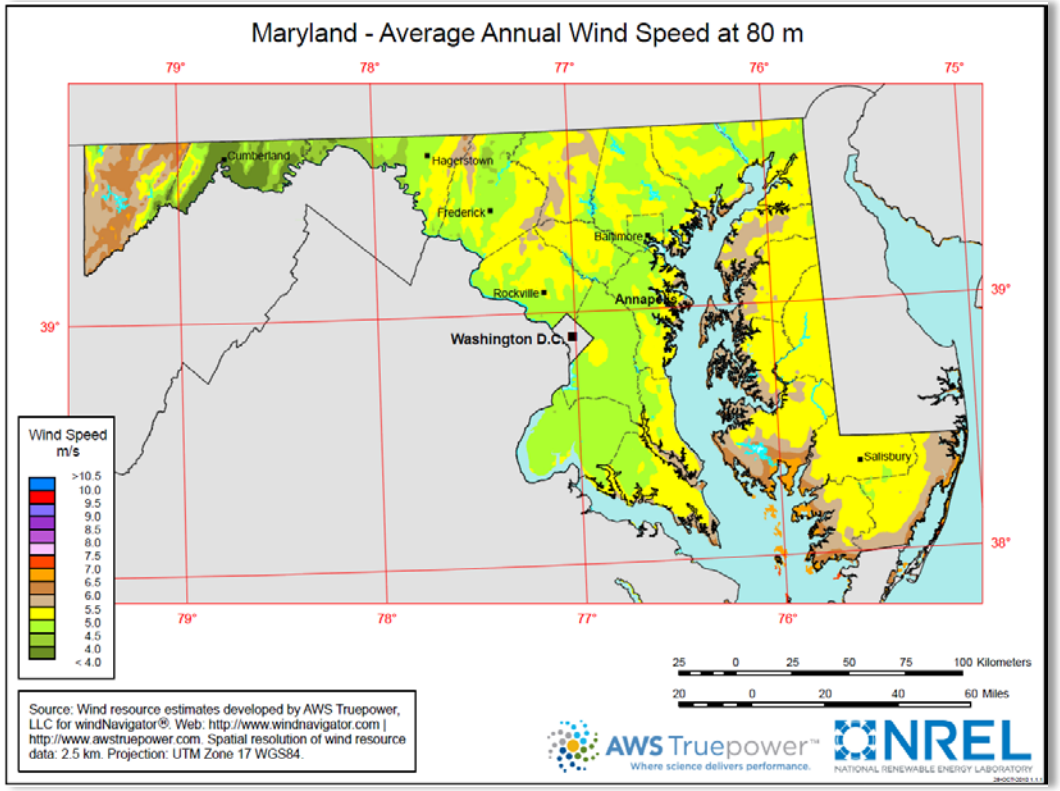
- Annual data from 2008-2009 show excellent resource, suitable for utility scale generation.

Image – crisfield.org

New NREL Wind Maps

- In 2010, DOE National Renewable Energy Laboratory (NREL) issued new wind maps showing wind speeds at 80 meters based on advanced meteorological models.

- These new maps showed large areas of the Eastern Shore of Maryland that may be suitable for commercial development.



Regional Outreach

- In 2009 and 2010, MEA conducted a series of stakeholder outreach meetings to discuss issues of concern for Maryland residents.

- The focus of these meetings was to determine what challenges and barriers to deployment of small, residential and community scale wind projects existed.

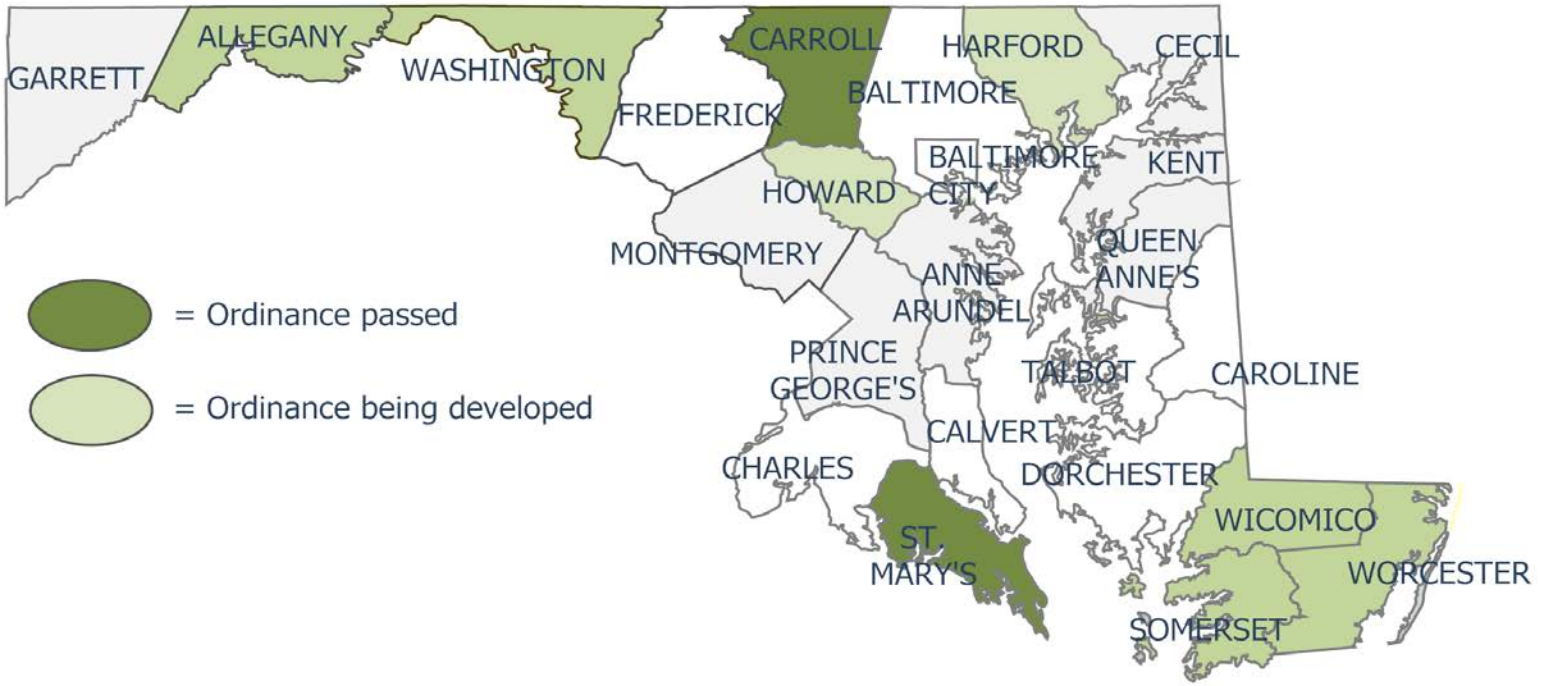
Regional Outreach

Priorities Identified:

- Lack of County and Municipal Ordinances
- Net Metering Limitations
- Lack of Information and Statewide Coordination
- Lack of Adequate Financial Incentives

Ordinances

- At the beginning of 2009, only two Maryland counties had developed wind ordinances.



Ordinances

- Within 2 years, most of the Counties in high-wind areas of the state had passed ordinances allowing wind generation.

Ordinances

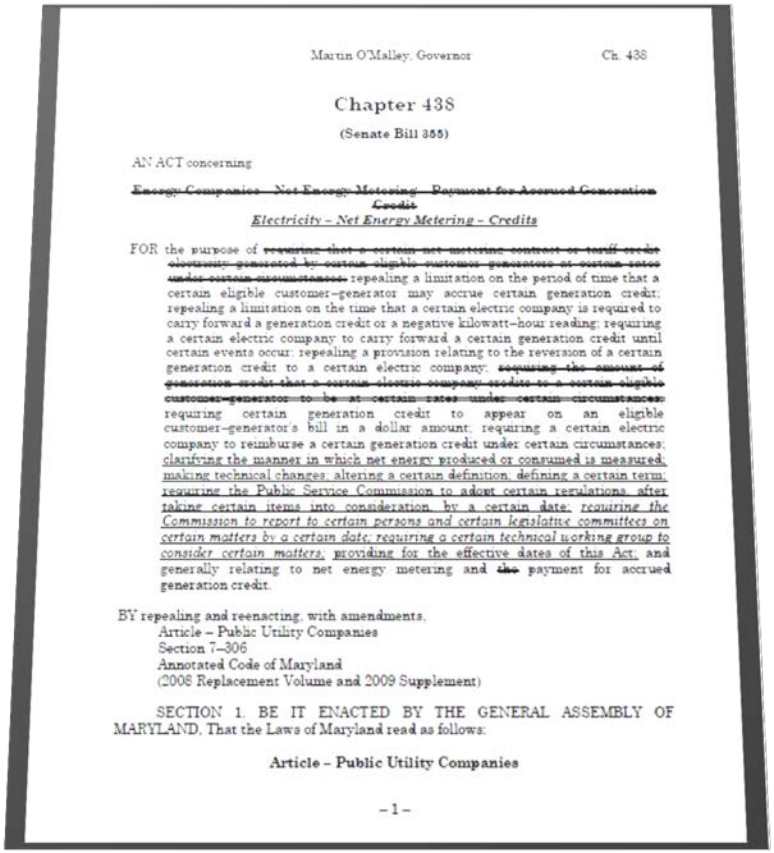
MEA worked with County governments to develop ordinances that allowed property owners to install small wind turbines in 12 more Counties.

Caroline and Dorchester Counties have developed ordinances with height restrictions of 200'. This type of progressive ordinance allows agricultural communities in those counties to take advantage of taller turbines.

Additionally, several municipalities have developed ordinances: City of Easton, City of Frostburg, City of Cumberland, City of Crisfield and Ocean City.

Net Metering

- In 2010, the General Assembly overhauled the State's net metering law in order to:
  - Repeal the 12 month limitation
  - Recommend virtual aggregation for certain customer types
  - Provide some value for net excess generation
- Under the new law, the Public Service Commission empanelled a working group to make recommendations.
- However, ambiguous wording left the regulations open to different interpretations which the Commission was forced to try to reconcile.



Martin O'Malley, Governor Ch. 438

Chapter 438

(Senate Bill 355)

AN ACT concerning

~~Energy Companies – Net Energy Metering – Payment for Accrued Generation Credit~~

Electricity – Net Energy Metering – Credits

FOR the purpose of ~~preventing that a certain net metering contract or tariff order electronically generated by certain eligible customer–generators or certain rates under certain circumstances;~~ repealing a limitation on the period of time that a certain eligible customer–generator may accrue certain generation credit; repealing a limitation on the time that a certain electric company is required to carry forward a generation credit or a negative kilowatt–hour reading; requiring a certain electric company to carry forward a certain generation credit until certain events occur; repealing a provision relating to the reversion of a certain generation credit to a certain electric company; ~~requiring the amount of generation credit that a certain electric company credits to a certain eligible customer–generator to be at certain rates under certain circumstances;~~ requiring certain generation credit to appear on an eligible customer–generator's bill in a dollar amount; requiring a certain electric company to reimburse a certain generation credit under certain circumstances; clarifying the manner in which net energy produced or consumed is measured; making technical changes; altering a certain definition; defining a certain term; requiring the Public Service Commission to adopt certain regulations after taking certain items into consideration, by a certain date; *requiring the Commission to report to certain persons and certain legislative committees on certain matters by a certain date; requiring a certain technical working group to consider certain matters;* providing for the effective dates of this Act; and generally relating to net energy metering and ~~the~~ payment for accrued generation credit.

BY repealing and reenacting, with amendments,
Article – Public Utility Companies
Section 7–306
Annotated Code of Maryland
(2008 Replacement Volume and 2009 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:

Article – Public Utility Companies

– 1 –

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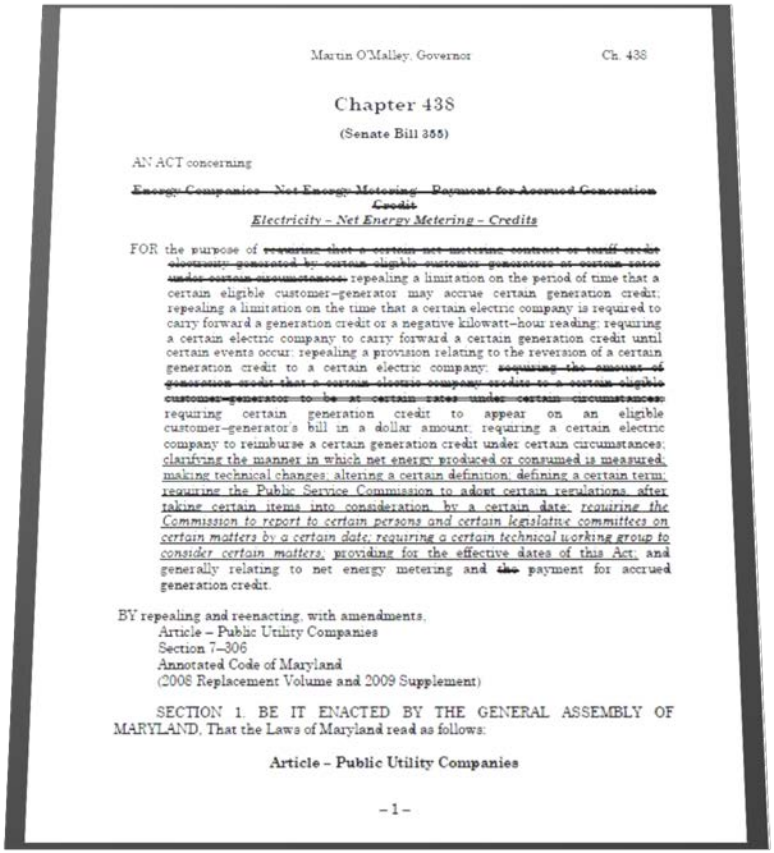
Net Metering

- Legislation in the 2011 General Assembly finally fixed the policy.

- The PSC is developing regulations that will allow:
  - Virtual aggregation for municipalities, farms and non-profits
  - One-time eligibility determination that will allow installation of systems projected to output up to 200% of historic load
  - Value for net excess generation beyond 1 year at retail energy (not distribution) rates



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Crisfield Community Wind

- In May, 2010 the City of Crisfield offered a Request for Proposals for wind energy projects on the site of the Crisfield Waste Water Treatment Plant.
- The city is reviewing proposals to develop a project that will reduce power costs to the facility.

Appendix D – Representative look of Renewable Energy Project

Chesapeake College

- Chesapeake College recently installed a 50 kilowatt Endurance wind turbine to power school facilities.
- MEA is pleased to have provided a $75,000 *Windswept* grant to help make this model community wind project a reality.

Photo Erin Fluharty

Renewables and Electric Vehicles

- The 2011 Senate Bill 176 established an Electric Vehicle Infrastructure Council (EVIC).
- Among other issues the Council is focused on is recommending policies that support EV charging from clean energy sources.
- This may ultimately lead to increased opportunities for co-location and integration of renewable generation, net metering, smart metering and electric vehicle charging.

Contact Information

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