Clean Renewable Energy for Maryland

Where We Are

(and where we need to go)

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It’s about Climate Change
The connection is CO$_2$ –
Correlation of CO$_2$ and Global Temperature, 1958 - 2017

- Electricity: 30%
- Transportation: 26%
- Industry: 21%
- Commercial & Residential: 12%
- Agriculture: 9%

U.S. Environmental Protection Agency
Overarching Goals

- 100% Clean Renewable Energy ASAP
- Feasible and affordable
- Cleaner air
- Economic and job development in Maryland
- Equity
What are the fuel sources for the electricity we actually generate in Maryland?

Source, by Percent of Electricity Generated

- Nuclear
- Coal
- Gas
- Hydroelectric
- Biomass
- Other

Data from U.S. Energy Information Administration, Electric Power Monthly Chart
Maryland’s Renewable Portfolio Standard – the “RPS”

- Legislative mandate - Specifies how much “renewable” energy our utilities must include each year
- Enacted 2004; implementation begun 2006
- Modified/increased multiple times
- Mechanism – Utilities purchase “Renewable Energy Credits” (“RECs”)

### Maryland RPS - Renewable Energy Credit Requirements

<table>
<thead>
<tr>
<th>Year</th>
<th>Tier 1 Non-Solar</th>
<th>Tier 1 Solar</th>
<th>Offshore Wind</th>
<th>Total Tier 1</th>
<th>Tier 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>20.0%</td>
<td>2.5%</td>
<td>Up to 2.5%</td>
<td>25.0%</td>
<td>0</td>
</tr>
<tr>
<td>2018</td>
<td>14.3%</td>
<td>1.5%</td>
<td>0</td>
<td>15.8%</td>
<td>2.5%</td>
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<tr>
<td>2016</td>
<td>12.0%</td>
<td>0.7%</td>
<td>0</td>
<td>12.7%</td>
<td>2.5%</td>
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</tbody>
</table>
Renewable Energy Credits – “bundled” & “unbundled”
Unbundled RECs (We don’t actually get the electricity)
Under Maryland’s RPS, “renewable” energy isn’t all clean

Almost half of our Tier 1 Renewable Energy Credits are subsidizing combustible sources that emit CO₂ and other pollutants

After more than 10 years of our RPS, less than 5% of Maryland’s electricity has RECs from wind and solar

Solar – 0.7%

RPS Tier 1 non-solar RECs (12%)
“Dirty” sources of “renewable energy continue to increase in our “portfolio”
Estimated Amounts Spent by Maryland Ratepayers to Buy Non-Solar Tier 1 Renewable Energy Credits (RECs)* Under Maryland's RPS 2008-2016

- Over $300 million for RECs since 2008 - most going to other states, not clean energy and jobs in MD
- Only 15% of Tier 1 non-solar REC payments went to sources in Maryland
- The remaining 85% went to 17 other states
- The cost of Tier 1 non-solar RECs added almost $1.50 to monthly bills in 2016

Source: Public Service Commission of Maryland – Renewable Energy Portfolio Standard Reports
From the PSC report – Specific sources by state
Most of the subsidies from Maryland RECs aren’t creating new “renewable” energy

- A substantial part of Maryland’s RECs come from facilities built before our Renewable Portfolio Standard was created

  **Examples:**
  - The largest number of RECs for small hydroelectric came from dams in Pennsylvania built between 1901 and 1989
  - The largest number of RECs for “Black Liquor” came from Virginia’s Covington Paper Mill, which opened in 1890

- Onshore wind electricity is already as cheap as fossil fuel power – our subsidies are just adding cost to projects that don’t need incentives to operate

Sources:
- MD PSC 2018 Renewable Energy Portfolio Standard Report
- Lazard’s Levelized Cost of Energy Analysis, November, 2017
The solar incentive under our present mechanism is highly volatile.

Value of Maryland Solar Renewable Energy Credits, 2008-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$345</td>
</tr>
<tr>
<td>2009</td>
<td>$345</td>
</tr>
<tr>
<td>2010</td>
<td>$329</td>
</tr>
<tr>
<td>2011</td>
<td>$278</td>
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<tr>
<td>2012</td>
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<td>2013</td>
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<td>2014</td>
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<tr>
<td>2015</td>
<td>$130</td>
</tr>
<tr>
<td>2016</td>
<td>$20</td>
</tr>
<tr>
<td>2017</td>
<td>&lt;$10</td>
</tr>
</tbody>
</table>
Equity (Energy Justice)

• The average non-low-income household spends about three percent of income on energy, an essential commodity.

• For low income households, the proportion of income spent on energy is about 12%.

• For lowest income households it is even higher – roughly 30%.

• The high burden of energy cost, combined with the cost of other essentials (food, clothing, housing), leaves little or nothing for important expenses like educational materials and voluntary health care.

• Maryland’s existing programs to provide electricity assistance are limited and reach only an estimated one-third of needy households.

Sources:
• Energy Advocates of Maryland, Communication with Maryland Public Service Commission (2017).
Bottom Lines: Problems with our current approach

• Our progress is too slow

• We’re paying extra for Renewable Energy Credits

• We aren’t getting actual clean electricity

• A significant part of the “renewable” credits we’re paying for actually subsidize carbon-emitting and polluting sources

• Much of our subsidies go out of state, rather than investing in jobs and economic development in Maryland

• Most of the “renewable” energy sources we’re subsidizing aren’t new

• The market-based subsidy for solar is highly volatile, leading to boom-and-bust cycles for both solar owners and developers

• We aren’t dealing adequately with the burden of energy cost on low income families
A better way to achieve our clean energy goals

• Faster expansion of clean energy

• Ratepayers’ dollars spent on incentives that support truly new and truly clean energy sources (non-carbon, non-polluting)

• A substantial part of this new clean energy built in Maryland, for jobs and economic development (including offshore wind)

• More dependable and transparent incentives for solar and wind

• Limiting the energy cost burden for all low income households