Summary

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Talen’s Position

- Coal-fired generation:
  - Serves a vital role in maintaining electricity reliability in Maryland;
  - Supports jobs and the economy;
  - Is well controlled and regulated;
- GHG policies should be market-based and allow for business to transition
- RGGI has a track record of helping achieve regional goals.
Background

- Electricity in Maryland is a deregulated market, meaning all generation is produced in a competitive market. Reliability is managed by PJM, the Regional Transmission Operator (RTO).
- All producers are independent businesses managing risks with no guarantee of revenue or survival.

<table>
<thead>
<tr>
<th>Plant</th>
<th>Owner</th>
<th>County</th>
<th>Generation Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brandon Shores</td>
<td>Talen</td>
<td>Anne Arundel</td>
<td>• 1,270</td>
</tr>
<tr>
<td>Wagner</td>
<td>Talen</td>
<td>Anne Arundel</td>
<td>• 958 (423 MW coal – 118 MW retiring in June 2020)</td>
</tr>
<tr>
<td>Morgantown</td>
<td>GenOn</td>
<td>Charles</td>
<td>• 1,477 (1229 MW coal)</td>
</tr>
<tr>
<td>Chalk Point</td>
<td>GenOn</td>
<td>Prince Georges</td>
<td>• 2,279 (667 MW coal)</td>
</tr>
<tr>
<td>Dickerson</td>
<td>GenOn</td>
<td>Montgomery</td>
<td>• 84 (537 MW coal)</td>
</tr>
<tr>
<td>Warrior Run</td>
<td>AES</td>
<td>Washington</td>
<td>• 180</td>
</tr>
</tbody>
</table>
Background

![2017 GHG Emissions by Sector](image)

Figure 3.1-1. Gross GHG Emissions by Sector, 2017, Maryland.
Background

- Approximately half of Maryland’s electricity is provided by out-of-state sources (15% of Economy-wide CO2 produced in-state).
- Maryland’s In-state Generation Profile:

<table>
<thead>
<tr>
<th>2018 MD Generation (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>23</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>32</td>
</tr>
<tr>
<td>Nuclear</td>
<td>34</td>
</tr>
<tr>
<td>Renewables</td>
<td>11</td>
</tr>
</tbody>
</table>

source: EIA 2019 MD Profile

- Prior to 2012 > 50% of in-state generation came from coal.
Background

- Coal-fired generation CO2 Emissions have dropped significantly since the 2006 baseline year.
- Reductions far exceed the economy-wide goal.
- Forced reductions will likely drive further increases in imported power.

<table>
<thead>
<tr>
<th></th>
<th>CO2e (MMt/yr)</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Consumption</td>
<td>42.5</td>
<td>23.7</td>
</tr>
<tr>
<td>In-State Generation</td>
<td>32.2</td>
<td>11.7</td>
</tr>
<tr>
<td>In-state Coal Gen.</td>
<td>28.3</td>
<td>8.8</td>
</tr>
<tr>
<td>Imported Electricity</td>
<td>10.3</td>
<td>12</td>
</tr>
</tbody>
</table>

source: MD GGRA Draft Report
Talen’s Coal plants – Key Benefits

- Maryland coal plants are an insurance policy for blackouts; They are projected to run very little, but provide critical capacity.
- The BGE transmission zone (Baltimore region) within PJM is considered “constrained” (limited import capacity)
  - In the 2018 PJM Base Residual Capacity Auction for delivery years 2021/2022, Brandon Shores and H.A. Wagner represented approximately 80% of the available generation within the BGE zone.
- Although they may be infrequent, reliability events occur where Brandon Shores and Wagner have been able to generate power to avoid brown/blackouts (e.g., Polar Vortex and Oct. 2019 event).
- Brandon Shores and Wagner employ ~260 people directly.
- There are countless indirect jobs paid for by the $50M/year O&M budget.
- There are up to 500 labor contractors on site for annual major maintenance projects.
- Talen pays $7M annually in State and local taxes.
Emissions Controls

- Talen has invested close to $1B in environmental controls since 2010.
- Brandon Shores and Wagner together are some of the cleanest coal fired generation with average emission reductions since 2009 of:
  - 95% SO2;
  - 80% NOx; and
  - 70 % CO2.
- Further reductions will take place this June (Wagner 2 will retire for NOx RACT) and in January 2021, new SO2 limits will be implemented across all units.
The Future

- Between market forces, energy efficiency standards, renewable development and RGGI, generation (and associated CO2 emissions) from these plants continues to drop. Plants have not run in 2020.
- RGGI is and can continue to be an effective market-based mechanism for driving CO2 emissions lower.
- Emissions from RGGI sources have dropped by 57% since the baseline period of 2006-2008.
- Allowances auctioned across all of RGGI have dropped by 67% in the same period
- From 2021 to 2030, available allowances will drop 2.3% per year further.

- In order to achieve a reduction in global CO2 emissions, it is more appropriate to utilize economy-wide policies and market-based approaches to maintain grid reliability and a thriving Maryland economy.