Ohio Energy

Last updated June 26, 2017
Ohio #1 in premature deaths from particulate matter from electricity generation

Ohio #3 in premature death rate from particulate matter from electricity generation

Coal is cause of high particulate matter

Fig. 1. Annual average ground-level PM$_{2.5}$ concentration (µg m$^{-3}$) from U.S. sources attributable to combustion emissions from (a) electric power generation; (b) industry; (c) commercial and residential sources; (d) road transportation; (e) marine transportation; (f) rail transportation; (g) sum of all combustion sources; (h) all sources (baseline case for this study). A different scale is adopted for (a–f) and (g–h).
Without nuclear, the amount of clean electricity in Ohio will decline 90 percent.

Source: https://www.eia.gov/electricity/data/browser/. Based on 2016 generation totals.
Solar subsidies vs. proposed Ohio nuclear subsidy

Sources: [http://www.srectrade.com/srec_markets/ohio](http://www.srectrade.com/srec_markets/ohio)
[https://solarpowerrocks.com/ohio/](https://solarpowerrocks.com/ohio/)
Ohio energy efficiency subsidies cost up to 6x more per kilowatt hour than the proposed nuclear subsidy.

Sources: https://energy.gov/eere/femp/energy-incentive-programs-ohio
Costs of Energy-Related Tax Preferences, by Type of Fuel or Technology, 1985 to 2016

(a) Includes the costs of tax preferences related to the transmission of electricity, which are typically small.

Costs of energy-related tax preferences, by type of fuel or technology, 2016

- Fossil Fuels: 25%
- Renewable Energy: 59%
- Energy Efficiency (a): 15%
- Nuclear Energy: 1%

(a) Includes the costs of tax preferences related to the transmission of electricity, which are typically small.

Total federal spending on electricity by fuel type and year

- **2010**
  - Coal: 2,000
  - Hydrocarbons (oil and gas): 4,000
  - Nuclear: 1,000
  - Wind: 1,000
  - Solar: 1,000
  - Other: 1,000

- **2013**
  - Coal: 2,000
  - Hydrocarbons (oil and gas): 4,000
  - Nuclear: 1,000
  - Wind: 1,000
  - Solar: 1,000
  - Other: 1,000

- **2016**
  - Coal: 2,000
  - Hydrocarbons (oil and gas): 4,000
  - Nuclear: 1,000
  - Wind: 1,000
  - Solar: 1,000
  - Other: 1,000

- **2019**
  - Coal: 2,000
  - Hydrocarbons (oil and gas): 4,000
  - Nuclear: 1,000
  - Wind: 1,000
  - Solar: 1,000
  - Other: 1,000

Subsidy by type and fuel per megawatt-hour

Ohio emissions will increase the equivalent of adding up to 3.4 million cars to the road if Perry and Davis-Besse close.

Sources:
https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle-0
https://www.eia.gov/electricity/annual/html/epa_08_02.html
In 2016, Ohio imported more than 19% of its power.

Source: EIA Electricity Data Browser. https://www.eia.gov/electricity/data/browser
Ohio residential electricity increased despite energy efficiency spending
Ohio Nuclear Abandonments

Source: EP Energy Progress Tracker

<table>
<thead>
<tr>
<th>Plant</th>
<th>Capacity (MW)</th>
<th>Annual Generation (TWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davis Besse 2</td>
<td>810</td>
<td>6.53</td>
</tr>
<tr>
<td>Perry 2 (was under construction)</td>
<td>1,205</td>
<td>9.71</td>
</tr>
<tr>
<td>Erie 2</td>
<td>1,260</td>
<td>10.15</td>
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<tr>
<td>Erie 1</td>
<td>906</td>
<td>7.30</td>
</tr>
<tr>
<td>Davis Besse 3</td>
<td>910</td>
<td>7.33</td>
</tr>
</tbody>
</table>

- Zimmer 1 (was under construction)
- Perry 2 (was under construction)
- Erie 2
- Erie 1
- Davis Besse 3
- Davis Besse 2
Nuclear Abandonments Locked in Fossil Fuels

Source: US Energy Information Administration

*Includes distributed solar
Since 1985, Ohio’s nuclear abandonments increased emissions equivalent of adding 14 million cars to road.

Nearly 35,000 premature deaths resulted from Ohio’s nuclear abandonments and the pollution from the coal that burned instead.

Ohio nuclear provided almost 12x more electricity than Ohio solar and wind combined in 2016.

Source: https://www.eia.gov/electricity/data/browser/
Nuclear produced more electricity in 2016 than renewables under RPS in 2027 assuming flat demand.

Source: https://www.eia.gov/electricity/data/browser/
https://www.puco.ohio.gov/industry-information/industry-topics/ohe28099s-renewable-and-advanced-energy-portfolio-standard/
Ohio will face a net loss of at least 1,345 direct jobs if nuclear plants are replaced with new natural gas.

Source: [https://www.firstenergycorp.com/content/fecorp/about/generation_system/FENOC/davis-besse.html](https://www.firstenergycorp.com/content/fecorp/about/generation_system/FENOC/davis-besse.html)
[https://www.firstenergycorp.com/about/generation_system/FENOC/perry.html](https://www.firstenergycorp.com/about/generation_system/FENOC/perry.html)