

The Contribution of Maryland's Existing Zero Carbon Emission Resources to GHG Reduction

Maurice Simpson, Jr.
Manager
Exelon Generation State Government Affairs

June 2021



Exelon in Maryland



Generation

Conowingo Dam
Calvert Cliffs Nuclear Plant
Criterion Wind Project

2,295 MW of carbon-free energy – can serve 2.2 million+ homes

Competitive Energy Sales

Retail sales, as well as successful Home Performance with ENERGY STAR program

Completed 342 energy efficiency projects, saving customers over \$16M annually in energy costs

Transmission and Delivery

MD's largest natural gas and electric utility

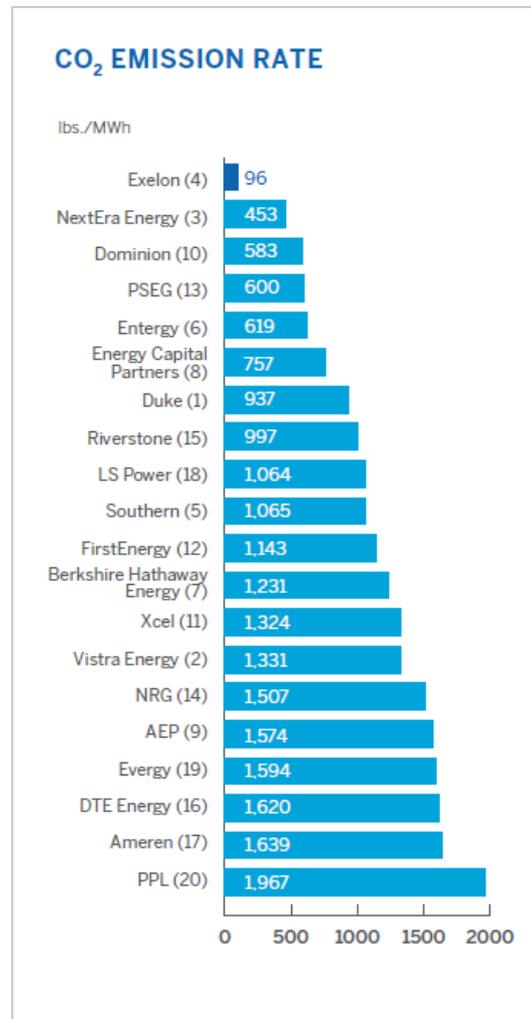
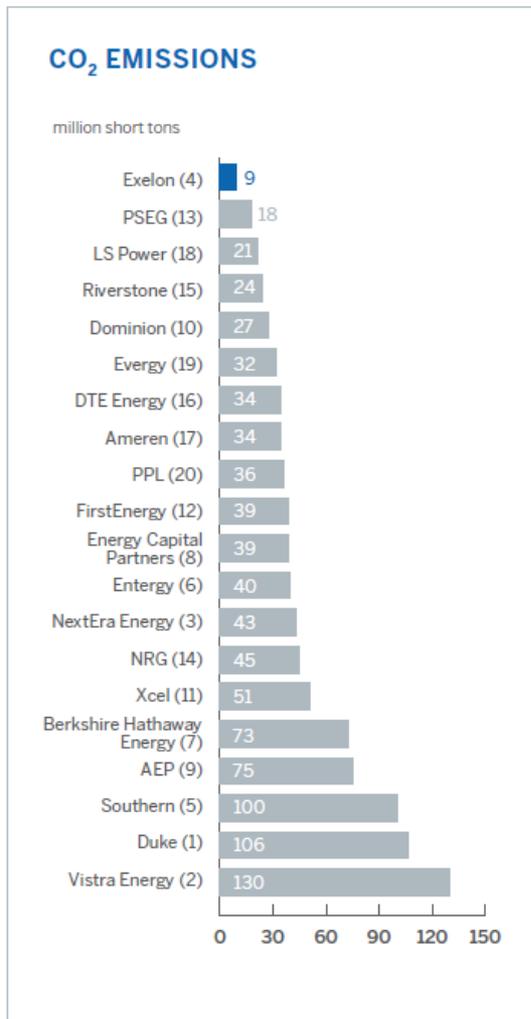
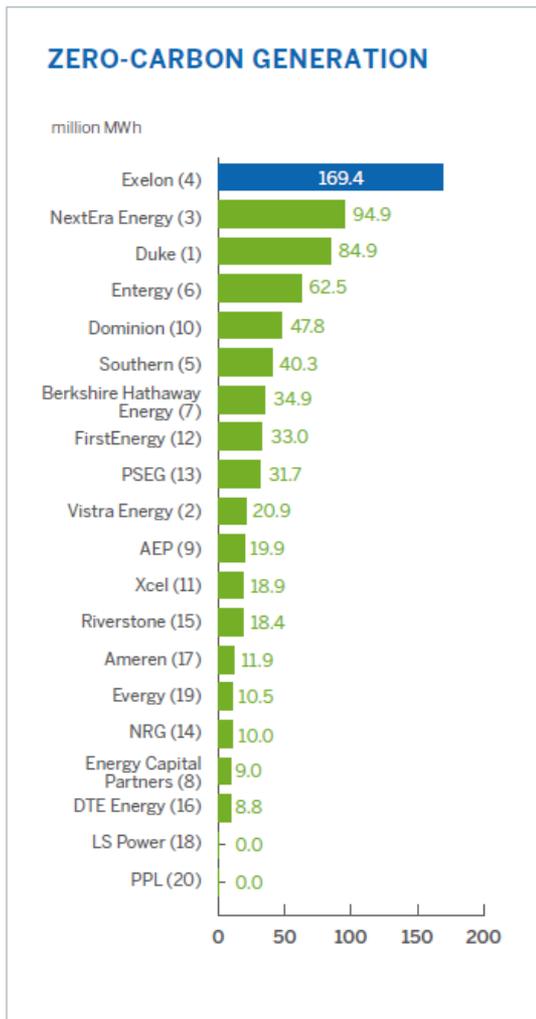
Maryland Customers:

BGE Electric: 1.25 million
BGE Natural Gas: 650,000
Delmarva: 204,000
Pepco: 567,000

7,500 Maryland residents employed by Exelon

Exelon Generation: Leader in Zero-Carbon Electricity Production

CARBON PERFORMANCE OF LARGEST 20 INVESTOR-OWNED POWER PRODUCERS



Source: Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States, M.J. Bradley & Associates (July 2020). Data used in the benchmarking report was calendar year 2018. Number in parenthesis by company name is the company generation ranking in 2018. E.g., Exelon was the fourth largest investor-owned producer in 2018.

Calvert Cliffs Nuclear Power Plant Facts

- Calvert Cliffs' top values are **SAFETY and SECURITY**
- Generation: Two units, 1,756 MW
 - Unit 1: Licensed until 2034
 - Unit 2: Licensed until 2036
- 850 full time employees & about 45 full time contractors
- Approximately 1,500 additional workers travel to Calvert for several weeks to support refueling
- Contributes ~\$397M to the state's economy
- Community Supporter with more than \$250,000 in local charitable contributions + countless employee volunteer hours



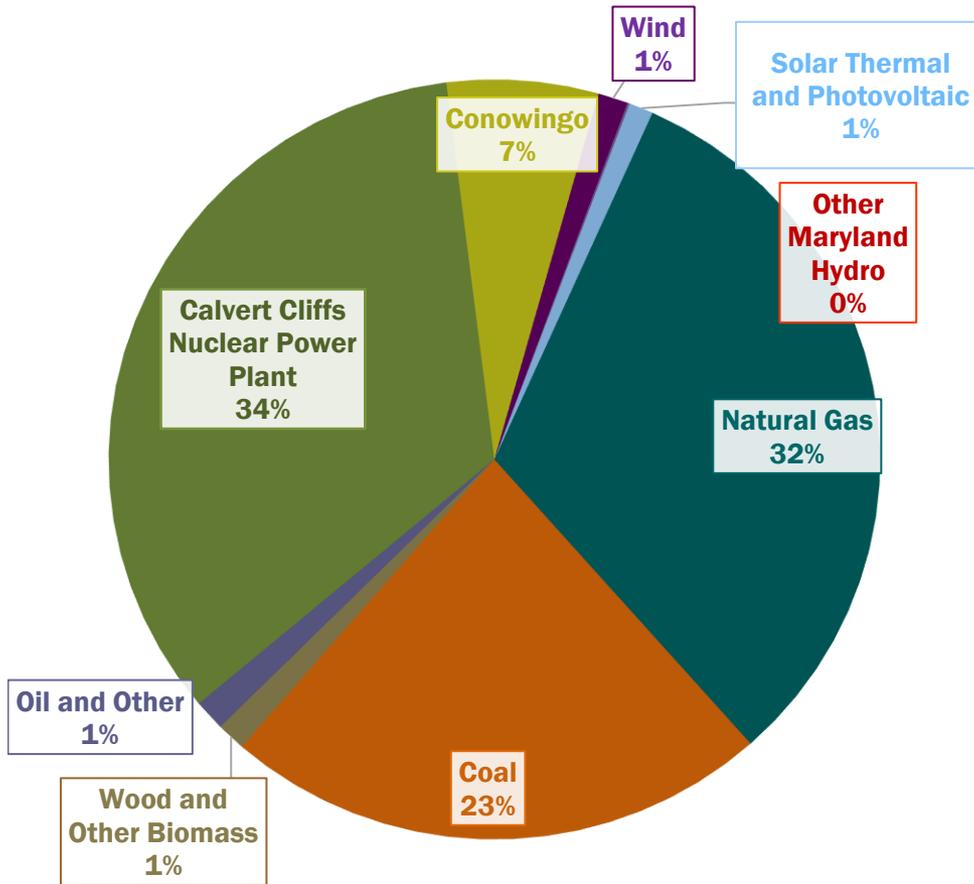
Avoids 10.6 million metric tons of CO₂ equivalent annually¹

- Total electrical generation is 15.1 million MWh per year, which represents 41% of Maryland's in-state generation, 78% of its carbon-free generation, and 26% of its electricity use²

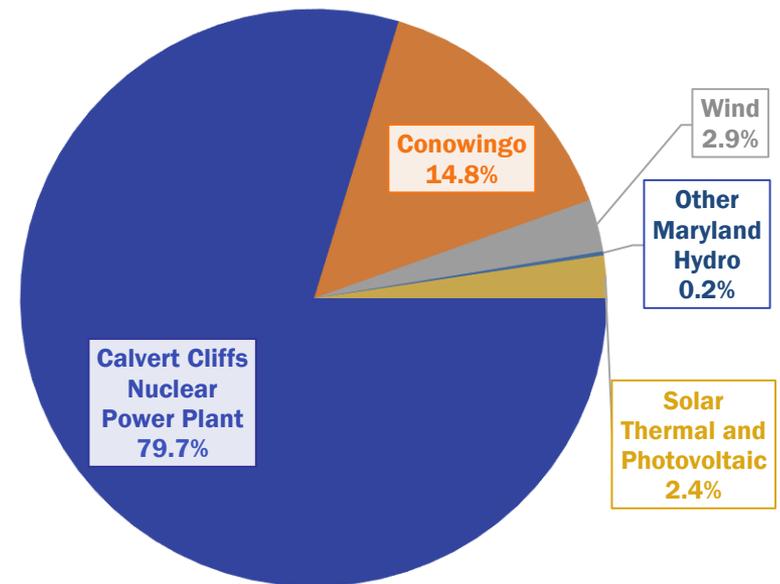
¹Maryland Department of Natural Resources, *Interim Report Concerning the Maryland Renewable Portfolio Standard As Required by Chapter 393 of the Acts of the General Assembly of 2017*. 2018

²EIA. Electricity Data Browser. Accessed June 16, 2021

Maryland Electric Power Generation, 2020

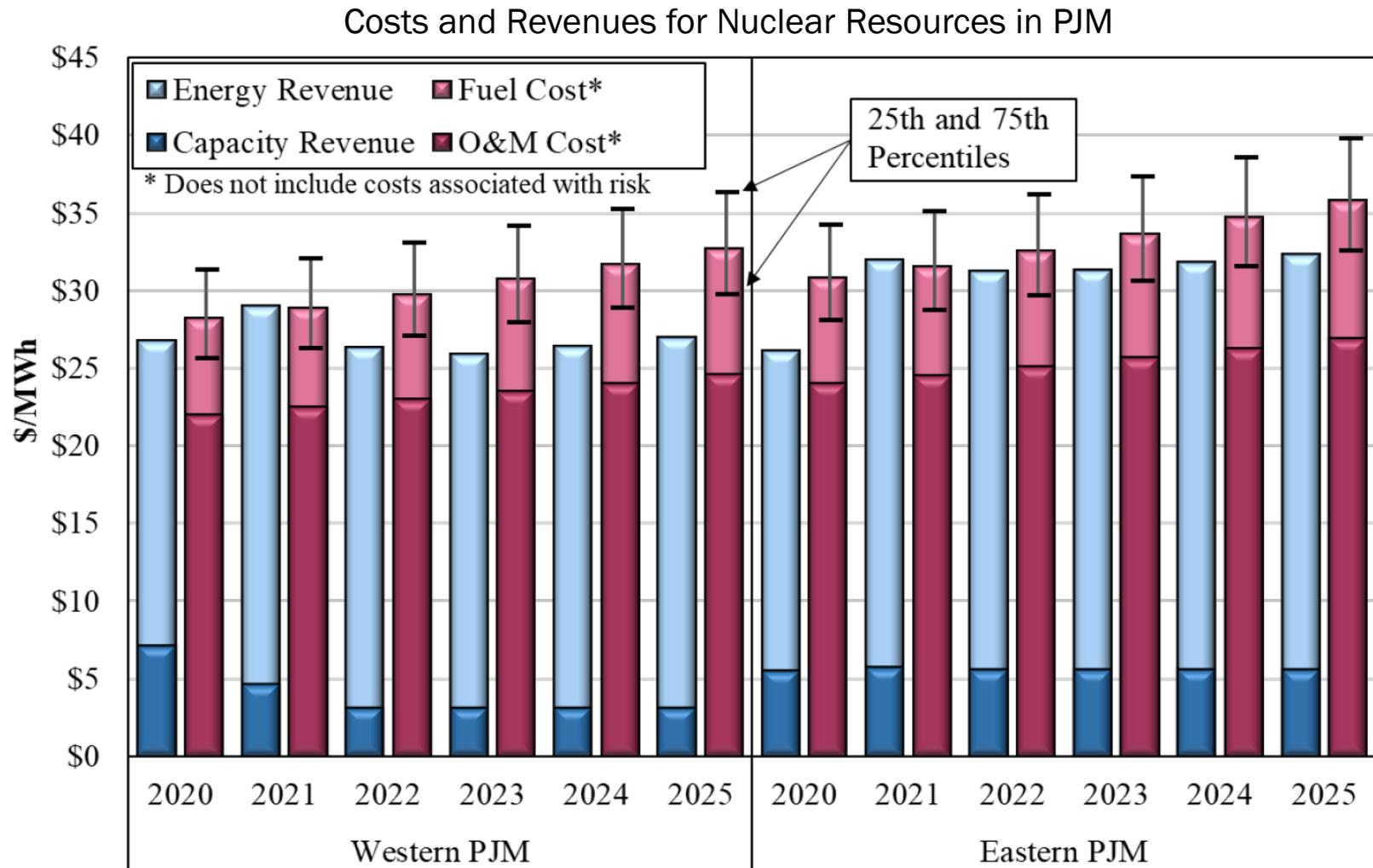


MARYLAND ZERO-CARBON GENERATION



Conowingo is Maryland's largest renewable resource with ~2.5 million megawatt hours of output (enough to power 165,000 homes) that prevents 880,000 tons of GHG emissions every year. Exelon's Calvert Cliffs and Conowingo generate 95% of Maryland's zero-carbon power

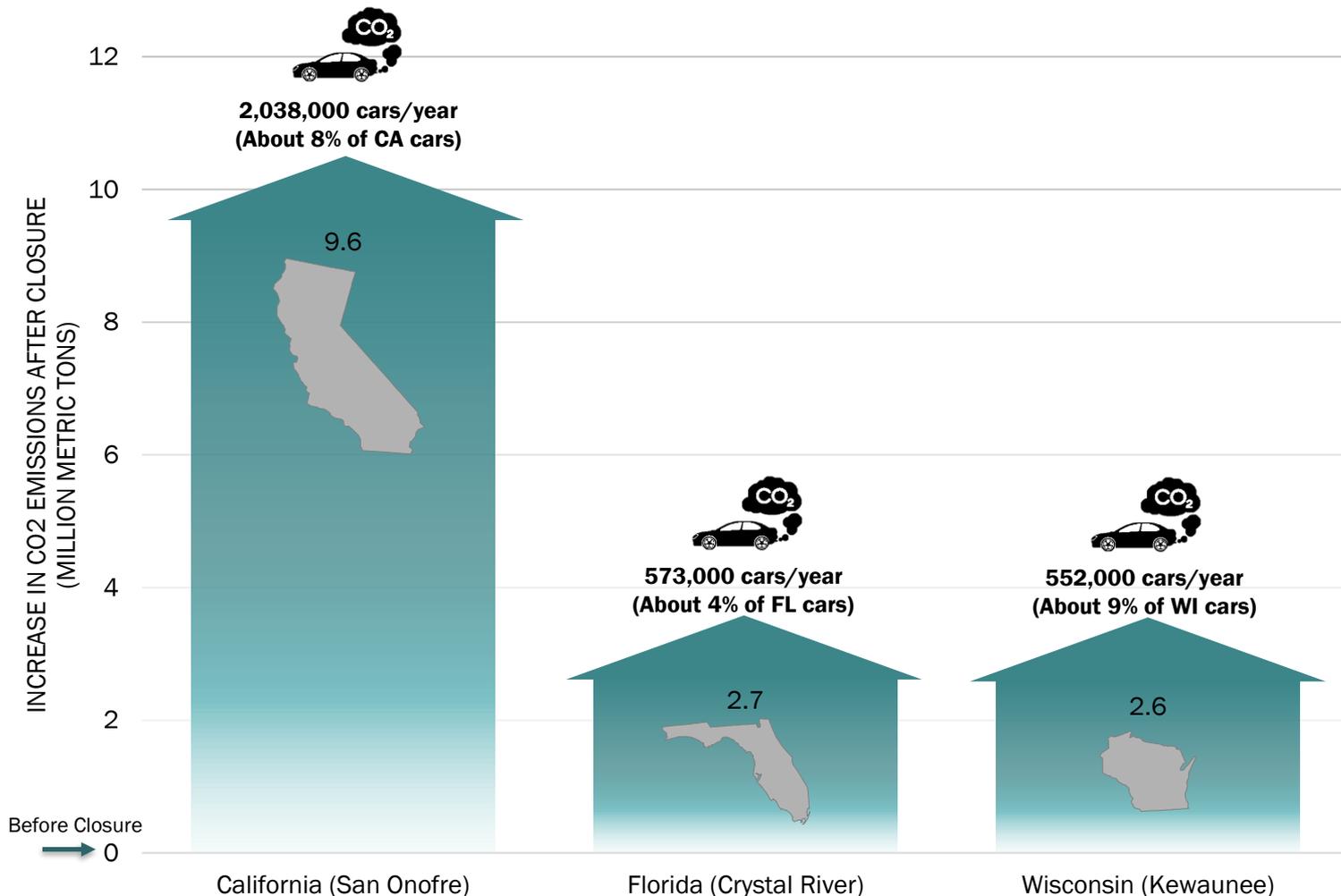
Nuclear Units in PJM Are Not Covering Costs



Source: Potomac Economics. *A Review of Nuclear Costs and Revenues in PJM*. April 2021.

<https://www.nei.org/CorporateSite/media/filefolder/resources/reports-and-briefs/potomac-nuclear-cost-study-0421.pdf>

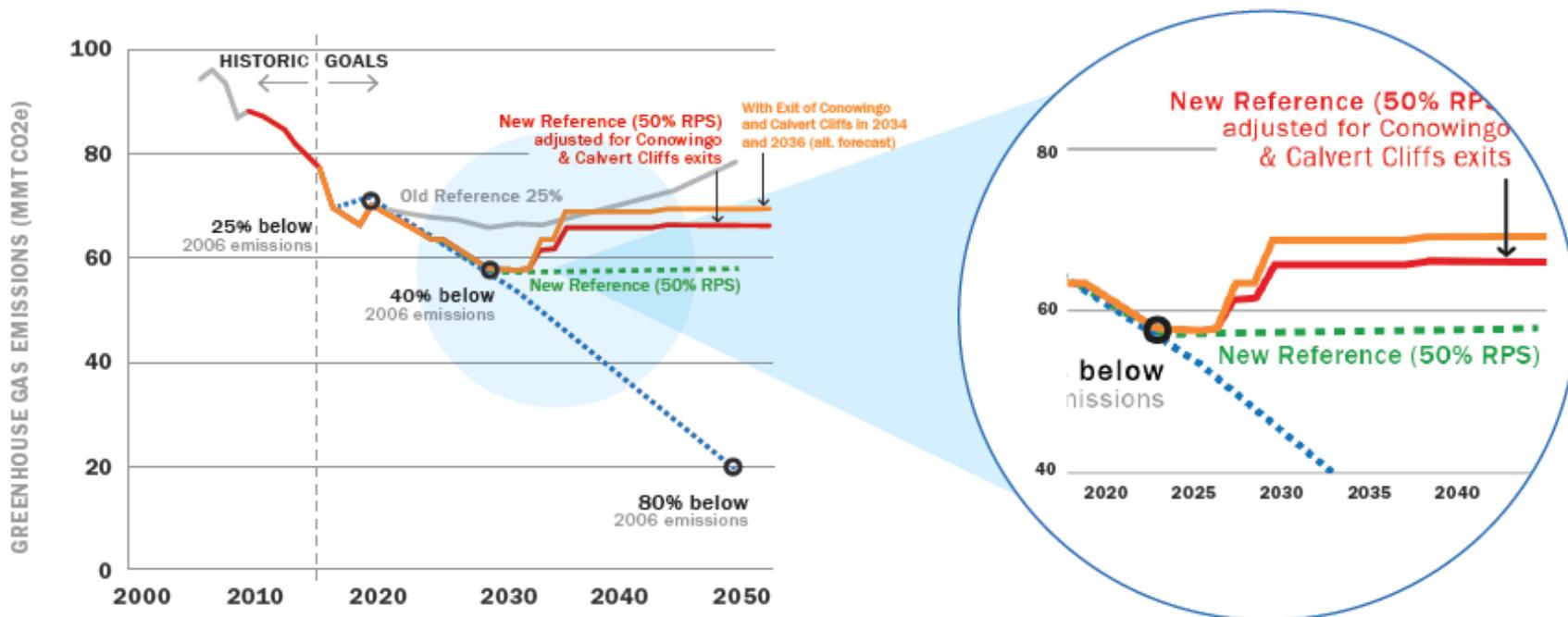
Actual State-Level Environmental Impacts of Recent Nuclear Retirements



“Early nuclear retirements lead to increased emissions and many years of alternative clean energy development, just to get back to where the state started, and during that time, the atmosphere received many millions of tons of carbon dioxide that will be there for centuries.”

-- C2ES President Bob Perciasepe [testimony](#) at Senate Environment and Public Works Committee, June 4, 2019

MARYLAND'S ECONOMY-WIDE GHG TARGETS REQUIRE EXPANDING, NOT LOSING, ZERO-CARBON GENERATION



EMISSIONS ABATEMENT OPTIONS IN MARYLAND	Calvert Cliffs Nuclear Plant	Conowingo Hydroelectric Plant	Planned Offshore Wind*	Other Maryland Zero-Carbon Renewables (wind, thermal and photovoltaic solar, other hydro)	New electricity generation incentivized or avoided by MEA's Clean Energy Grant Program
MILLION MWh/year	14.988	2.788	1.369	1.039	0.030

Zero-carbon generation is a cornerstone for other efforts at decarbonization, such as electrification of transportation.

NEW REFERENCE (50% RPS) MEETS MARYLAND RPS 50% BY 2030.

*U.S. Wind and Skipjack, approved by PSC May 2017, 4.3% capacity factor at OREC co-ops, to come into operation in 2020 and 2022.

**Electricity savings estimates are from Maryland Strategic Energy Investment Fund Report for FY 2018.

E3 Briefing to MWG (7/16/19).

Interim RPS Report