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PSC Electrification Study Scenario Shows Moderate Growth in Electricity Demand, Significant Gas Demand Reduction

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Baltimore, MD – The Maryland Public Service Commission has completed an electrification study to assess the capacity of Maryland’s gas and electric utilities to serve customers under a managed transition to a highly electrified building sector, as directed by the Climate Solutions Now Act (CSNA), enacted by the Maryland General Assembly in 2022. The report has been sent to the Legislative Policy Committee, Governor Wes Moore, Sen. Brian Feldman (chair of the Education, Energy and the Environment Committee), Del. Marc Korman (chair of the Environment and Transportation Committee), and Del. C.T. Wilson (chair of the Economic Matters Committee).

“This analysis provides sound and constructive information to policy makers as they contemplate next steps on the path to achieving Maryland’s important greenhouse gas reduction goals,” said Frederick H. Hoover, chair of the Commission. The electrification study was conducted by the Commission’s consultant, The Brattle Group, and follows a robust and transparent, months-long stakeholder process through the Commission’s Electrification Study Workgroup.

The [Maryland’s Climate Pathway Report](#) demonstrates how Maryland can meet its ambitious climate goals of 60% reduction of greenhouse gas emissions by 2031 relative to 2006 levels, and attain a net-zero economy by 2045, all while realizing health and economic benefits for Marylanders, including improved air quality, new jobs, and household cost savings. This electrification study modeled scenarios that would result in direct building heating emissions reductions consistent with Maryland’s Climate Pathway report.

The results indicate that the aggregate Maryland electric systems would see a 2.1% maximum growth in the demand for electricity (load) per year through 2031 with the high electrification scenarios assuming utility energy efficiency plans consistent with the CSNA and existing demand response plans (programs designed to incentivize customers to reduce energy usage or shift it to times of lower demand on the grid). The study notes that pursuing policies to incentivize efficient

electrification, such as cold climate heat pumps as well as additional energy efficiency and load flexibility measures, could result in further significant mitigation of electric load growth by 2031. The Maryland electric system, which currently sees peak energy usage in the summer, would switch to winter peaking around 2026-2027 with high electrification.

To add context, Maryland's electric grid experienced load growth in the 1980s of 4.9% per year and more moderate growth of 1.2-1.5% from 1990-2010, with load declining between 2010-2020. The study results show that peak load growth through 2031 with high electrification of the building sector will be comparable to or less than the growth rate the Maryland system has seen over the past 40 years.

High electrification would also reduce building sector gas demand by about 31-32% by 2031. The study also included assumptions regarding the growth in deployment of renewable energy resources such as solar, as well as grid impacts related to electric vehicles. By 2035, the Advanced Clean Cars II rule adopted in Maryland requires that 100% of sales of passenger cars and light trucks in Maryland must be electric.

As background, the CSNA set the following requirements for this study (which did not include an analysis of costs):

- Use a projection of average growth in system peak demand between 2021 and 2031 to assess the overall impact on each gas and electric distribution system
- Compare future electric distribution system peak and energy demand load growth to historic rates
- Consider the impacts of energy efficiency and conservation and electric load flexibility
- Consider the capacity of the existing distribution systems and projected electric distribution system improvements and expansions to serve existing electric loads and projected electric load growth
- Assess the effects of shifts in seasonal system gas and electric loads.

The report can be found on the Commission's website ([Commission Reports](#)), under 'Reports to the Maryland General Assembly.' Additional information on the study can be found in a [Q-and-A](#).

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About the Public Service Commission:

The Maryland Public Service Commission regulates electric and gas utilities and suppliers, telephone companies (land lines), certain water and sewer companies, passenger motor

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