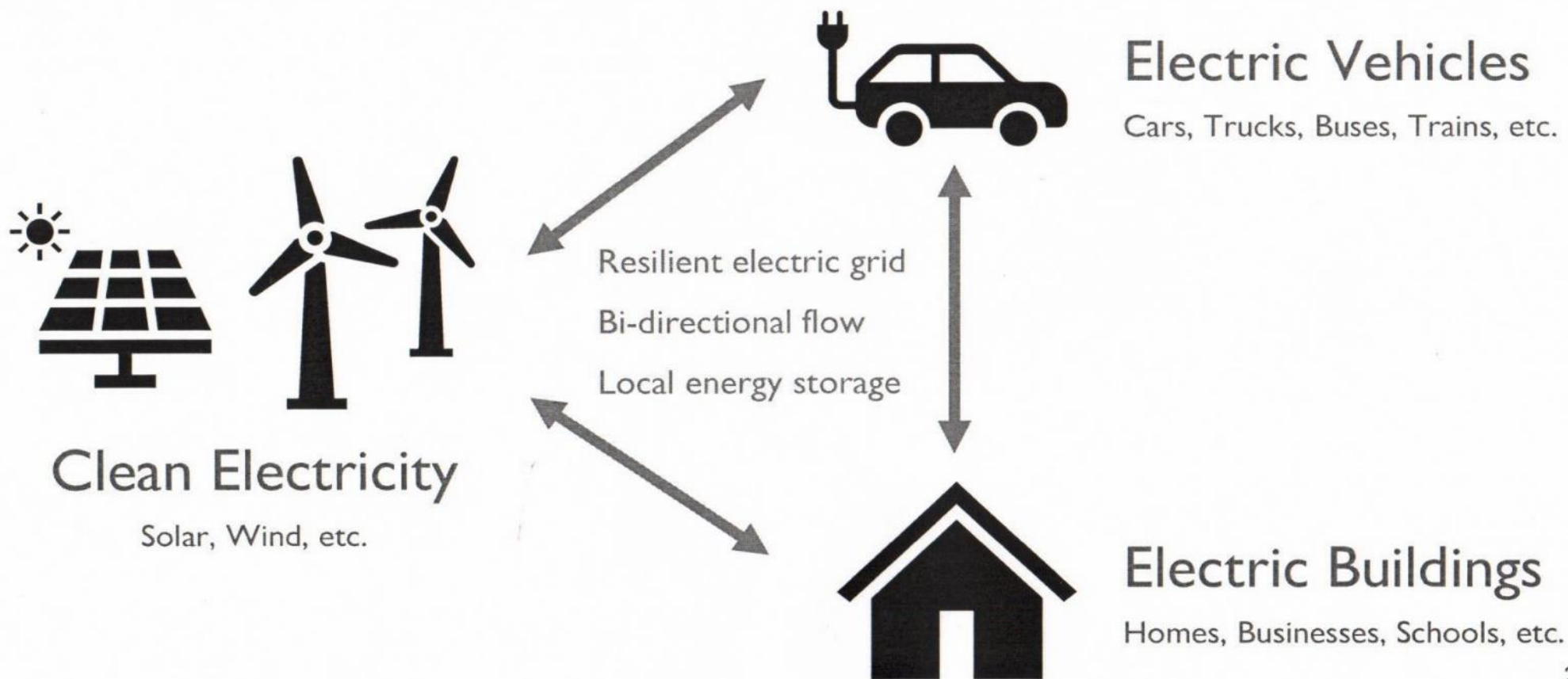


HB 831
Reducing Greenhouse Gas
Emissions – Commercial and
Residential Buildings

Where We Are Heading



Why Reduce Emissions from Buildings?

- The use of fossil fuels in buildings is a substantial source of CO₂ emissions in Maryland. Most of this energy use is for space and water heating.
- Maryland's **2030 Greenhouse Gas Reduction Act (GGRA) Plan**, approved by the Maryland Commission on Climate Change, set a goal of electrifying fossil fuel end-uses (using natural gas and oil) in buildings.
- The 2030 GGRA plan called on the Maryland Commission on Climate Change (MCCC) to develop a Building Energy Transition Plan to identify measures and goals to decarbonize the buildings sector.

Source: Maryland Commission on Climate Change

MCCC Buildings Subgroup

MCCC established a Buildings Subgroup to develop the transition plan. The group consists of representatives from a variety of sectors: builders, environmentalists, utilities, energy, and state and local agencies.

With the help of the consultant **Energy + Environmental Economics (E3)**, the Buildings Subgroup developed the [Building Energy Transition Plan: A Roadmap for Decarbonizing the Residential and Commercial Building Sectors in Maryland](#) in November 2021.

This plan was approved by the MCCC Commissioners as part of its Annual Report by a vote of **24-2** (the two “no” votes were State agencies).

The two core concepts of the plan are:

- 1) Construct **new buildings** to meet space and water heating demand without fossil fuels. An all-electric construction code for space and water heating should be adopted by 2024.

- 2) Implement a flexible Building Emissions Standard for existing commercial buildings to reduce **direct** building emissions to net zero by 2040.

Building Decarbonization Roadmap for Maryland

Red shading indicates transition time to near-zero emissions.



Legend: P = Proposed herein E = Existing but should be strengthened G = GGRA Plan target L = Legislation introduced S = In statute

Key Provisions of HB 831

House Bill 831 is based on the Subgroup's plan and recommendations, as adopted by the MCCC.

- Develop a code that requires new buildings to meet water and space heating demand without using fossil fuels. Department of Labor is to adopt the code by 2024 (by sponsor amendment) and DOL will develop a cost-effectiveness test that builders can use to apply for variances from the electric requirements on new buildings.
- **Existing commercial buildings larger than 25,000 sq. ft.** to reduce on-site emissions to zero by 2040. MDE to develop a flexible building emissions standard to achieve this. Owners of covered buildings can determine on their own how (and with technical support from MEA) to invest in building upgrades to reduce emissions. An alternative compliance pathway allows the owner of a covered building to pay a fee for building emissions that exceed the standard.

Key Provisions (continued)

- ACP funds would be invested in carbon sequestration and other measures that net out remaining building emissions.
- A **Building Energy Transition Taskforce** will recommend a plan to assist commercial and residential building retrofits through tax credits, subsidies, and other state support.
- The bill establishes a goal of retrofitting 100% of low-income households by 2030. Funding to be provided to enable MEA, DHCD, and local governments and organizations to offer little-to-no upfront cost retrofits.

This Is What the Bill Does NOT Do

- Existing homes do **not** have to electrify (or make any changes)
- New buildings will **not** cost more. In fact, almost all building types will cost less to build and operate as electric buildings (per E3 and RMI).
- Existing buildings are **not** required to electrify. The MCCC plan assumes that many buildings can keep gas systems using an alternative compliance program. Also, renewable gas and other low-carbon fuels would qualify.
- A build-out of the grid is **not** necessary to handle increased demand before 2030. E3's study shows that winter power demand will be the same as summer demand in 2030. After that, there will be some investments needed to strengthen the grid (and gas system investments will decline).

Maryland Would Not Be the Only Jurisdiction Requiring Electrification of New Buildings

- **New York City** has enacted an all-electric, new construction law that also includes a ban on fossil fuel used for cooking, not just for space and water heating.
- **California's** new code doesn't require new buildings be all-electric, but its new code will prompt many builders to forego gas in new construction starting in 2023. ([nrdc.org](https://www.nrdc.org))
- **New York State** is currently considering a statewide, all-electric building requirement.
- **Washington State** is considering all-electric new construction for commercial buildings.
- **New Jersey's** Energy Master Plan calls for the full electrification of buildings

This Plan Will Reduce Emissions and Costs

E3 found that implementing the plan will:

- Reduce emissions from residential and commercial buildings by 95 percent by 2045 (assuming a high rate of adoption of residential heat pumps)
- Reduce construction and energy costs for all building types except for large commercial buildings
- Ramp up electricity system investments to around \$1B annually by 2045
- Ramp down gas system investments, saving around \$1B annually by 2045
- Provide the lowest gas rates among all scenarios modeled

Economic Benefits of the Building Energy Transition Plan

According to an RESI (Towson University) analysis, implementing the Building Energy Transition Plan would, between 2021 and 2045, generate an **additional:**

- \$16B to \$67B in total economic activity;
- **\$4.5B to \$23B in net economic benefits;**
- 29,000 to 215,000 jobs;
- \$4B to \$19B in wages;
- \$600M to \$1.3B in county tax revenue; and
- \$800M to \$1.9B in state tax revenue

Source: Towson University, Regional Economic Studies Institute, “Economic Benefit Analysis of Building Energy Transition Plan Investments.”

THE SUN

Maryland must reduce its natural gas consumption

Commentary in support of the Climate Solutions Now Act of 2022

By: Baltimore Sun Editorial Board

2/22/22

There's an old saying (and song lyric) repeated around the State House whenever difficult issues arise before the Maryland General Assembly: Everybody wants to get into heaven, but nobody wants to die. In the context of legislative matters, it means that we can all usually agree on good outcomes, but it's how best to get there that proves daunting. In the matter of how to deal with the serious threat posed by climate change, most lawmakers (those who aren't outright global warming deniers) favor a reduced carbon footprint. But, aside from the relatively easy steps like encouraging renewables or providing incentives for homeowners to invest in insulation or other forms of conservation, the devil is inevitably in the details. That was evident last week when landmark climate legislation, the Climate Solutions Now Act of 2022, received its first hearing before the Senate Education, Health and Environmental Affairs Committee.

The sticking point? Not necessarily in setting more ambitious goals like a 60% reduction in greenhouse gas emissions by 2030 (the state is currently on track for a 40% reduction in eight years), but in specific measures to reduce natural gas consumption. And here's one that could prove a significant roadblock: The legislation would mandate that all new buildings in Maryland be powered by electricity. That prospect drew howls from Baltimore Gas and Electric and others with significant investments in natural gas distribution. And, indeed, that industry has long tried to present itself as at least a "transitional" fuel that is not as harmful as burning coal or gasoline. And there's surely no shortage of consumers who like their gas stoves, water heaters and furnaces — or at least they did prior to recent rate hikes that have raised the cost of natural gas 24% from one year ago (and may increase further as Russia threatens Ukraine).

In reality, the primary component of natural gas, methane, is a far more potent greenhouse gas than carbon dioxide. Production leakage is a major problem, but even if that were addressed, methane is still a fossil fuel and so produces carbon dioxide when it's burned. Adding natural gas capacity whether in the U.S. or elsewhere will only make matters worse. There's simply no room for further fossil fuel development if the world is serious about meeting its climate goal of no more than a 2-degrees Celsius rise (or 3.6 degrees Fahrenheit) in average temperatures this

century. Switching to all-electric construction is a sensible move, particularly as its followed by greater investment in greener forms of electrical generation including wind and solar.

Nevertheless, opponents of electrification have made claims about natural gas that don't stand up to scrutiny. They have said that natural gas is more reliable (which ignores how most gas furnaces require electricity to run), that it's cheaper (the Maryland Commission on Climate Change actually found the reverse to be true), and that transitioning to electricity will harm low and moderate income households when, again, the long-term fuel costs should actually prove lower. Granted, not everyone can afford new appliances, but that requirement of the legislation is aimed primarily at new construction.

Some companies and individuals may take a financial hit as the state transitions away from natural gas, of course. But setting energy policy based on gas production or pipeline jobs is like setting Chesapeake Bay water quality goals based on the convenience to polluters. And make no mistake, Maryland is particularly vulnerable to climate change because of its coastal location. The U.S. Environmental Protection Agency has warned that rising sea levels, worsening storms, and saltwater intrusion that ruins farmland and infiltrates drinking water supplies could spell disaster for the state, particularly low-lying areas near the Chesapeake Bay and its tributaries. Maryland can't afford to wait for other states or countries to make the transition to clean energy; we must lead by example.

Lawmakers should keep this threat in mind as they consider any changes to the legislation to reduce its impact or delay its implementation. There may be a price to pay for reducing our dependence on methane but there's an even greater price to be paid by doing nothing about climate change. Build more gas pipelines and we are locking in more carbon production for decades hence. And while it's all very well to transition to electric school buses or insist new or renovated schools are energy efficient, lawmakers must insist on doing the more politically difficult things as well beginning with regulating natural gas out of all new buildings.