Maryland Buildings Decarbonization Efforts

New Construction

Presented by the Sierra Club to The Maryland Commission on Climate Change – Mitigation Work Group's Buildings Ad Hoc group

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Response to survey questions collaboratively prepared by David Smedick (Sierra Club), Susan Stevens-Miller (Earthjustice), and Jim Grevatt (Energy Futures Group)

Agenda Overview

Residential New Construction

Commercial New Construction

Fossil Gas Alternatives

Residential

New Construction Standard

Maryland should adopt a net-zero, all electric standard for new homes as soon as possible to protect consumers from paying for stranded assets and by no later than 2025, recognizing the time needed for developers to plan for code compliance.

The state should also:

- Develop a plan that targets implementation before that date if possible
- Encourage, support, and incentivize localities to adopt net-zero all electric standards prior to 2025
- Adopt an all electric-, electric vehicle charging- and solar-ready new residential construction standard

New Construction Standard

CLEAN ENERGY DC

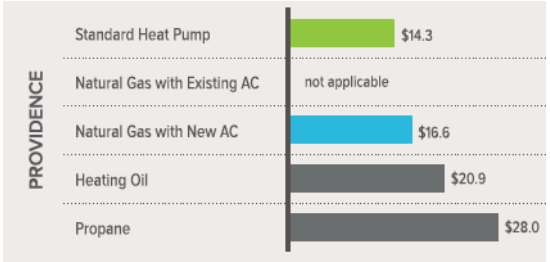
https://doee.dc.gov/cleanenergydc

Zero Energy Appendix for the 2021 IECC

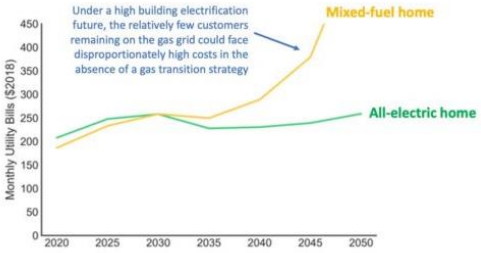
This proposal provides cities and states an appendix to the residential section of the 2021 IECC that would result in a residential building that has zero energy consumption over the course of a year. Jurisdictions would have the prerogative to adopt the appendix in support of policy goals related to energy efficiency and renewable energy.

The provisions contained in this appendix are not mandatory unless specified as such in the jurisdiction's adopting ordinance.

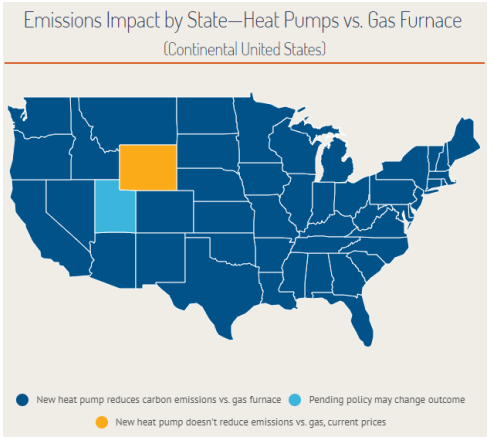
https://newbuildings.org/wp-content/uploads/2018/10/nbi_Factsheet_ZEBuilding-Appendix-Factsheet_5.pdf



https://rmi.org/insight/the-economics-of-electrifying-buildings/



https://www.ethree.com/at-cec-e3-highlights-need-for-gas-transition-strategy-in-california/



https://rmi.org/its-time-to-incentivize-residential-heat-pumps/

New Construction Standard

Incentives

- Joint agency task force for affordable housing
- EmPOWER
  - Including Coordinated Residential Construction Program
- Innovative financing
- Tax abatements
- Permitting incentives

Barriers

- Education
  - Workforce (designers, contractors, etc.)
  - Homeowners

Commercial

New Construction Standard

Maryland should adopt a net-zero, all electric standard for new commercial buildings as soon as possible to protect consumers from paying for stranded assets and by no later than 2026, recognizing the time needed for developers to plan for code compliance.

The state should also:

- Develop a plan that targets implementation before that date if possible
- Encourage, support, and incentivize localities to adopt net-zero all electric standards prior to 2026
- Adopt an all electric-, electric vehicle charging- and solar-ready new commercial construction standard
- Institute a plan for publicly-owned buildings to be constructed to the net-zero, all-electric standard beginning well before 2026. The state should lead by example and construct new government buildings and schools to this standard beginning as early as 2021.

New Construction Standard

Incentives

- EmPOWER
- Innovative financing
- Tax abatements
- Permitting incentives
- Restaurant-specific incentive programs
- Education incentives for designers & contractors

Barriers

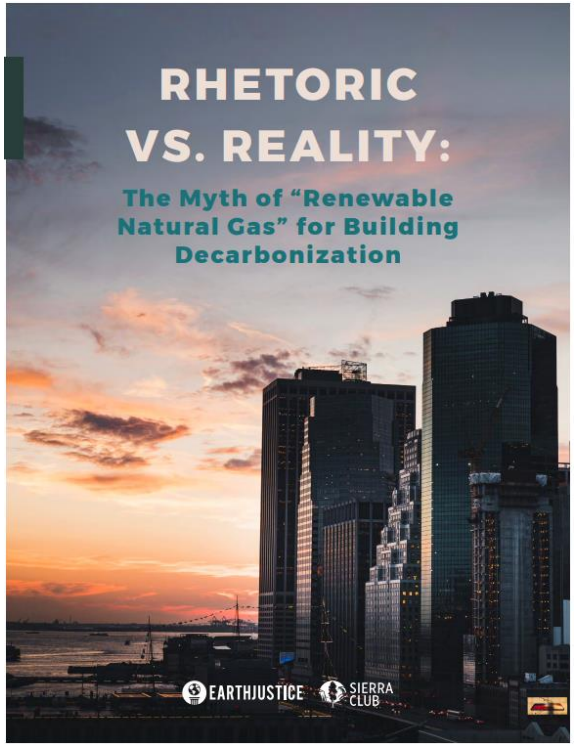
- Education
  - Workforce (designers, contractors, etc.)
  - Building owners

Fossil Gas Alternatives

Fossil Gas Alternatives

Upon evaluation of FGAs, it is clear that they are not a viable alternative to building electrification.

- The potential supply of FGAs is a small fraction of gas demand. The gas industry's own research found that after two decades of ramping up supply and production, FGAs could only replace 13% of the existing demand for fossil gas.
- Replacing fossil gas with FGAs is extremely costly. High production costs mean FGAs range from 4 to 17 times more expensive than fossil gas.
- FGAs have a mixed environmental record. Facilities where FGAs are produced can exacerbate air and water pollution impacts in nearby communities, and intentionally produced methane can increase greenhouse gas emissions.
- FGAs perpetuate the health impacts of combustion. Burning FGAs in homes, offices, and commercial spaces has the same issues inherent to any combustion-based fuels.



https://earthjustice.org/sites/default/files/feature/2020/report-decarb/Report_Building-Decarbonization-2020.pdf

Decarbonization of New Construction in Maryland

The survey responses and this presentation represent our current recommendations on these issues in Maryland and for the sake of this stakeholder process. We look forward to hearing from all the stakeholders on the survey questions (including feedback on our responses) and working to find recommended solutions to help Maryland meet its climate action goals.

Thank You