

November 1, 2022

Dear Councilmember,

On behalf of our thousands of members and constituents, the twenty-one undersigned organizations are writing to ask for your vote in favor of Bill 13-22, Comprehensive Building Decarbonization, which has been introduced by Councilmember Hans Riemer with the cosponsorship of Councilmember Will Jawando and the support of County Executive Marc Elrich.

Five years ago, the Council unanimously passed the Emergency Climate Mobilization Resolution, committing Montgomery County to reduce its greenhouse gas emissions 80% by 2027 and 100% by 2035 from a 2005 baseline. These goals simply cannot be met by allowing new and substantially renovated buildings to include fossil fuel appliances for space and water heating. Bill 13-22 will keep Montgomery County on track towards its goals by requiring the County Executive to propose new all-electric building codes by January 1, 2024 for most new and substantially renovated buildings.

Across the nation, state and local policymakers are realizing that greenhouse gas emissions from combustion of fossil fuel for heat, hot water, and cooking in buildings, including homes, have a disastrous climate impact and must rapidly come to an end. Variations of this modest and sensible policy change have been approved in more than 80 jurisdictions across the nation, from California to Massachusetts. The District of Columbia recently adopted a new law prohibiting any fossil fuel use in most new and renovated buildings, as well as requiring them to achieve “net zero energy” status over the course of a year.

Statewide enactment of all-electric codes was the number one recommendation of the Maryland Commission on Climate Change, chaired by Governor Hogan’s Environment Secretary, after the Commission concluded that construction costs are similar and that ongoing utility costs to tenants would decrease significantly with all-electric buildings. Those findings are confirmed many times over by highly respected research groups such as RMI, the National Buildings Institute, the Building Electrification Institute, the American Council for an Energy Efficient Economy, and Rewiring America. The Urban Land Institute pointedly summed up a recent study by writing “Owners, developers, and investors who ignore the growing [electrification] trend risk premature obsolescence of their assets and face growing operating and capital expenses as the rest of the market moves away from fossil fuels.”

10/31/2022

Organizational letter to Council page 2 of 3

In addition to these analyses, the recent Inflation Reduction Act's generous tax advantages for developers who build energy efficient buildings more than offset any additional first costs for many building types.

A huge body of research demonstrates that Montgomery County residents are putting their health at risk by cooking with methane ("natural") gas or propane. This is particularly true for lower income residents. Moreover, the utilities' distribution cost of methane gas is projected to skyrocket. The Maryland Office of the People's Counsel [recently released a study](#) showing that methane gas distribution costs will force increases of 40% in the typical customer's winter gas bills by 2035 using the average 2020-2022 commodity price as a baseline, and more than 100% using September 2022 commodity prices. It makes no sense to build new buildings and renovations that subject additional owners and tenants to these coming price increases.

As always, we are mindful of the particular needs of lower-income residents and urge the county to use the Green Bank and other sources of support to assist people who need help with their energy transition.

Proponents of the status quo have suggested a host of weak arguments for continuing to burn unhealthy, dangerous, and expensive fossil fuel in new homes and buildings. Perhaps the weakest of them is to ask you to wait until the Maryland Public Service Commission completes its statewide study of the regional grid by January 1, 2024. That is simply a delaying tactic. The regional grid has enough excess capacity to power literally millions of new homes. Pepco's [study of capacity in DC](#) shows that it is capable of providing far more local electrification than is projected in the coming years from new and renovated buildings in Montgomery County.

We are attaching to this letter a policy memo with two appendices treating in much more detail several of the issues that have been raised, including the deficiencies of the Office of Legislative Oversight's Economic Impact Statement. Clearly, to meet its own greenhouse gas reduction goals, Montgomery County simply must not continue to allow gas combustion in new buildings for decades to come. Passing Bill 13-22 will make the county a regional and national leader in the modern, healthy, economical, climate-friendly buildings that tenants will expect in the coming years. We urge you to take the sensible step of supporting Bill 13-22 and ensuring that it passes before the end of this Council session.

Thank you.

//signing organizations on next page//

10/31/2022

Organizational letter to Council signature page

350MoCo

American Institute of Architects Maryland

Baltimore-Washington Conference,

United Methodist Church

Bethesda Green

CASA

Cedar Lane Environmental Justice Ministry

Chesapeake Climate Action Network

Chesapeake Physicians for Social

Responsibility

Climate Reality Montgomery County

Elders Climate Action Maryland

Indivisible Howard County

Interfaith Power and Light

(DC.MD.NoVA)

League of Women Voters of

Montgomery County, MD

Maryland League of Conservation Voters

Montgomery County Faith Alliance for

Climate Solutions

NAACP Maryland State Conference,

Environmental and Climate Justice

Committee

Nature Forward (formerly Audubon

Naturalist Society)

Maryland Legislative Coalition

MLC Climate Justice Wing

Sierra Club Montgomery County

Takoma Park Mobilization Environment

Committee

POLICY MEMO ON COMPREHENSIVE BUILDING DECARBONIZATION BILL
October 2022

Local jurisdictions around the nation are electrifying new and renovated buildings

- Officials in localities across the nation are realizing the large contribution that burning fossil fuels for temperature control and hot water heating in buildings has on climate change. Where they are not preempted by state law, more than 80 jurisdictions have adopted, or are in the process of adopting, all-electrification or new zero energy policies. These range from small towns such as Crested Butte and Ithaca to major cities such as Seattle, San Diego, Boston and New York City.
- Locally, the District of Columbia in July passed a Zero Emissions future buildings (and major renovations) law, which is much stronger than what is being proposed in Montgomery. The District’s law allows for no emissions from new and substantially renovated buildings.

Bill 13-22 implements Montgomery County’s Climate Action Plan

- Direct use of gas, heating oil, and propane in buildings accounts for about 2.1 million metric tons or 50% of all county greenhouse gas emissions in 2018, the last year for which a Montgomery County Greenhouse Gas Inventory is publicly available.
- In 2017, the Montgomery County Council unanimously passed the Emergency Climate Mobilization Resolution, committing the county to reduce its greenhouse gas emissions 80% by 2027 and 100% by 2035 from a 2005 baseline.
- Following on the Emergency Climate Mobilization Resolution, the county put a great deal of effort, including extensive public participation through issue-specific working groups, into developing the 2021 Climate Action Plan (CAP). The CAP establishes a roadmap to implement the greenhouse gas reduction goals of the Emergency Climate Mobilization Resolution by 2035 – only thirteen years from now.
- Electrification of new and substantially renovated buildings is one of the CAP’s key recommendations.¹ One of the few sources of emissions that the county can directly control is

¹ Montgomery County Climate Action Plan: Building Actions Fact Sheet, *available at* <https://www.montgomerycountymd.gov/green/Resources/Files/climate/climate-action-plan-building-actions.pdf>.

its homes and buildings. Sources of electric generation (except for additional local solar energy) are largely outside of the county's control, and reducing mobile emissions from vehicles (the other large source of emissions) is much more of a challenge.

- Bill 13-22, Comprehensive Building Decarbonization, would achieve the county's goal of an all-electric new construction code and begin to decrease climate emissions from buildings. It makes no sense to allow the construction of new buildings that continue to directly emit greenhouse gasses. Enactment of the bill is essential for the county to meet its greenhouse gas reduction goals, and respects the public process of developing the Climate Action Plan.

State of Maryland policy context

- Building electrification is the top 2021 recommendation of the Maryland Commission on Climate Change ²
- There is every likelihood that the Maryland General Assembly will adopt a statewide all-electric new building code in the next few years even without this legislation (the Office of Legislative Oversight's Economic Impact Statement estimates implementation by 2029.)
- The Maryland Code already mandates that any building over 35,000 square feet must show a 20% reduction in greenhouse gas emissions before January 1, 2031 compared with 2025 average building levels for like building types, and completely eliminate direct greenhouse gas emissions by 2040. Mandating electric buildings now will ensure that building owners avoid retrofit costs in coming years. Building developers may avoid the possibly higher "first cost" now, but they will have to retrofit at higher expense in a few years or pass along the higher cost of retrofit for compliance to long-term building operators.

Indoor gas combustion for cooking has serious health effects

- Gas stoves and cooktops are a primary source of pollution inside the home. Cooking with gas can spike emissions of nitrogen dioxide and carbon monoxide to levels that would violate outdoor pollutant standards. Homes with gas stoves have nitrogen dioxide concentrations 50 – 400% higher than homes with electric stoves. Exposure to nitrogen dioxide, even in the short term and at low levels, can cause respiratory effects.

² Maryland Commission on Climate Change Appendix A: Building Energy Transition Plan, *available at* <https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/2021%20Annual%20Report%20Appendices%20FINAL.pdf>

- There is a great deal of peer-reviewed evidence that burning methane gas or propane for cooking can trigger pediatric asthma and create breathing difficulty in older people. One rigorous meta-analysis of dozens of prior studies showed that kids who live in a home with a gas stove are 42% more likely to have asthma.³
- In addition, a recent large study from Harvard showed that even when it is not burned, the gas that most people burn in their kitchens leaks constantly and contains 21 known hazardous air pollutants.
- The health issues caused by gas combustion are particularly bad for lower-income people who are more likely to have tight, under-ventilated kitchens. In June, the conservative American Medical Association passed a resolution recognizing that use of gas stoves increases household air pollution and the risk of childhood asthma and asthma severity and asking its members to educate people and help with the transition to electric appliances.⁴ In addition to the climate advantages, it is good public policy to stop putting this health risk in people’s new homes.
- As we have recently seen in Montgomery and Howard Counties and elsewhere, gas can blow up, putting lives at risk.

Bill 13-22 favorably impacts racial equity and social justice

- The Office of Legislative Oversight’s Racial Equity and Social Justice Impact Statement “anticipates that Bill 13-22 will have a favorable impact on racial equity and social justice in the County, as Black, indigenous, and Other People of Color (BIPOC) residents could disproportionately benefit from countywide reductions in greenhouse gas emissions driven by building decarbonization.”
- Such positive effects would come in at least two ways: 1) from reduced fuel costs over time (according to the OLO RESJ Statement, about 17% of Montgomery County residents are energy burdened and about 9% are living in energy poverty, with greater burdens experienced by Black and Latinx residents) and 2) from improved health (Black and Latinx residents have far higher rates of emergency room visits for chronic respiratory diseases.)

³ Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children, available at <https://academic.oup.com/ije/article/42/6/1724/737113>

⁴ American Medical Association House of Delegates (A-22), available at <https://www.ama-assn.org/system/files/a22-refcmte-d-report-annotated.pdf>, page 16-17.

The OLO Economic Impact Statement is seriously and inappropriately incomplete and draws the wrong conclusion

- The Montgomery County Council’s Office of Legislative Oversight has produced an Economic Impact Statement concluding that Bill 13-22’s overall impact on the county’s economics would be negative. This analysis is sadly incomplete but concludes that “the change in building code has the potential to reduce, both, private sector capital investment and the County’s competitiveness in the commercial building sector.”
- Its own analysis of the commercial building sector doesn’t lead to the negative conclusion that it suggests. The study acknowledges that “All Electric New construction costs (equipment, operations, maintenance, utility bills) are lower than mixed fuel new construction costs for ALL building types.” (Page 7) and “All Electric Retrofit costs are lower than Mixed Fuel retrofit costs for ALL building types EXCEPT large commercial buildings.” And, the closing discussion of the competitiveness issue states that “*Given data limitations and the complexity of building electrification, it is impossible to quantify whether the benefits to some entities would outweigh the costs to others.*”
- It is worth emphasizing that all available studies (except for one NAHB-funded study) suggest that new all-electric homes can be built less expensively than mixed fuel homes, and that on-going fuel costs are much less. There are more new homes built than commercial buildings.
- Builders in Montgomery County can get Commercial PACE loans from the Montgomery County Green Bank for new or renovated buildings that include a variety of environmental attributes. The Council updated the C-PACE legislation earlier this year to explicitly include climate-related improvements, including renewable energy, grid resilience and property resilience. Loans made by the C-PACE program allow the builder to retain capital for other uses, thus lowering his costs, but are paid back by the property owner on their property tax.
- Any possible additional cost of large commercial building retrofits is irrelevant to Bill 13-22 because of existing state and county law. Commercial buildings greater than 35,000 sq ft must eliminate fossil fuel systems by 2040 under the Climate Solutions Now bill. Existing buildings larger than 25,000 square feet will also be subject to Montgomery County’s Building Energy Performance Standards (BEPS). Moreover, the cost scenario discussed on page 7 of the EIS regarding retrofits of commercial buildings only applies where the existing fossil fuel energy system is not at the end of its life span. And, under BEPS, buildings can opt for alternative compliance plans to minimize retrofit costs. Thus, concluding that Montgomery County’s competitiveness would be undermined because developers would move large

commercial buildings to other, possibly less demanding jurisdictions is not a consequence of this new proposed legislation.

The EIS ignores the social costs of maintaining the status quo

- The study sets aside (p. 5) normal procedure in policy analyses by not taking into account the costs of doing nothing, sometimes referred to as the social costs of carbon or the opportunity cost. This factor simply asks, “what are the costs of doing nothing – eg., not accelerating building electrification in the County?” A good local example of this is the social and financial costs of childhood asthma or other respiratory distress triggered or exacerbated by burning methane gas in cooktops. As noted above, such costs tend to be more concentrated in Black and Latinex populations. A recent study by Resources for the Future calculated that the true social cost of carbon is about \$185 per ton - equal to about \$388 million dollars from Montgomery County’s current building emissions alone. This is the cost – spread out across the County taxpayer base – to which the costs of accelerated electrification should be compared.

The EIS ignores the economic impact of lifecycle/consumer costs

- The Maryland Commission on Climate Change, through the study commissioned from the national consulting group Energy and Environmental Economics (E3), found that the construction costs of retrofits of large commercial buildings were sometimes more expensive and sometimes cheaper than mixed fuel retrofits, but that the annualized costs (construction, operation, maintenance, utility bills) were cheaper than mixed fuel retrofits.⁵
- The OLO study elects to focus on capital costs (“first costs”) (p. 9) rather than on consumer costs (p. 7) because “While it can be financed, OLO believes [capital cost] offers a better indicator of potential short-term costs of electrifying buildings than total annual consumer costs because it excludes savings from lower utility and operation/maintenance expenses.” (p. 8) Lower utility and operation/maintenance costs are later described as too risky and uncertain to be included in the projected costs. This is absurd in the context of an economic impact study.

The EIS leaves out many positive economic impacts that overwhelm any possible negative impacts from the commercial sector alone

⁵ Maryland Commission on Climate Change Building Energy Transition Plan, *available at* <https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Commission/Building%20Energy%20Transition%20Plan%20-%20MCCC%20approved.pdf>, page 7.

- With new homes and building electrification, the economic cycling of fuel savings secured by families, building operators, and commercial tenants who pay their own utility bills far surpass any additional first costs. Similarly, wages and salaries associated with new electrical jobs would blunt any negative economic impacts.

The EIS postulates and gives considerable weight to several phantom “real world” risks that it says studies of building electrification do not consider

- One of these is the relative future cost of natural gas compared to electricity. The EIS mentions that “relative drops in the price of gas has been identified as an important factor in decisions to forego building electrification.” (p. 10). However, Maryland's Strategic Infrastructure Development and Enhancement Plan (STRIDE) law allows Maryland’s gas distribution utilities to submit five-year infrastructure replacement plans to the Maryland Public Service Commission for expedited cost recovery. It allows gas utilities to add a monthly surcharge on customer bills to recover the estimated costs of replacement projects with or before the execution of the projects - an easier and faster method for gas utilities to recover these infrastructure costs from ratepayers. The Maryland utilities project that repair costs for their leaky systems under the STRIDE program will rise from \$155 million annually (2022) to \$455 million annually by 2044. The Office of People’s Counsel likened the gas utilities to having a credit card with no spending cap with ratepayers footing the bill. A possible global trend of falling gas prices does not seem likely to reach Maryland gas consumers.
- Another risk identified is shortage of “knowledge and technical expertise among developers, general contractors and subcontractors” about how to properly install all-electric building systems. But several large all-electric developments (eg., Hillandale Gateway) are already planned or built. Moreover, as noted, the District has passed a much stronger new and substantially renovated buildings law. The knowledge is very easily available in Montgomery County.
- A third risk identified is lack of information among building buyers and tenants about the energy-efficiency benefits of all-electric buildings, leading to buyers and tenants being unwilling to help cover the upfront higher costs of putting up such a building in the first place. This risk assumes that there will be an up-front/first cost premium that can’t be passed along. The recent passage of the Inflation Reduction Act (IRA) addresses the possibility of an upfront premium and removes much of the risk of not being able to achieve return on investment in all-electric construction.

The EIS completely ignores the substantial financial incentives for commercial building retrofits under the IRA and other federal programs

- The EIS notes that capital costs can be financed (p. 8). Indeed, the recently passed Inflation Reduction Act offers numerous incentives for all-electric construction, including:
 - Tripling currently allowable 179D tax deductions for energy efficient new construction and retrofits⁶
 - Expansion of 179D deduction to now benefit tax-exempt entities
 - Section 45l tax credit for multifamily developers increased 2.5x and expanded to more building types
 - \$837 million for affordable housing energy efficiency programs
 - \$20 billion to green banks that can benefit all sectors of the building industry and an additional \$7 billion to green banks for low-income programs
 - Homes rebate program: a \$4.3 billion program
 - Section 25d 30% residential clean energy credits, both for installation of solar and geothermal and for air source space and water heat pumps and electrical upgrades.
 - High-Efficiency Electric Home Rebate program (HEEHRA)
- The tripling of the section 179D tax deduction under the Internal Revenue Code for energy efficient new construction and for energy efficient retrofits of existing buildings provides that for buildings placed into service after 2022, taxpayers can claim a tax deduction of up to \$5 per square foot (the prior maximum benefit was \$1.88 per square foot). This single benefit by itself could outweigh the incremental first cost of \$0.33-0.50 per square foot noted by the EIS on page 9 as a barrier to electrification of modeled medium-sized office buildings.
- For additional detail on the numerous IRA incentives for electrification, see Appendix 2. It seems unlikely that Montgomery County builders and developers will not take advantage of

⁶ How the Inflation Reduction Act of 2022 Expands Energy Efficiency Tax Incentives for the Real Estate Industry, available at <https://www.kbkg.com/45l-2/inflation-reduction-act-expands-energy-efficiency-tax-incentives-real-estate-industry>

these incentives. Capital costs or “first costs” are likely to drop very markedly in the next few years.

The EIS leaves out an important key actor

- The two groups on which the study focuses are investors and occupants. In fact, however, many developers construct buildings, then soon sell them off to longer-term operators. The operators may hold the buildings for many years more than the original investors. While builders will have an overriding interest in lowering the “first cost” of a project, operators will have a strong interest in low maintenance and operation costs. Focusing the assessment on just two key actors – and leaving out the group that would be advantaged by long-term cost reductions advantageous – skews the overall assessment.

Heat pumps and heat pump water heaters are efficient and available electric technology

- Modern efficient heat pumps work well in Montgomery County’s climate zone (4A). There are multiple brands and models that work at full capacity down to 5 degrees Fahrenheit, with “cold-climate” heat pumps efficiently working down to -15 degrees F. (The lowest recorded temperature at Deep Creek in western MD was -5 degrees in the last 20 years.)
- Heat pumps are very common in cold climates such as Sweden, Finland, Norway, Denmark, France, Germany and Japan. About 30% of Sweden’s total building heat is from heat pumps.
- Heat pump and heat pump hot water technologies are advancing rapidly with consumer demand and government intervention in the market. Decarbonization studies project 65% to 90% consumer adoption of electric heat pumps by 2045.
- Fossil fuel backup is entirely unnecessary. If a consumer absolutely wants a backup system, electric resistance heating coil strips are available.
- Market availability will rapidly increase with demand and investments in the industry from the federal government, and prices will come down.

What happens when the electricity goes out?

- Most modern gas appliance systems need electricity to work. If there is a power outage, most gas heaters and appliances do not work because they have electric starters, controls, pumps, ignitors, and safety valves which will not allow gas to flow if the electric ignitor does not turn on. Some direct venting fireplaces and wall heaters would work, but then they also

significantly increase indoor air pollutants and when they malfunction, they create an enormous carbon monoxide risk.

- Bill 13-22 only deals with future buildings in the county. Consumers will have choices whether to purchase a new all-electric unit or a already-built unit with gas appliances.
- For buildings that must have or want to have backup systems (such as hospitals and first emergency operations), a diesel generator or battery backup provides the power; a gas boiler does not. Public Safety Codes do not allow natural gas for emergency backup. Storage battery technology is advancing rapidly and prices are coming down.

Electric grid capacity and reliability

- Electrification of homes and buildings creates more demand for electricity in the winter heating months, leading some to wonder about the ability of our local grid to meet the demand that would be generated from electrified new and substantially renovated homes and buildings. Such concerns are completely unfounded. According to the most recent PJM Interconnection annual report, excess capacity on the PJM grid during last year's winter peak is equal to the electric demand of more than 41 million additional homes.
- Moreover, at the direction of the District of Columbia Public Service Commission, Pepco commissioned a report last year from the Brattle Group consulting group showing how it could grow just 1.4% to 1.7% annually over the next 30 years (to 2050) to handle all new and existing buildings AND all new transportation energy in the District of Columbia. This is well within its historical growth rates; at some points its annual growth rate has approached 10%.

Irrelevance of the system planning study required by the Climate Solutions Now Act

- Utilities and some other opponents of bill 13-22 argue that the Council should not act until the results of a Public Service Commission general system planning study required by the Climate Solutions Now Act are complete. This is a disingenuous delay tactic only. The required statewide system planning study has little or nothing to do with the modest number of new electric additions that would be added each year in the county under Bill 13-22. Here is the required report language from the CSN Act:

“The Public Service Commission shall complete a general system planning study, for gas and electric companies... assessing the capacity of each company’s gas and electric distribution systems to successfully serve customers under a managed transition to a highly electrified building sector. The study shall:

- (i) 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;*
- (ii) compare future electric distribution system peak and energy demand load growth to historic rates;*
- (iii) consider the impacts of energy efficiency and conservation and electric load flexibility;*
- (iv) 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; and*
- (v) assess the effects of shifts in seasonal system gas and electric loads.”*

Appendix 1: Expanded Building Cost Information

Overall consumer savings from fully electrifying homes and buildings

- Rewiring America recently calculated that, mostly because of the efficiency of electric appliances, Montgomery County residents (specifically) would save the following amounts annually:
 - Methane gas customers: \$360/year from space heating plus \$184/year from water heating; total \$544
 - Electric resistance customers: \$316/year from space heating plus \$289/year from water heating; total \$605
 - Fuel oil customers: \$911/year from space heating plus \$459/year from water heating; total \$1370
 - Propane customers: \$790/year from space heating plus \$657/year from water heating; total \$1447

Post-construction consumer costs for various building types

- The Maryland Buildings Decarbonization Study found that all-electric new buildings save consumers money compared to mixed buildings for every building type in Maryland.⁷

	Mixed-Fuel	All-Electric	Annualized Savings
Single-family Residential	\$5,500	\$3,800	+\$1,700
Multifamily Residential	\$4,100	\$3,400	+\$700
Small Commercial	\$18,400	\$15,500	+\$900
Large Commercial	\$150,000	\$147,000	+\$3,000

⁷ Maryland Building Decarbonization Study, *available at* https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf

Wholesale fuel costs

Much of the heating equipment installed this decade will be operational through the 2030s and into the 2040s, so it is important to consider costs over the lifecycle of the equipment.

The federal Energy Information Administration projects that the commodity price of methane (natural) gas will stay more or less constant in real terms for the next 25 or more years while renewable energy costs drop precipitously.⁸

Even if both gas and electric prices were to remain constant, annual energy costs will be far lower for homes and buildings with electric heat pumps because of much greater efficiencies. The annual savings are especially favorable when compared to homes heated by electric resistance, oil, or propane.

Delivery costs to skyrocket due to stranded gas infrastructure and other capital costs

The Maryland Commission on Climate Change has projected that gas delivery rates in Maryland will rise 4 to 5 times by 2045.

The Maryland Office of the People's Counsel [recently released a study](#) showing that methane gas distribution costs will force increases of more than 100% in the typical customer's winter gas bills by 2035 using September 2022 commodity prices and 40% using the average 2020-2022 commodity price as a baseline.

Maryland's Strategic Infrastructure Development and Enhancement Plan (STRIDE) law permits Maryland's gas distribution utilities to submit five-year infrastructure replacement plans to the Maryland Public Service Commission for expedited cost recovery. It allows gas utilities to add a monthly surcharge on customer bills to recover the estimated costs of replacement projects with or before the execution of the projects - an easier and faster method for gas utilities to recover these infrastructure costs from ratepayers. Maryland utilities project that repair costs for their leaky systems under the STRIDE program will rise from \$155 mil annually (2022) to \$455 million annually by 2044.

⁸ Winter Fuels Outlook, *available at* https://www.eia.gov/outlooks/steo/special/winter/2021_Winter_Fuels.pdf

Appendix 2: Electrification Incentives in the Inflation Reduction Act

IRA Nearly Triples Allowable Tax Deductions and Expands it to Non-Profits for Energy Efficient New Construction and Retrofits⁹: For commercial buildings, the IRA nearly *triples the tax benefits* under section 179D of the Internal Revenue Code for energy efficient new construction and for energy efficient retrofits of existing buildings and expands the types of buildings that qualify for that deduction. For buildings placed into service after 2022, taxpayers can claim a tax deduction of up to \$5 per square foot (the prior maximum benefit was \$1.88 per square foot).

Expansion of 179D Deduction for Tax-Exempt Entities: The 179 D tax benefit has been expanded to apply to schools, hospitals, churches, charitable organizations and facilities owned by any level of government. Because these entities are not taxable, the benefit can be passed on to the primary designer of the buildings, including engineers, architects, contractors, energy service providers, and environmental consultants. The purpose of the deduction is to incentivize designers of tax-exempt buildings to use energy efficient systems and consideration of those benefits can result in lower negotiated cost of the construction for the tax-exempt entity.

Section 45L Tax Credit for Multifamily Developers and Homebuilders Increased 2.5x and Expanded to More Building Types: Originally having expired at the end of 2021, 45L tax credits have been retroactively extended for 2022 through the end of 2032, creating significant benefits for multifamily developers and homebuilders. The maximum tax credit for dwelling units is increased from \$2,000 per unit to \$5,000 per unit for both single-family and multifamily developments when the energy efficiency of those units meet Energy Star and Zero Energy Ready criteria. As a result, all residential developments become eligible whereas prior, only low-rise residential developments were eligible.

Section 45L and 179D Tax Benefits Can Be Stacked. This means builders and developers can take advantage of both benefits.

Section 45L Benefits Sunset in 2032. This means builders and developers should be acting now to get the full savings under the IRA.

Affordable Housing¹⁰ and Individual Consumers

⁹ <https://www.kbkg.com/45l-2/inflation-reduction-act-expands-energy-efficiency-tax-incentives-real-estate-industry>

¹⁰

https://www.nationalhousingtrust.org/sites/default/files/news_file_attachments/The%20Inflation%20Reduction%20Act%20AH%20Guide%20FINAL%20Aug%2029%202022.pdf

The IRA provides significant benefits for affordable housing and directly to consumers for building electrification, including multifamily housing subsidized by HUD and Low Income Housing Tax Credits. An analysis by the National Housing Trust identified more than \$25 billion in the Act that could benefit affordable multifamily housing. The Act includes \$1 billion for HUD’s multifamily housing programs – including for owners and operators of Section 8, Section 202, and Section 236 properties – to improve energy or water efficiency and zero-emission building electrification.

HOMES Rebate Program: a \$4.3 billion program that will provide rebates for the costs of energy efficiency retrofits that are modeled to achieve or have achieved verifiable minimum energy use reductions. Eligible recipients can include homeowners and multifamily building owners and aggregators (entities that may receive rebates on behalf of homeowners and multifamily building owners) who undertake whole-house energy efficiency retrofit projects that achieve modeled or measured reductions in energy usage. Rebates are capped at \$4,000; \$8,000 for low and moderate income households.

Residential Clean Energy Credit: Amends Section 25D of the tax code to provide a 30% tax credit for installing solar, geothermal or wind energy and battery storage. Program sunsets in 2034.

Residential Energy Efficiency Tax Credit: Amends Section 25C of the tax code to provide 30% tax credit for residential efficiency and electrification upgrades, up to \$3200 per year. The cap for space and water heat pumps is \$2,000 and annual credit for other upgrades is \$1200 (electrical panel, weatherization, energy audits). The credits are an annual credit (not lifetime). The program sunsets in 2031. Must meet the CEE highest efficiency tier.

High-Efficiency Electric Home Rebate Program (HEEHRA): Another \$4.5 billion program in the Act, HEEHRA, will provide generous rebates for qualified home electrification projects to low- or moderate-income homeowners and multifamily building owners undertaking a qualified electrification project and entities carrying out qualified electrification projects on behalf of LMI homeowners and multifamily building owners. For low income, the rebates can cover up to 100% of the project costs and for moderate income, the rebates can cover up to 50% of the costs. The rebates include up to \$8000 for space heat pump, \$1,750 for water heat pump, \$840 for electric stove/cooktop, \$840 for heat pump clothes dryer, \$4,000 for electric box upgrade, \$2,500 for wiring, and \$1,600 for weatherization. **The rebates sunset in 2031.**

Green Bank Financing: The IRA includes \$27 billion to establish the Greenhouse Gas Reduction Fund to allocate:

- \$7 billion to make grants available for states, municipalities, Tribal governments, and eligible recipients to invest in projects that enable low-income and economically, socially, and environmentally disadvantaged communities to deploy zero-emissions technologies and carry out other emissions-reducing activities.
- \$20 billion to make grants available to eligible recipients that invest in projects that reduce greenhouse gas emissions

Of the \$20 billion for grants to eligible recipients, \$8 billion, or 40%, will be dedicated to projects benefiting low-income and disadvantaged communities.

Works Cited

1. Montgomery County. 2021. “Montgomery County Climate Action Plan: Building Actions Fact Sheet.” <https://www.montgomerycountymd.gov/green/Resources/Files/climate/climate-action-plan-building-actions.pdf>
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