

## **New York's Heat Pump Mandate: Doubling Annual Heating Costs to Achieve a 13% Reduction in New York's CO<sub>2</sub> Gas Emissions**

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**Abstract :** Manmade climate change is an existential threat that must be mitigated at the earliest opportunity. The role of government in climate change mitigation is enacting and enforcing law and policy to affect substantial reductions in greenhouse gasses, in the short and long term, without substantial increases in the cost of energy. To be optimally effective those laws and policies must be established and enforced based on peer reviewed evidence and scientific facts and result in substantial outcomes in years, not decades. Over the next fifty years, New York's 2019 Climate Change and Community Protection Act and 2021 All Electric Building Act that mandate replacing natural gas heating systems with heat pumps will, immediately double annual heating costs and by 2075, yield less than 16.2% reduction in CO<sub>2</sub> emissions from heating systems in new housing units, less than a 13% reduction in total CO<sub>2</sub> emissions, and affect a \$40B in cumulative additional heating cost, compared to natural gas fueled heating systems.

**Keywords :** climate change, mandate, heat pump, natural gas

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