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Household Impacts of a Natural Gas Ban in New York

Banning the use of natural gas from homes in New York State could cost a staggering $35,000 per household, according to a recent analysis by Consumer Energy Alliance (CEA).

In the middle of a harsh 2021 winter season, New York City's Mayor Bill de Blasio announced a new policy that would ban natural gas connections for new buildings starting in 2030. This was on top of other policies issued a year before that would ban fossil fuels in large commercial buildings by 2040 as well block any new pipeline infrastructure to serve the city's energy or reliability needs. CEA developed a cost calculator using open-sourced data to provide an estimate of what a typical New York City household could expect to pay if short-sighted and harmful policies to ban natural gas service and use were put in place for households and those living paycheck-to-paycheck, as the state recovers from the COVID-19 pandemic. What that analysis found was costs would be enormous – over $25,000 per New York City household – if they were put in place. These findings dovetail with updated research performed by CEA which found that the cost to replace just major gas appliances in homes nationwide would be more than $258 billion.

As the state implements and develops its action plans to meet the requirements of the Climate Leadership and Community Protection Act, CEA expanded its analysis for households across New York State to better understand what the economic impacts would be for other regions. For example, Upstate and Western New York are home to many populations and communities which are heavily reliant on natural gas and exceed the state average for home heating use during its cold and snowy winters. Based on this consumer-data and home conditions, CEA found New York State households could pay over $35,800 if natural gas use was forced out of their dwellings.

Replacing Natural Gas Comes at a Cost for Families and Households

Nearly 60% of New York households rely on natural gas for home heating and it provides over 40% of the state's power generation. According to the consumer website HomeAdvisor, the average price nationwide for purchasing a new heat pump is over $5,700, and total expenses "(a)fter labor, fees and permits, costs can hit $20,000 or more, not including ducts." This is just to replace a natural gas furnace and does not include other appliance replacement costs nor the re-wiring needed for electric conversion. Further, heat pumps can be more expensive to use because they require electricity to operate. They also work better in warm or temperate regions of the country and are not effective as furnaces during severe cold snaps and the long winters Western and Upstate New Yorkers frequently experience. Depending on the models chosen and home conditions, CEA's analysis found that mandates requiring the replacement of major appliances like hot water heaters, furnaces, gas stoves, and gas dryers could range from $27,327 to $35,803 for a New York State household. A more detailed cost calculator can be found below.

Cleaner Futures Without Consumer & Economic Pain

CEA wants to see a clean future with lower emissions in New York. We can get there without dictating energy choices to families, small businesses, seniors and neighbors along the way – especially as they recover from the economic impacts of the COVID-19 pandemic. A survey by the U.S. Census Bureau reports that 86% of small businesses in New York State experienced moderate to large negative effects from the COVID-19 pandemic.

Natural gas is helping New Yorkers clean up their air and chart a path for a more sustainable future. From 1990 to 2015, total emissions from the electricity generation sector fell 42% while natural gas use for power generation increased more than 150% during that same period, according to data from the New York State Energy Research and Development Authority.

Based on data from the EPA, from 1990 to 2019 New York State's emissions of key pollutants have decreased across the board, with a:

- 78% reduction in nitrogen oxides (NOx)
- 97.2% reduction in sulfur dioxide (SO2)

Even more remarkable – carbon emissions (CO2) since 1990 dropped over 24% in conjunction with increased natural gas use, pipeline infrastructure expansion and an improved grid, and New York's economy surged. Usually, economic growth equals higher emissions.

Exciting technologies like renewable natural gas (RNG) and blending hydrogen into the natural gas stream can help reduce potent methane emissions and improve water quality all while still using existing infrastructure. RNG captures harmful methane emissions from landfills, municipal water systems or farm operations and transform it into useable fuel that can be transported in our existing pipeline network. Renewable energy and other sources can be used to split water molecules and create hydrogen that is converted into energy which can be used in fuel cells, electricity generation, industrial processes or blended into our natural gas pipeline systems to reduce emissions. To make these technologies a reality, it will require the approval of new permits to make infrastructure enhancements and new pipeline projects as well. Large-scale renewable opportunities from offshore wind and hydropower, along with battery storage technology, are other options on the horizon that will help further drive down the Empire State's emissions profile.

Natural gas infrastructure can help integrate and optimize these renewable energy options into the grid and in our energy mix. As policymakers consider next steps to implement the emissions reductions targets of the Climate Leadership and Community Development Act, they should consider this infrastructure to be a solution rather than a problem in helping meet public policy goals. In addition, misguided attempts to ban energy services like natural gas will lead to astronomical costs, surprise bills and jeopardize energy resources that are helping reduce harmful emissions for all New Yorkers.

Cost Calculator of an New York Energy Service Ban

Heat Pump Installation: $4,104 - $7,240 (nationwide price range)
https://www.homeadvisor.com/cost/heating-and-cooling/install-a-heat-pump/

Total Costs: $20,000 potentially depending on labor, fees and permits
https://www.homeadvisor.com/cost/heating-and-cooling/install-a-heat-pump/#calculator

Electric Panel Upgrade (200 Amps): $496 - $1,801 (nationwide price range)
https://www.homeadvisor.com/cost/electrical/upgrade-an-electrical-panel/

Hot Water Heater Replacement: $812 - $1572 (nationwide price range)
https://www.homeadvisor.com/cost/plumbing/install-a-water-heater/

Electrician Fee: $162 - $522 (nationwide price range)
https://www.homeadvisor.com/tloc/New-York-NY/Install-or-Repair-Electrical-Switches-and-Outlets/

Hot water heater removal: $103 - $268 (Buffalo, NY price range)
https://www.homewyse.com/services/cost_to_remove_water_heater.html

Electric Stove: $660 - $700 (nationwide price range)
https://www.fixr.com/comparisons/gas-vs-electric-stove

Electric Dryer: $600-$700 (mid-range average)
https://www.homedepot.com/p/Maytag-7-0-cu-ft-240-Volt-White-Electric-Vented-Dryer-with-Wrinkle-Control-MEDC465HW/304751694?irgwc=1&cm_mmc=afl-ir-29332-456723-1083244&clickid=Uj2XtL1v5xyLUBBwUx0Mo3ZwUkERBr0aSSLDyU0

Installing Electric Clothes Dryer: $390 – $3,000 (nationwide price range)
https://www.fixr.com/costs/dryer-installation