



## NEW JERSEY

### **THE HIDDEN COSTS OF A NEW JERSEY NATURAL GAS BAN**

New Jersey's Energy Master Plan (EMP), released in January 2020, establishes the ambitious goals of becoming 50% carbon neutral by 2030 and 100% carbon neutral by 2050 by directing a transition to renewable energy sources. Consumer Energy Alliance (CEA) supports efforts to thoughtfully reduce our emissions profile and enhance environmental stewardship that keep in mind the energy needs of consumers. However, the EMP and other proposals that penalize natural gas overlook the fact that prohibiting access to affordable energy jeopardizes those who can least afford it.

Consumers need always-on options like natural gas to balance the grid and ensure families have the power and heat they need during storms, weather events and for daily service. This became evident when Texas faced power reliability challenges during the February 2021 freeze.

Using open-source consumer data, CEA developed a cost calculator to provide an estimate of what a typical household in Newark, New Jersey could expect to pay if policies to ban natural gas service and usage are put into place. If forced onto families, the cost would be astronomical.

Depending on the appliance models, home configuration, labor, and reliance on natural gas, an energy ban could cost as much as \$28,475 for a Newark household to retrofit existing appliances. These findings dovetail with previous [CEA research](#)

that found that the cost to replace major gas appliances in homes nationwide would be more than \$258 billion.

Further, as the report shows, a tremendous amount of new transmission infrastructure will need to be built at significant costs to New Jerseyans to meet the demands to “electrify everything.” While CEA supports voluntary efforts by consumers to use the types of appliances and services they prefer, the cost of forcing actions on them must be balanced against costs to households and real-world, practical considerations that can help lower emission today.

### **THE CONSEQUENCES OF ENERGY BANS**

Adding more diverse energy options is a laudable goal. CEA strongly supports adding renewable energy to our mixture of energy resources. However, attempts to limit critically important and widely used traditional energy have been proven unnecessary, draconian, infeasible, and environmentally harmful.

Natural gas bans deny homeowners and businesses the service they need, want and most commonly use to power their lives, heat their homes and run their operations. These energy bans dictate choices to consumers, and supporters of these efforts ignore science and leave out pertinent facts – mainly how expensive it will be to force people to change all their appliances to electric-only.

Arbitrarily limiting energy choice would increase costs and disproportionately affect consumers and households on fixed and low incomes.

Almost half of New Jersey’s [electric power generation comes from natural gas](#). Banning natural gas hookups could lead to huge sticker shocks on future energy bills. That’s something no household with a stretched budget needs to face. A recent Bankrate [survey](#) found that only 44% of Americans have enough savings to cover a \$1,000 emergency.

In July 2021, the U.S. Census Bureau [estimated](#) 9.4% of New Jersey’s residents lived at or below the poverty line. Additionally, more than 172,000 New Jerseyans remain [unemployed](#) as of July 2022.

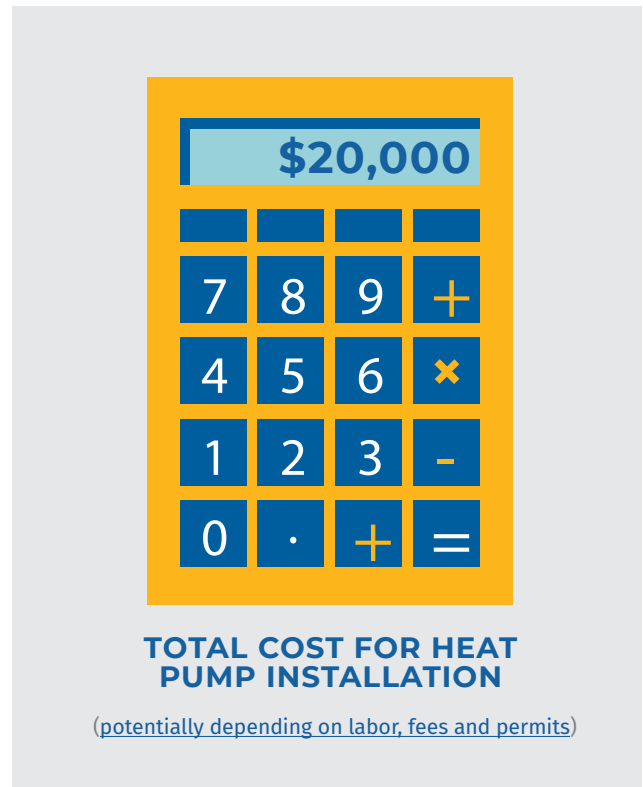
In addition to the impact on lower-income populations, energy bans would add avoidable hardships to many of the state’s battered businesses. The New Jersey Economic Development Authority [reported](#) that during the height of pandemic shutdowns, small business revenue was down by almost 60% statewide. These businesses are the lifeblood of vibrant neighborhoods across the Garden State and rely on natural gas to power their operations. Short-sighted energy service bans would be another impediment to bringing back New Jersey’s most important economic generators.

## NATURAL GAS AND NEW JERSEY

New Jersey families, seniors, small businesses, and manufacturers saved almost \$16 billion over the past decade because of the increased availability of affordable natural gas and related infrastructure. New Jersey’s use of natural gas has increased over the past 40 years. [Three out of four](#) New Jersey homes rely on natural gas during the winter for heat. Natural gas heat was critical in January 2022 as the Garden State experienced seven days with [sub-zero temperatures](#).

Restricting use of natural gas could put those benefits in jeopardy for New Jersey households. Not only would there be significant costs for new appliances, wiring upgrades and potential remodeling, but it would potentially lead to higher monthly energy bills for home heating. According to [data](#) from the American Gas Association (AGA), conventional natural gas furnaces are less expensive to operate compared to other heating sources, including advanced heat pumps. This corresponds with their findings from the 2014 Polar Vortex, when the average cost to heat a

natural gas home in January of that year was \$159 compared to \$267 for a similar home with a heat pump and an electric furnace for backup heat – a 40% difference. AGA reported that “an equivalent home



with equal heating loads operating an electrical resistance furnace would have incurred a heating bill of \$445 on average.”

What is often left out of the public policy conversation is that as natural gas use has grown and expanded across New Jersey, emissions have fallen dramatically.

Based on [data](#) from the Environmental Protection Agency, from 1990 to 2020 New Jersey’s emissions of criteria pollutants have decreased across the board, with a:

- 82% reduction in nitrogen oxides (NOx)
- 79% reduction in volatile organic compounds (VOCs)
- 99% reduction in sulfur dioxide (SO2)

Even more remarkable – [energy-related carbon emissions](#) dropped more than 19% from 2000 to 2019. These reductions came as natural gas use grew, infrastructure expanded, and New Jersey’s economy surged. Usually, economic growth and emissions increase in parallel.

**ELECTRIC WATER HEATER:  
\$1,771 - \$2,238**

(July 2022 prices include material, labor and supplies)

## IMPACT ON NEW JERSEY HOUSEHOLDS

The [Garden State Initiative](#) expressed concern regarding the New Jersey EMP's lack of an official economic impact analysis estimate for the plan. The EMP would require the use of 100% renewable energy by 2050 and would eliminate natural gas as an option. A [study](#) by Continental Economics estimates it will cost at least \$65 billion to retrofit New Jersey's nearly two million single-family homes, 350,000 apartments and thousands of restaurants and other commercial businesses that rely on natural gas for heat, hot water, and cooking.

A ban or mandate to replace natural gas appliances could be potentially ruinous for many New Jerseyans by hitting them with surprise bills. CEA developed its cost calculator by examining open-source information from consumer websites that detail average cost information for the replacement of natural gas appliances, remodeling, construction, wiring, and labor. All these costs would be forced on

homeowners and landlords, the latter of whom would pass them on to renters.

According to the consumer website Homewyse, [a new heat pump](#) in Newark, New Jersey would currently cost homeowners between \$5,111 and \$6,451. "After labor, fees and permits, costs can hit [\\$20,000 or more](#), not including ducts," according to consumer website HomeAdvisor. This is just to replace a furnace and does not include other appliance replacement costs nor the rewiring needed for conversion. Depending on the models chosen, mandates requiring the replacement of major appliances like hot water heaters, furnaces, gas stoves, gas dryers could top out at more than \$28,475 for a Newark household reliant on natural gas.

**ELECTRIC PANEL UPGRADE  
(PER PANEL):  
\$1,847 - \$2,245**

(July 2022 prices include material, labor and supplies)

## IMPACT ON THE ELECTRIC TRANSMISSION AND DISTRIBUTION GRID

CEA supports a balanced and rational discussion by those who want to voluntarily pursue strategic electrification efforts that make sense from

a practical or technical standpoint. However, prematurely instituting technologies comes at a cost; and a blanket adoption of forcing electrification onto consumers without examining the details could have very real cost and reliability impacts.

Princeton University's Net-Zero America [study](#) took a comprehensive, multi-scenario look at how the United States could achieve net zero carbon policies by pursuing electrification and other strategies.

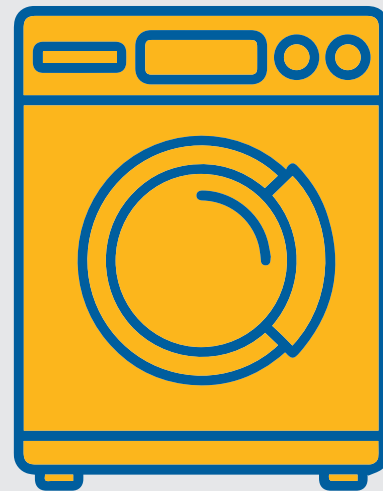
To execute the study's "E+ high electrification scenario" by 2050, utilities will have to make massive infrastructure investments to manage the increased load and connected costs of adding electric vehicle charging stations, heat pumps, all-electric appliances and more to New Jersey electricity grid. A high electrification (and net-zero) scenario would increase [peak system demand](#) by 50% and require the [replacement](#) of nearly 14,000 megawatts of traditional-fuel generating capacity, which currently meets over 60% of [New Jersey's electricity demand](#).

In addition, the study estimates that in excess of \$50 billion will need to be invested in utilities' distribution systems by 2050 to support the electric load increases at a cost of \$15,000 [per household](#). Add that to an estimated \$60 billion in capital investment for wind and solar and per-household costs to "electrify everything" soar to \$33,000.

The study also suggested that electric transmission capacity across the country may need to increase

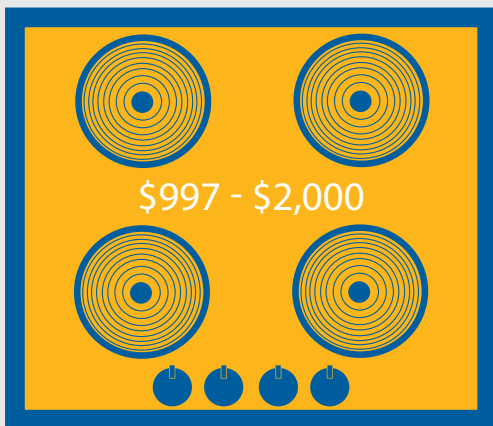
by 60% (2030) to 300% (2050). There are nearly [1,100 miles](#) of electric transmission lines New Jersey. While cost estimates for construction of transmission lines [vary](#), if New Jersey were to increase its transmission infrastructure by 60% at an [estimated](#) cost of \$350,000 per mile, an additional 660 miles of transmission lines would cost approximately \$231 million; an additional 3,300 miles would be nearly \$1.2 billion.

As is too often the case when it comes to energy policy, [low- and fixed-income communities](#) will be most affected by untested solutions like forced electrification. Policymakers and regulators will have to decide if the benefits of electrifying our economy will outweigh the costs to New Jersey, which will surely exceed \$100 billion by 2050.



**ELECTRIC DRYER:  
\$997 - \$1,992**

(July 2022 prices include material, labor and supplies)



**\$997 - \$2,000**

**ELECTRIC RANGE:  
\$997 - \$2,000**

(July 2022 prices include material, labor and supplies)

## CLEANER FUTURES WITHOUT CONSUMER PAIN

CEA wants to see a clean future with lower emissions. We can get there without dictating energy choices to families, seniors and neighbors along the way. Exciting technologies like renewable natural gas (RNG) 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 transforms them into useable fuel that can be transported through existing infrastructure. Blending hydrogen into our existing gas infrastructure is another emerging solution. Large-scale renewable opportunities from offshore wind, along with battery storage technology, are other options on the horizon that will help further drive down New Jersey's emissions profile. However, misguided attempts to ban energy services will lead to astronomical costs and jeopardize energy resources that are helping reduce emissions.

Protections are needed to prevent our neighbors and communities from being hit with surprise bills and service disruptions as a result of these bans – especially as they try and recover from the incredible economic harm of COVID-19. It should be up to consumers to decide what types of appliances they want, not activists.

