CONSUMERENERGYALLIANCE

THE IMPORTANCE OF NATURAL GAS TO ILLINOIS

A REPORT BY CONSUMER ENERGY ALLIANCE

As Illinois considers policies restricting or banning the use of natural gas in homes and businesses, it is essential to understand the financial impact this would have on the state's residents. From big cities like Chicago to rural farming communities, millions of Illinois citizens rely on natural gas for heating and cooking every day. In fact, **Illinois is the eighth largest natural gas consuming state in the country.**

This should come as no surprise as almost 8 out of 10 **Illinois homes are heated by natural gas**, according to the U.S. Energy Information Administration (EIA). Restricting or banning access to natural gas for 80% of Illinois households for residential use would significantly harm families across the state, placing a disproportionate burden on those living at or below the poverty line or families that meet the ALICE (Asset-Limited, Income-Constrained, Employed) threshold.

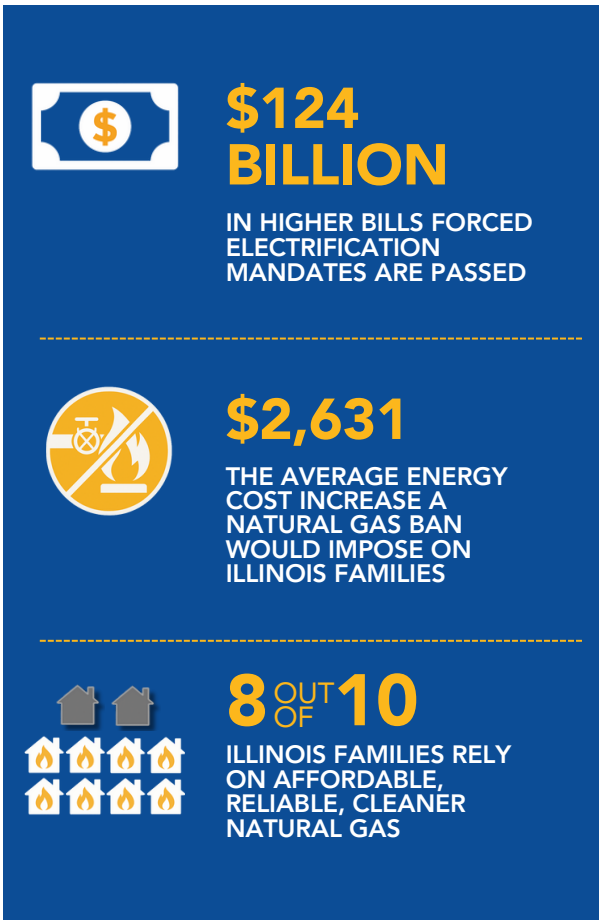
This report examines the substantial economic burdens that would result from natural gas restrictions or bans, with a focus on comparing the impacts between urban and rural areas. **Forced electrification could end up costing households $26,217 - $101,988 in retrofitting expenses alone**, creating disproportionate hardships for low and fixed-income families.

EFFORTS TO LIMIT NATURAL GAS

Natural gas plays a significant role in Illinois' energy landscape – especially during the winter heating season. The EIA projected average household spending on fuel during the winter of 2024-2025, and its forecast showed that electricity would cost on average 75% more than natural gas. **Natural gas bills were expected to average $602, in comparison to electric heating bills which averaged $1,054**, a $452 difference in affordability.

Prior to the winter heating season, Consumer Energy Alliance (CEA) annually issues Heat or Eat, an analysis based on the EIA Winter Fuels Outlook to determine the impact winter energy costs may have on families across the country.

CEA's analysis found that **if forced to switch to all-electric power** during the past winter, overall household expenditures on energy would have substantially increased. **Households using natural gas would have seen a $124 billion increase** in their utility bills, propane users would have seen a $7.5 billion increase, and consumers who rely on heating oil would have seen a $17.7 billion increase in energy costs.



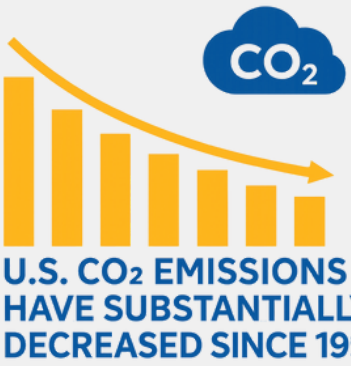
In Illinois, households using natural gas would have seen their average winter utility bills increase as well if they were forced to switch to all-electric heating. **Families that depend on natural gas would have seen their utility bills increase by $7.6 billion**, propane users would have seen a $379 million increase, and those relying on heating oil would have seen a $15 million increase in energy costs. To place this in perspective, **average energy costs would have increased by $2,631** for Illinois families, with the burden falling greatest on those relying on natural gas.

This validated the findings of the Biden Administration. Last year, the Office of Energy Efficiency and Renewable Energy updated the Representative Average Unit Costs of Energy for residential users. The latest release identified that electricity is by far the costliest among the five residential energy sources. Natural gas was found to be the most affordable of the five sources, followed by propane and heating oil.

Despite natural gas being a proven cost-saving resource, and a major reason why **U.S. CO2 emissions have substantially decreased since 1990,** recent legislative and regulatory efforts have attempted to restrict or ban natural gas usage in the name of climate mitigation efforts – which have largely been political gestures rather than effective solutions to creating more affordable, reliable and cleaner energy.

In 2023, Illinois proposed Residential and Commercial Stretch Energy Codes as required in the Climate and Equitable Jobs Act that sought to increase energy efficiency requirements. However, the proceedings highlighted efforts that would have made the requirements so high, that the end result would have been a de facto ban on natural gas service and appliances for new construction and remodeling projects. While CEA and many stakeholders support developing the renewable energy industry and reducing emissions, **policies that eliminate energy choice place financial hardship on many families** – especially those with low incomes or seniors with fixed incomes.

Responding to the Illinois Stretch Energy Code,



Since 1990, U.S. CO_2 emissions have dropped significantly — thanks in large part to affordable, reliable natural gas. Yet, new laws and regulations threaten this progress by pushing restrictions that are more political than practical.

the Home Builders Association of Illinois submitted a letter reviewing how the proposed changes might impact housing affordability by looking at the effect of similar actions in comparable markets. For example, **a cost study** from the Kansas City area **found that** moving from the 2018 to 2021 International Energy Conservation Code (IECC) **added $31,853 per home** - closing the doors to homeownership for over 300,000 families. In comparison, **the proposed Illinois stretch code** exceeded the 2021 IECC, which **would increase the cost of new homes even more.** This only demonstrates the need for comprehensive affordability cost studies to be completed to determine how lowering access to homeownership harms low-income and working-class families across the state.

Yet, Illinois state agencies and commissions are not the only ones that need to consider the impacts restrictions or bans on natural gas might have. Cities across Illinois must also pay attention to the negative economic impact this would have on their residents.

Take for example Chicago, the nation's third-largest city, attracting businesses and people from across the world with its unique culture and career opportunities. The Chicago City Council and Mayor proposed ambitious climate goals through the Clean and Affordable Buildings Ordinance (CABO), which would require all new construction to be built to use electricity rather than natural gas. City officials argue that this plan would increase affordability for consumers.

However, in March 2021, Chicago's City Council Office of Financial Analysis released an objective analysis outlining the potential consumer impacts of electrification. It pointed to California as a case study, where **aggressive climate policies have caused electricity prices to surge 50% higher than the national average**. The report also acknowledged the high upfront costs of electrification. **According to the city's utility, converting a single Chicago home to fully electric appliances could cost up to $75,000.**

Luckily, CABO has not advanced after significant public opposition, including that of 31 Council Members, who authored an opinion article opposing the city's natural gas ban because it risked hurting affordability and reliability for households.

ENERGY AFFORDABILITY WHEN IT MATTERS MOST – FOR FAMILIES

As we see some state agencies and cities attempting to restrict or ban natural gas use, it is helpful to know the burden this may place on Illinois families, especially when forcing electrification on existing housing requires purchasing not just new appliances, but also electrical work.

Consider recent research from Bankrate shows that Americans' ability to save for emergencies, and the funds available in their savings accounts, has decreased substantially. In their latest 2025 release, Bankrate found that **59% of Americans could not afford a $1,000 emergency expense**.

With this in mind, it is important to look at the families across Illinois that are unable to meet this type of expense. One place to start is by reviewing the federal Low-Income Home Energy Assistance Program (LIHEAP), which provides heating and cooling payment assistance, and the Illinois families who depend on this lifeline.

LIHEAP assists families who are living at or below 200% of the poverty level, which for a family of four is an annual income of $64,300. In 2024, Illinois Community Action Agencies assisted over 333,000 low-income families pay for their energy bills.

A family of four would need to earn $80,568 to cover a basic standard of living in Illinois

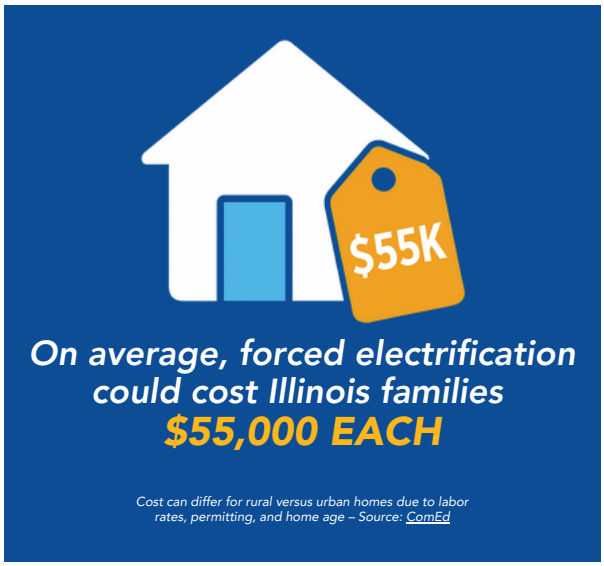
These applications, however, are not evenly distributed across the state. A recent study on energy poverty in Illinois found six energy poverty risk areas with households having an energy burden in the 85th percentile or higher. Households with a high energy burden spend a greater portion of their income on energy costs than other goods.

As noted earlier when examining energy costs during the winter heating season, restricting or banning natural gas would further exacerbate the burden on these communities that are already struggling to make ends meet. For example, **14.5% of residents in Schuyler County survive on less than $12 a day. Budgeting for all-electric appliances would be nearly impossible** for these households, given their income.

However, many households in Illinois not considered to be living in poverty by the federal definition also struggle to make ends meet. United for ALICE has found a way to demonstrate the number of homes that are "Asset Limited, Income-Constrained, and Employed" (ALICE). To determine the ALICE threshold, the cost for household essentials, tailored by location, is calculated. In contrast to the federal poverty level guidelines, ALICE calculated that **a family of four would need to earn $80,568 to cover a basic standard of living in Illinois** – a difference of over $16,000 per family. While 12% of Illinois residents were considered impoverished in 2022, 24% were below the ALICE threshold. This means 37% of Illinoisans live with a constrained income.

The ALICE data shows that both urban and rural areas are home to hardworking people with limited incomes. In Chicago, 35% of residents are below the ALICE threshold while many rural areas in Illinois face even higher levels. Counties such as Alexander, Pulaski, and Fayette report 52% to 64% of households are living below the ALICE threshold.

To better understand the real-world impact of banning natural gas, CEA used publicly available consumer data to create a cost calculator to estimate what households in big cities like Chicago could face, as well as smaller cities like Rockford and rural areas like Alexander. If consumers in Illinois were forced to replace their gas appliances, the costs would be overwhelming for those in both large and small cities and rural areas.



As is evident, Illinois' push to restrict or eliminate natural gas use risks placing an unsustainable burden on consumers, especially the 37% of households already living below the ALICE threshold. Natural gas remains Illinois citizens' most affordable, reliable, and environmentally friendly option. From large urban areas like Chicago to smaller cities like Rockford and rural agricultural communities, families and businesses depend on natural gas not just for its affordability, but also for energy security during extreme weather and rising electricity demand.

While developing all energy resources, including renewable energy, is essential to achieve long-term energy diversity and advancing the state's net-zero goals, mandating the full electrification of homes and businesses would have serious consequences for consumers.

According to the city's utility, converting a single Chicago home to fully electric appliances could cost up to $75,000.

Rather than eliminating energy choice, Illinois must prioritize the protection of consumers – for both families and businesses.

ENERGY AFFORDABILITY FOR BUSINESSES

Businesses across Illinois have two things in common – the need for affordable energy and a well-trained workforce in diverse skills for opportunities in everything from agriculture and manufacturing to hospitality and healthcare.

Illinois has a long history in manufacturing, benefiting from its central location, transportation infrastructure, strong workforce, and access to water and natural gas. In fact, natural gas plays a crucial role in supporting these industries, as **Illinois manufacturers consume over 25% of the natural gas in the state to produce the goods we rely on every day**. Across the state, over 13,000 manufacturers employ over 574,000 workers, contributing over 1.3% to the state's GDP according to the National Association of Manufacturers.

As part of the manufacturing industry, Illinois's chemical manufacturers are almost in a class of their own. **The chemical industry is the state's second largest manufacturing sector producing over $41.5 billion of chemistry products a year**, enabling it to lead the state's export market. As a result, the chemical industry in Illinois directly **employs over 46,000 workers and 184,900 related jobs.**

Next to manufacturing, Illinois' economy is also highly dependent on agriculture – with more than 70,000 farms covering over 27 million acres according to the United States Department of Agriculture. With over 75% of the state's total land area being dedicated to agriculture, it is no surprise that Illinois is a national leader in production. The Illinois Farm Bureau examined the food supply chain and the importance of soybeans (the number one producer in the nation) and corn (the number two producer in the nation) to pigs.

Agricultural products account for over $51.1 billion in GDP every year to Illinois, and natural gas plays a large part in food production.

According to the American Gas Association, the U.S. agricultural industry consumes around 1.7 trillion cubic feet of natural gas, which is about 15% of the entire consumption demand for the U.S. commercial and industrial sectors.

As a leading row crop producer of corn and soybeans, many of which require drying for processing, **Illinois' agricultural community is highly dependent on natural gas and propane**. There are no commercially available technologies that can successfully dry grain using sources of heat. Due to this, not only would **a natural gas ban** affect the affordability for households in rural areas, but it **would also affect the industry that drives employment and opportunities for economic growth.**

Restricting natural gas access would almost surely lead to an increase in production cost, which would in turn raise prices for the agricultural goods that are grown on Illinois farms and delivered to restaurants and tables across the state.

Consider the importance of natural gas to Illinois's restaurant industry.

As the second largest private employer in Illinois, restaurant owners have routinely spoken about what natural gas means to the hospitality industry. The Natural Restaurant Association polled restaurant owners on how natural gas restrictions would impact their business. And, what did restaurant owners say? **Of those that use natural gas, 94% of restaurant operators believe that banning it would harm their business** and 90% say that losing an open flame would impact the quality of the food they serve. This is because small, local restaurants would be inordinately impacted by high retrofitting costs and balancing their expenses to stay open. **Gas appliances are around 10-30% cheaper** and have longer lifespans to operate than electric alternatives.

When cities have failed at banning natural gas outright, some have looked to make it unaffordable by taxing it at levels no one would be able to afford.

Most recently, hospitals have started speaking out against restrictions on natural gas use.

Just last year, Berkeley, California proposed a natural gas tax so extreme, the Hospital Council strongly opposed the measure as it would put patient's lives in jeopardy. This misguided public policy **would have forced cuts to critical services or make hospitals forgo purchasing the latest life-saving equipment, hiring additional doctors**, or reducing improvements to support patient care.

For manufacturers to farmers and the hospitality industry to hospitals, natural gas affordability is important, but the attributes of reliability natural gas delivers to consumers is equally significant.

94%

Of restaurant operators believe that banning Natural Gas would harm their business

ENERGY RELIABILITY WHEN IT MATTERS MOST

Energy reliability is the backbone to both a strong economy and a healthy populace. Unfortunately, over the past decade, maintaining the reliability of the electricity grid in both Illinois and the United States is a growing challenge.

Federal Energy Regulatory Commission (FERC) Chairman Mark Christie has repeatedly warned of reliability challenges facing the nation's electricity grid—often citing the premature retirement of dispatchable generation capacity as a leading cause.

In its Long-Term Reliability Assessment released in December of 2024, the North American Electric Reliability Corporation (NERC), which is the entity responsible for overseeing the reliable operation of our nation's electricity grids, stated: "The trends point to critical reliability challenges facing the industry: satisfying escalating energy growth, managing generator retirements, and accelerating resource and transmission development.

This is becoming more relevant as electricity demand is projected to increase, driven by the expansion of data centers and advanced manufacturing. Unfortunately, the two regional grid operators serving Illinois, MISO and PJM, are both facing reliability challenges.

MISO is at a high risk because "(r)esource additions are not keeping up with generator retirements and demand growth. Reserve margins fall below Reference Margin Levels (RML) in winter and summer."

This capacity deficiency is not only a detriment to reliability but also impacts consumer costs as is reflected in MISO's most recent capacity auction. As reported, the results showed a more than twenty-fold increase in capacity prices from $30/ MW-day last year to $666.50/MW-day this year. As part of Illinois sits within the MISO footprint, **forced electrification could expose Illinois' families and business to further reliability and cost-escalation risks.**

Much like the challenges faced by MISO, PJM is also experiencing risk as a result of increasing demand projections, coupled with generator retirements, according to NERC.

In NERCs most recent long-term reliability assessment, the risk level assigned to PJM beginning in 2026 is Elevated, one step below the risk level assigned to MISO. In fact, NERC identified the winter season as experiencing the period of highest risk due to generator performance and fuel supply issues. Based on PJM's most recent capacity auction, NERC's caution on grid reliability proved prescient.

Capacity prices hit record highs, increasing from $28.92/MW-day to $269.97 / MW-day for PJM West. This auction result alone has increased the bills of residential customers by approximately $10 per month.

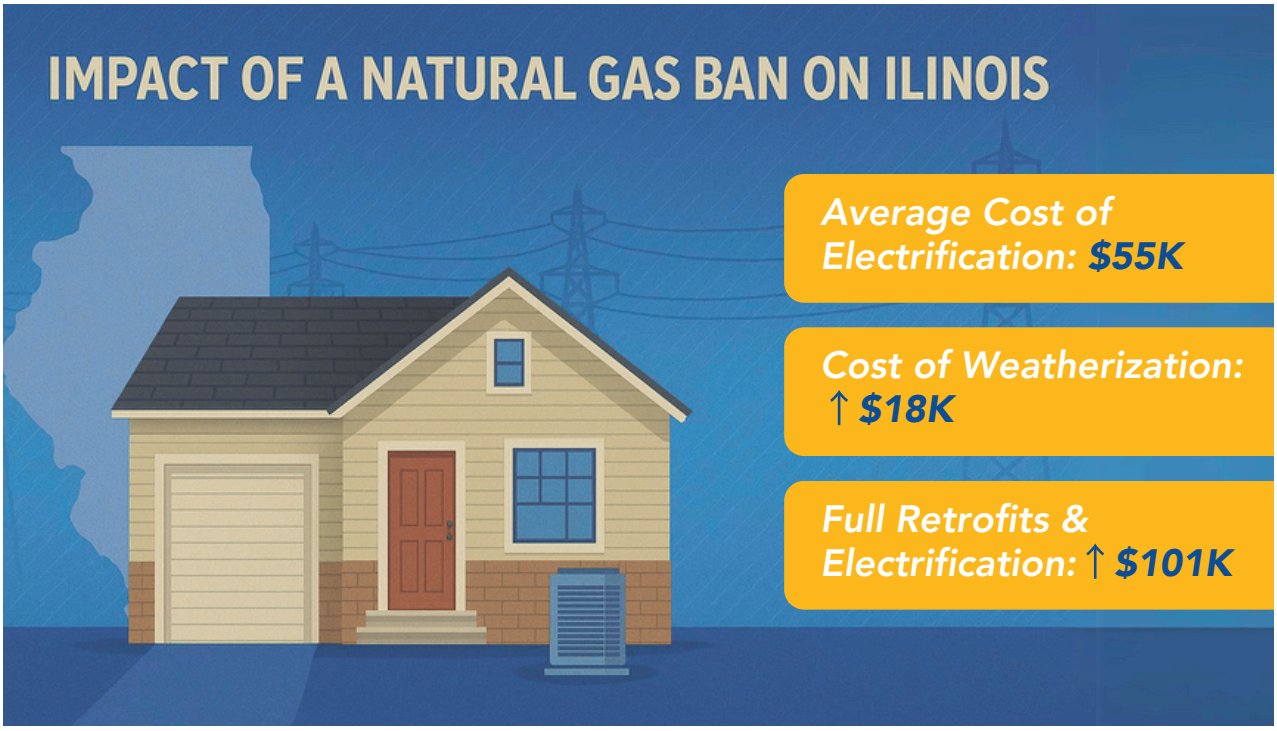
With the electricity grid in Illinois at an ever-increasing risk of outages, the state's policymakers need to think long and hard about policies that not only place mandates on consumers to heat their homes and power their business operations with electricity but also reconsider policies that prohibit Illinois natural gas distribution companies from maintaining existing infrastructure or expanding it to reliably serve new customers.

While the electricity grid is facing reliability challenges, the natural gas distribution system is not. This is evidenced by that fact that **during brutal winter storms, like the 2019 Polar Vortex and 2022's Winter Storm Elliot, not a single gas customer lost service**.

Despite this, the challenges on the electric distribution systems will continue to grow as evidenced by the FERC projections in the 2025 Summer Energy Market and Electric Reliability Assessment. Temperatures are expected to be higher across all major U.S. trading hubs and with that, wholesale electricity is expected to be more expensive than last summer.

However, the electric distribution system can only be as reliable as the electricity that is generated to distribute. And, electric generation reliability is also in question as energy demand continues to grow due to the reshoring of manufacturing, the rapid expansion of data centers and artificial intelligence technologies. The DOE projects that electricity consumption from data centers alone could double or even triple by 2028, accounting for as much as 12% of the nation's total electricity use. This surge in demand places additional stress on the electric grid, risking an increase in blackouts or brownouts.

Natural gas is a proven asset in meeting this challenge to maintain reliable utility services for consumers.



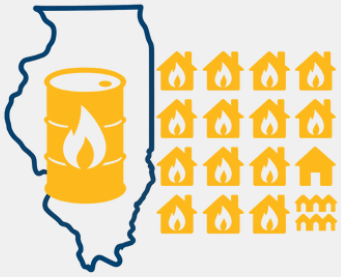
THE COST OF REPLACING ILLINOIS NATURAL GAS STORAGE

One of Illinois' greatest assets is the capacity to store natural gas underground – with a design capacity of over 300 billion cubic feet – **ranking 2nd of all Midwestern states in this category by the EIA.**

Natural gas storage benefits Illinois' families and businesses in several ways. Economically, storage allows the balancing of seasonal demand. When natural gas prices are low during the summer months, underground storage spaces are filled, which reduces the volatility of utility bills by providing consumers with lower priced natural gas during the winter, when prices typically increase.

Illinois' natural gas storage also enhances overall reliability and resilience during extreme weather events, providing extra capacity to meet the needs of home heating and power generators. As important, it allows for increasing the flexibility power generators have to bring more variable renewable energy resources online.

In essence, natural gas storage is the underground equivalent of above-ground utility-scale battery storage, but with much more capacity. In 2023, Illinois stored 1,019,173 Mcf of natural gas. T**he energy stored underground in Illinois would be equal to the energy stored in 38.36 million megawatts of utility-scale battery storage capacity**—assuming 8 hours of discharge capability.[1]



An average household uses about 30 kWh of electricity each day. Illinois's underground natural gas reserves—totaling nearly 38.9 million megawatt-hours—could keep roughly 3.5 million homes powered continuously for an entire year. That scale of dispatchable energy ensures families and small businesses have access to affordable, reliable power even when intermittent sources fall short.

[1] 1 cf of natural gas =1,036 Btu; 1kWh of electricity=3,412 Btu. Therefore, the formula is to determine the electricity equivalent of natural gas storage is: ((1,019,173,000,000cf*1,036)/3412)/1000=309,455,811.25MWhs (of battery storage). Assuming 8 hour duration you would then divide 309,455,811.25MWhs by 8 hours which equals 38,681,976.41 MW of capacity.

NATURAL GAS PROVIDES CLEANER ENERGY

Natural gas provides more benefits than just affordability and reliability for Illinois families and businesses. It also offers the best solution to decreasing the key criteria pollutants tracked by the U.S. Environmental Protection Agency (EPA) and helping to lower carbon emissions.

As production and consumption of natural gas has grown in the United States, Illinois' emissions of criteria pollutants have decreased across the board.

Based on EPA data, from **1990 to 2024 Illinois witnessed a:**

- **76% reduction in** nitrogen oxides (**NOx**);
- **63% reduction in** volatile organic compounds (**VOCs**); and
- **96% reduction in** sulfur dioxide (**SO2**).

Energy-related carbon emissions (CO2) decreased, dropping 4.86% from 1990 to 2022.

Importantly, all of these reductions came as pipeline infrastructure expanded and the consumption of natural gas increased, all while Illinois' economy surged. **Since 1997, the state's GDP has increased 44%** on an inflation-adjusted basis. This shows economic growth in the state while emissions fell; ordinarily, economic growth and emissions are positively correlated.

Knowing that natural gas has helped better the environment overall, especially in the power generation sector, it is also helpful to examine how household energy use impacts the environment as well.

The U.S. has some of the most stringent environmental regulations for the production and transportation of natural gas, from the well pad to the welcome mat. Natural gas can be delivered directly to homes with minimal service interruptions, and appliances that use natural gas are often more efficient than their electric counterparts. The AGA estimates that when "you factor in energy use and emissions along the full fuel cycle, **households with natural gas versus all-electric appliances produce 37 percent lower greenhouse gas emissions.**"

States that have aggressively pursued electrification mandates and created barriers to both expanding natural gas and maintaining the existing infrastructure are beginning to see substantial pushback from both the residential and commercial sectors.

Illinois lawmakers must promote energy policies that are rooted in practicality, affordability, and reliability **rather than burdening families and businesses** with mandates that increase costs and reduce energy security.

From keeping homes warm during winter storms to enabling the state's agricultural leadership, natural gas is an essential, proven energy source that supports both rural and urban communities. **Banning or restricting natural gas would impose harmful costs on consumers** by forcing families to retrofit their homes with expensive appliances or businesses to experiment with unproven technology. This could deepen energy poverty and compromise grid reliability at a time when demand is surging.

Instead of eliminating energy choice, Illinois should embrace a diverse and balanced approach to powering Illinois' families, farmers, and businesses.