The Power Play: Unlocking America's Energy for Powering Economic Growth, Prosperity, and Freedom

Testimony Before
House Committee on Natural Resource / Subcommittee on Oversight and Investigations
Hearing on "Unleashing the Golden Age of American Energy Dominance"
United States House of Representatives

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Chairman Gosar, Ranking Member Dexter, and other Members of the subcommittee, thank you for the opportunity to testify about energy policy. My name is Kevin Dayaratna. I am the Acting Director, Chief Statistician, and Senior Research Fellow at The Heritage Foundation's Center for Data Analysis. The views I express in this testimony are my own and should not be construed as representing any official position of The Heritage Foundation.

I. Introduction

Access to affordable and reliable energy is essential to a thriving society. From brewing a morning cup of coffee, to starting a car, to powering this very hearing, affordable and reliable energy forms the backbone of nearly every aspect of daily life.

Policymakers have increasingly sought to restrict the use of certain forms of energy in response to climate change concerns. However, research from The Heritage Foundation has demonstrated that these policies often carry substantial economic costs while delivering negligible climate benefits.

This testimony is organized into three parts. First, I examine the essential connection between access to affordable, reliable energy and human flourishing. Next, I discuss the economic and environmental consequences of carbon-based regulations implemented under the Biden administration. Lastly, I present a cost-benefit analysis of harnessing the oil and gas resources available here in the United States. The data makes it clear--expanding energy access is not just smart policy; it is also a moral imperative for economic prosperity, public health, and human flourishing.

II. The Inextricable Link Between Affordable and Reliable Energy and Human Flourishing

Human progress has always relied on the ability to harness affordable and reliable energy—from fire and steam to electricity and nuclear power. In today's industrialized world, energy underpins everything from transportation to the Internet. Policymakers must recognize how access to abundant energy has allowed societies to move beyond subsistence and achieve widespread prosperity. Innovations like the steam turbine and internal combustion engine have turned energy into a powerful engine of economic growth.

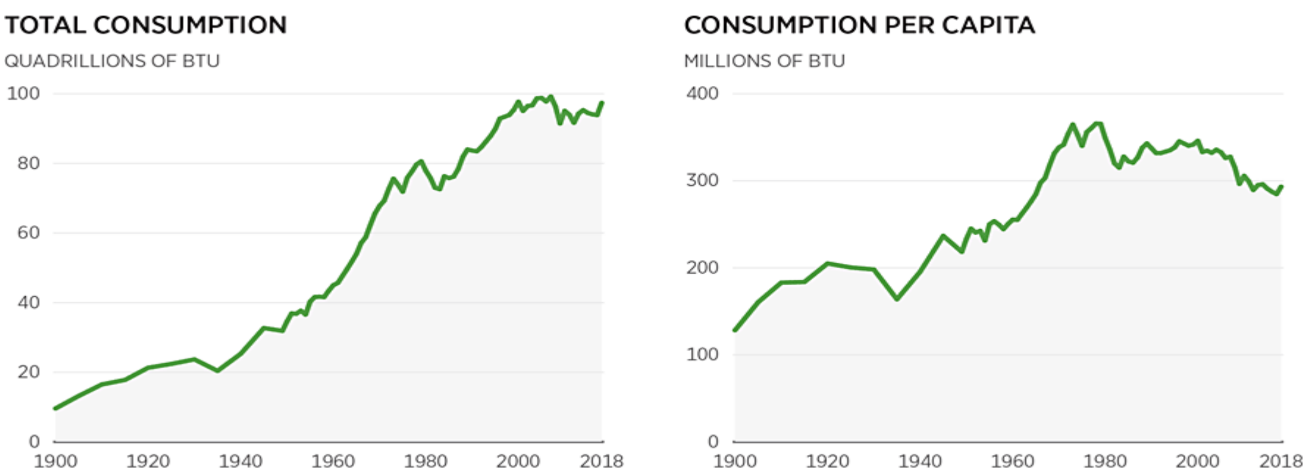
Co-authored with my colleagues Diana Furchtgott Roth, Miles Pollard, and Richard Stern, our Heritage Foundation *Special Report* titled, "Powering Human Advancement: Why the World Needs Access to Affordable and Reliable Energy," examines how energy access has driven poverty reduction, improved health and agricultural productivity, and enabled the wealth creation necessary to address environmental challenges via an extensive exploratory data analysis.[i] For example, Chart 1 in the appendix taken from this paper shows the share of U.S. households utilizing many technologies that are now considered commonplace.

As Chart 1 shows, regarding many aspects of modern society including the refrigerator, the radio, and the cell phone, among others, access to affordable and reliable energy has underpinned the development and utilization of all of these technologies.

As access to energy has become more widespread and affordable, consumption has also increased. Charts 2 and 3 depict both U.S. and global energy consumption on an aggregate as well as a per capita basis.

CHART 2

U.S. Energy Consumption



SOURCES:
- Hannah Ritchie, Max Roser, and Pablo Rosado, "Energy Production and Consumption," Our World in Data, July 10, 2020, https://ourworldindata.org/energy-production-consumption (accessed November 29, 2023).
- U.S. Energy Information Administration, "Today in Energy: History of Energy Consumption in the United States, 1775–2009," https://www.eia.gov/todayinenergy/detail.php?id=10 (accessed November 15, 2023).
- U.S. Energy Information Administration, "Open Data," https://www.eia.gov/opendata/index.php#bulk-downloads (accessed November 29, 2023).
- Energy Institute, "2023 Statistical Review of World Energy," https://www.energyinst.org/statistical-review/ (accessed November 29, 2023).
- U.S. Energy Information Administration, "Total Energy: Annual Energy Review," https://www.eia.gov/totalenergy/data/annual/ (accessed November 20, 2023).

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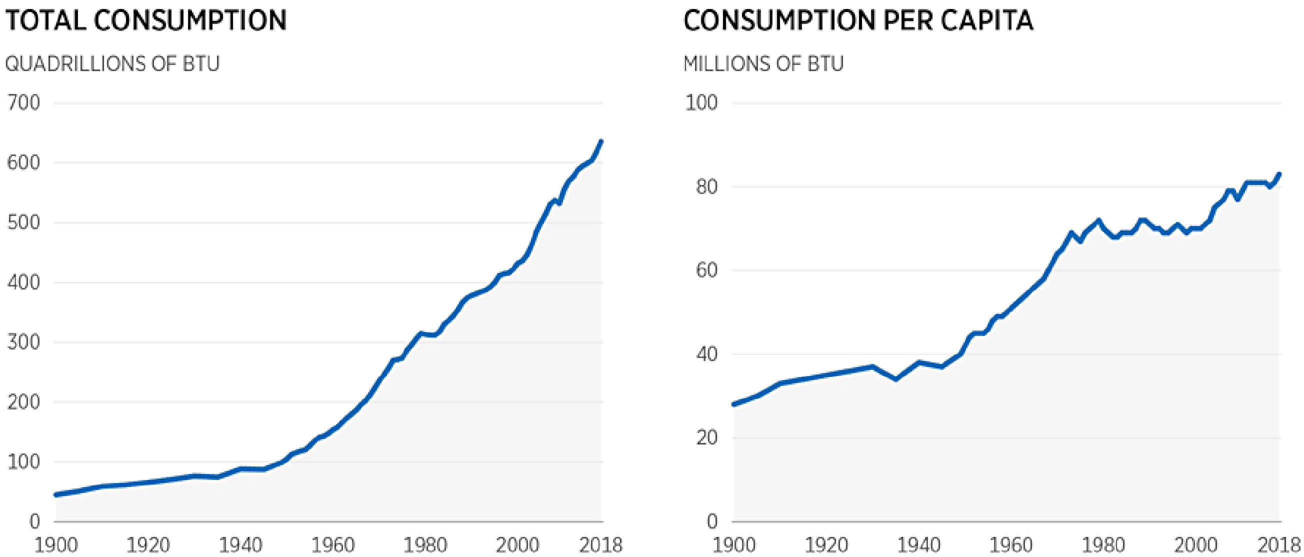
CHART 3

Global Energy Consumption



SOURCES:

- Paolo Malanima, "World Energy Consumption: A Database, 1820–2018 (2020 Revision)," https://histecon.fas.harvard.edu/energyhistory/DATABASE%20World%20Energy%20Consumption.pdf (accessed November 29, 2023).
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- Google Docs, "GM-Population-Dataset-v7," https://docs.google.com/spreadsheets/d/1c1luQNdpH90tNbMleU7jD__59wQ0bdlGRFpbMm8ZBTk/edit?pli=1#gid=569008164 (accessed November 20, 2023).

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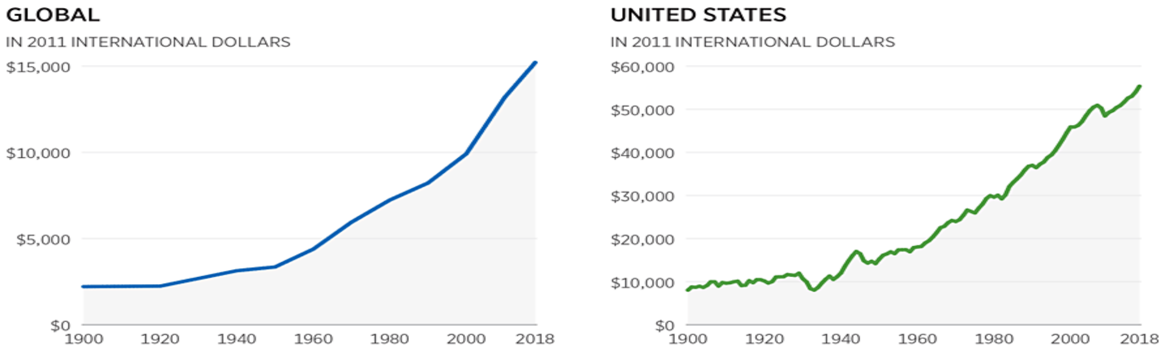
Charts 2 and 3 highlight the sharp rise in both domestic and global energy consumption over time. In 1900, the United States used 9.6 quadrillion British thermal units (BTUs) of energy, or 128 million BTUs per person, a figure that has since grown to 94.8 quadrillion BTUs overall and 281 million BTUs per capita. Chart 2 also shows a modest drop in per capita energy use beginning in the mid-1970s, largely due to oil price spikes following the Organization of the Petroleum Exporting Countries (OPEC) embargo. Around the same time, the Nixon Administration created the Environmental Protection Agency (EPA) in 1970. Through heavy regulation, the EPA imposed efficiency mandates on the automotive industry—eliminating certain vehicles and raising production costs for others—which, while achieving some efficiency on paper, ultimately curbed energy use at the expense of economic growth.

As energy consumption has increased so has income. For example, Chart 4 shows a similar increase in per capita gross domestic product (GDP) both globally as well as in the United States over the same time horizon.

CHART 4

GDP per Capita, Global and U.S.



NOTE: International dollars are a metric presented by Our World in Data: "International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent." See Our World in Data, "GDP per Capita, 2018," https://ourworldindata.org/grapher/gdp-per-capita-maddison (accessed November 30, 2023).

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- University of Groningen, "Maddison Project Database 2020," October 27, 2020, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020?lang=en (accessed November 29, 2023).
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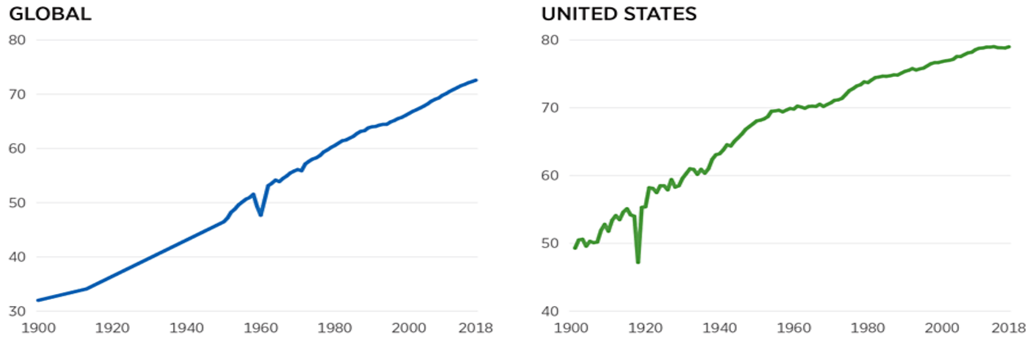
Chart 4 demonstrates the substantial growth in income that has coincided with expanded energy access and usage. Between 1900 and 2018, real global per capita income rose from $2,200 to $15,000 (measured in 2011 international dollars), marking an increase of over 500 percent. During this same period per capita income in the United States rose from $8,000 to $55,000, an increase of also well over 500 percent. Indeed, as energy consumption has risen over time, this rise has fueled economic development and raised standards of living.

Life expectancy has also risen significantly. In particular, Chart 5 offers a glimpse into these increases as well:

CHART 5

Life Expectancy from Birth, in Years



SOURCES:
- Our World in Data, "Life Expectancy at Birth," 2019, https://ourworldindata.org/grapher/life-expectancy (accessed November 29, 2023).
- Human Mortality Database, "Life Expectancy at Birth," Period Data and Cohort Data, https://www.mortality.org/Data/ZippedDataFiles (accessed November 29, 2023).
- The dip in life expectancy from 1959 to 1961 is due to the Great Chinese Famine. The Chinese Communist Party caused the famine as part of the Great Leap Forward through the misallocation of food in the nation's planned economy. The forced labor transfer of farmers to cities, the lack of a mechanized harvesters, the formation of agricultural communes, and the ecological devastation of key animal species exacerbated the famine. See Xin Meng, Nancy Qian, and Pierre Yared, "The Institutional Causes of China's Great Famine, 1959–1961," *The Review of Economic Studies*, Vol. 82, No. 4 (2015), pp. 1568–1611, https://doi.org/10.1093/restud/rdv016 (accessed December 4, 2023).

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As shown in Chart 5, global life expectancy was just 32 years in 1900. By 2018, it had more than doubled to just over 72 years—a 125 percent increase. The United States experienced a similar trend. Although there was a brief decline during the 1918–1920 Spanish flu pandemic, U.S. life expectancy rose from 49 years in the early 1900s to nearly 79 years in 2018, marking a 61 percent increase. Access to energy has played a vital role in this progress by enabling electricity, clean water systems, and medical advancements that have significantly extended human lifespans.

Over the past century, substantial advancements in energy access have coincided with notable improvements in human well-being. In the United States, the child mortality rate for children under five dropped from approximately 3.7 percent in 1950 to 0.65 percent in 2018. Substantial reductions have occurred globally over this time period as well. Between 1961 and 2018, agricultural productivity surged. Wheat output jumped over 70 percent in both the U.S. and globally, and corn soared more than 150 percent. These improvements—discussed in further detail in our Heritage Foundation report—have been facilitated by technological advancements powered by reliable and affordable energy.

There is, of course, significant heterogeneity all across the world regarding energy consumption. Western countries have better access to affordable and reliable energy and, consequently, perform better in terms of a variety of metrics regarding human flourishing. Chart 6 in the appendix shows the relationship between per capita energy consumption and the per capita GDP of countries across the world.

Chart 6, plotted on a logarithmic scale, shows a clear positive relationship between per capita energy consumption and per capita GDP. Less developed countries that consume around 4,000 kilowatt hours (kWh) per person typically have incomes near $4,000 per year, while those using approximately 80,000 kWh per person enjoy incomes close to $40,000—a 10-fold increase. This strong correlation underscores that no country achieves high income without also consuming large amounts of energy, emphasizing the foundational role of energy in economic development.

Not surprisingly, access to affordable and reliable energy has also reduced poverty. For example, Chart 7 in the appendix shows the relationship between access to energy and poverty around the world, particularly those living on less than $30 a day.

Chart 7 reveals a strong inverse relationship between per capita energy consumption and the share of a country's population living on less than $30 per day. As energy use per person rises above 10,000 kWh, the proportion of the population below this income threshold declines, approaching zero as consumption nears 100,000 kWh per capita. Indeed, as access to energy increases, standards of living tend to soar—driven by improved health care, education, and economic opportunity.
In fact, Chart 8 in the appendix reveals the relationship between access to energy and a variety of health outcomes.

Chart 8 illustrates that higher per capita energy consumption is strongly associated with greater doctor availability and longer life expectancy, alongside steep reductions in child and maternal mortality. Malawi, Rwanda, and Sierra Leone each consume less than 900 kWh per capita and have fewer than one doctor per 1,000 people, life expectancies under 67 years, child mortality rates exceeding 4,000 per 100,000, and maternal mortality rates over 200 per 100,000 live births. In contrast, Greece, Italy, and Japan each consume more than 30,000 kWh per capita and have more than 2.4 doctors per 1,000 people, representing an increase of over 140 percent. Life expectancy in these countries exceeds 80 years, a gain of more than 19 percent. By comparing these two cohorts of countries, one can see that child mortality rates drop by over 80 percent, to below 500 per 100,000, while maternal mortality rates fall by more than 90 percent, to under 12 per 100,000 live births. Indeed, energy—often taken for granted—powers the medical innovations that save lives and improve health.

From a public health standpoint, access to clean air and water is essential for human survival. Expanding energy access enables countries to diversify their energy mix, often allowing for cleaner energy choices. In many developing nations, traditional biomass—such as wood and crop residues—remains the primary fuel source for cooking and heating, contributing significantly to indoor air pollution.[ii]

Moreover, greater energy availability supports the development and adoption of cleaner energy technologies. It also makes possible the use of advanced air quality management tools, including pollutant scrubbers and electrostatic precipitators.

Energy access is equally vital for securing clean water. Reliable and affordable energy is essential for the infrastructure required to pump, treat, purify, and distribute safe drinking water. Chart 9 in the appendix offers an illustration of the relationship between per capita energy consumption and mortality linked to air pollution and unsafe water.

Chart 9 makes clear that expanding access to reliable energy is not just a matter of better infrastructure—it is also a matter of life and death. Mortality from air pollution and unsafe drinking water drops sharply once countries surpass roughly 20,000 kWh in per capita energy consumption. In low-energy nations, such as Madagascar and Somalia, where people consume less than 600 kWh per year, over 15,000 lives are lost due to air pollution and more than 40 deaths per 100,000 occur from unsafe drinking water. In stark contrast, countries like Finland, Iceland, and Sweden—where per capita energy use exceeds 60,000 kWh—have achieved extraordinary improvements: air pollution–related deaths are reduced by more than 93 percent, and deaths from unsafe water plummet by over 99.7 percent, to less than 1,000 and 0.1 per 100,000, respectively.

These numbers are not just statistics—they are lives saved. Ensuring widespread access to affordable, abundant energy is one of the most effective strategies we have for protecting global health and lifting people out of environmental vulnerability.

Altogether, it is clear that access to affordable and reliable energy is paramount to a flourishing society. In the following section, we will discuss Heritage Foundation analysis that examines the impact of attempts taken by the previous Biden Administration to constrict access to carbon-based forms of energy.

III. The Economic and Climate Impacts of Carbon-Based Regulation

One of former President Joe Biden's earliest moves in office was to rejoin the United States to the Paris Agreement on climate change. This global accord seeks to limit the rise in global temperatures to below 2 degrees Celsius above preindustrial levels, with a more ambitious target of capping warming at 1.5 degrees Celsius. Alongside my former colleagues Katie Tubb and David Kreutzer, in a Heritage Foundation backgrounder titled, "The Unsustainable Costs of President Biden's Climate Agenda," we analyzed the economic and climate impacts of carbon-based regulation pursued by the Biden Administration.[iii]

For this analysis, we utilized the Heritage Energy Model (hereafter referred to as HEM), a clone of the Energy Information Agency's National Energy Modeling System. Under the auspice of curbing climate change, the Biden Administration sought to regulate and ultimately phase out carbon-based forms of energy. Such regulations included but were not limited to:

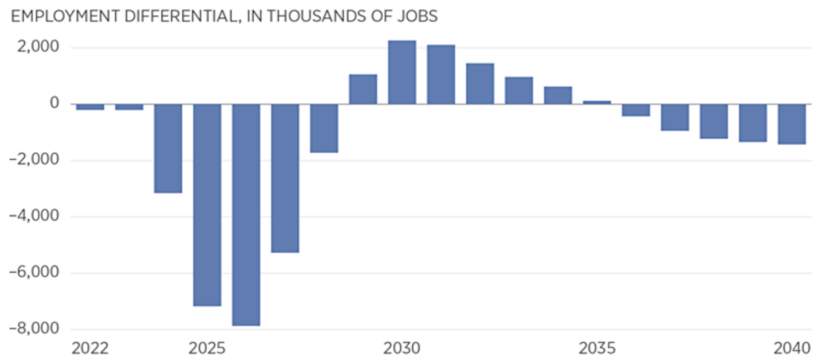
- Revoking the cross-border permit for the Keystone XL Pipeline, which would have delivered up to 830,000 barrels of crude oil per day from Alberta, Canada, to U.S. refineries;[iv]
- Prohibiting new oil, coal, and natural gas leases on federal lands and waters;[v]
- Reassessing the social cost of carbon dioxide (as well as other GHGs), making it easier for agencies to justify the costs of climate regulations;[vi]
- Promulgating GHG regulations for new light-, medium-, and heavy-duty vehicles with the ultimate goal of phasing out the internal combustion engine;[vii] and
- Signing an executive order calling for half of new car sales to be zero-emission vehicles by 2030.[viii]

To assess the effects of such a policy, we modeled a hypothetical $300 carbon tax and used the Heritage Energy Model (HEM) to estimate the resulting economic impacts. Our analysis compares this scenario to the Energy Information Administration's (EIA) business-as-usual baseline. Because the policy does not achieve net-zero emissions, the projected economic costs are likely understated. Charts 10 and 11 present the short- and long-term differences between the two scenarios.

CHART 10

How Re-Entry into the Paris Agreement Would Affect Total Employment

Average annual employment would have an average shortfall of 1.2 million jobs, and a peak shortfall of 7.8 million jobs in 2026.



NOTE: Figures shown are differentials between current projections and projections based on a $300 carbon tax instituted in 2023.
SOURCE: Authors' calculations based on Heritage Energy Model simulations. For more information, see the methodology in the appendix.

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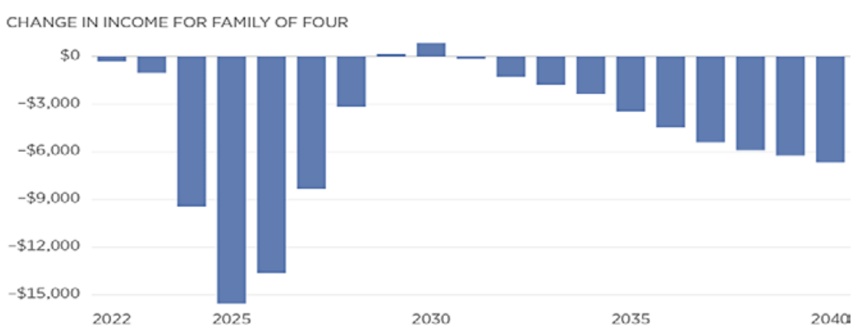
CHART 11

Re-Entry into the Paris Agreement Would Significantly Reduce Family Incomes

The typical American family of four would lose, on average, more than $4,000 per year through 2040, with total losses exceeding $80,000.



NOTE: Figures shown are differentials between current projections and projections based on a $300 carbon tax instituted in 2023.
SOURCE: Authors' calculations based on Heritage Energy Model simulations. For more information, see the methodology in the appendix.

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As Charts 10 and 11 illustrate, our analysis suggests that the regulatory policies pursued by the Biden Administration over an eighteen-year (2022-2040) time horizon would result in:

- An overall average reduction of more than 1.2 million jobs,
- A peak employment reduction of more than 7.8 million jobs,
- An average annual income loss for a family of four of $5,100,
- A total income loss for a family of four of more than $87,000 over the 18-year time horizon, and

- An aggregate GDP loss of over $7.7 trillion over the 18-year time horizon.

Our analysis also indicated an increase in household electricity expenditures averaging in excess of 20 percent per year as well as an increase in gas prices of over two dollars per gallon.
Of course, as stated earlier, such policies are pursued with the intention of curbing climate change. To assess the proposed policy's effectiveness of doing so, we utilized the Model for the Assessment of Greenhouse Induced Climate Change, developed by researchers at the Intergovernmental Panel on Climate Change (IPCC) as well as the National Center for Atmospheric Research.[ix] We again compared two scenarios: a commonly accepted business as usual scenario of carbon-dioxide (CO_2) emissions without mitigation policies implemented (Representation Concentration Pathway 6.0, hereafter referred to as RCP 6) against a hypothetical scenario of complete elimination of fossil fuels from the United States starting immediately.[x] These simulations varied climate sensitivities (the level to which the planet warms due to carbon-dioxide emissions) under a variety of plausible scenarios suggested in prior IPCC Assessment Reports.[xi] Our results under assumptions between 1.5 degrees and 4.5 degrees are outlined in Chart 12 in the appendix.

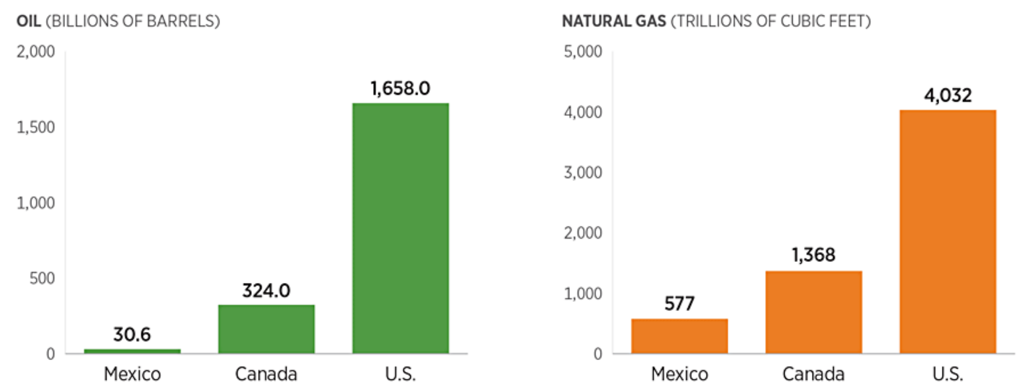
As Chart 12 illustrates, even assuming a 4.5 degrees Celsius sensitivity, complete elimination of fossil fuels in the United States will result in less than 0.2 degrees Celsius temperature mitigation by 2100. Separately, we ran an additional analysis assuming a climate sensitivity of 5 degrees Celsius, and this analysis also found a negligible –0.23 degrees Celsius temperature mitigation by 2100.[xii] Altogether, the government's own models suggest that carbon-based regulation would have significant economic costs and negligible environmental impact. In the subsequent section, I discuss the benefits of unleashing American energy.

IV. The Economic and Climate Impacts of Unleashing American Energy

As Section II illustrates, access to affordable and reliable energy is paramount for human flourishing. Chart 13 provides estimates from the Institute for Energy Research's North American Energy Inventory:

CHART 13

North America Is Abundant in Technically Recoverable Oil and Natural Gas



NOTE: Figures are estimates.
SOURCE: Institute for Energy Research, "2024 North American Energy Inventory," May 2024, https://www.instituteforenergyresearch.org/wp-content/uploads/2024/05/2024-North-American-Energy-Inventory.pdf (accessed January 7, 2025).

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Chart 13 shows that North America possesses over 2 trillion barrels of technically recoverable oil and more than 5.9 quadrillion cubic feet of technically recoverable natural gas—more than two-thirds of which are located within the United States. The United States has over 1.6 trillion barrels of technically recoverable oil and over 4 quadrillion cubic feet of natural gas. At current (2021) consumption rates, U.S. oil and natural gas resources could meet domestic demand for over 200 and 130 years, respectively. These abundant reserves present a significant opportunity for long-term energy security, economic stability, and strategic policy planning.[xiii]

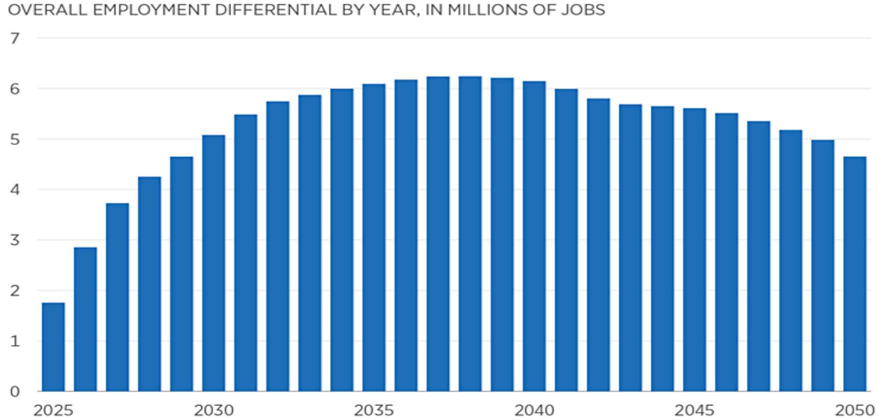
In the United States, the extraction of shale oil and gas—often referred to as tight oil—relies on a combination of horizontal drilling and hydraulic fracturing, two advanced technologies that have significantly transformed domestic energy production. Horizontal drilling allows operators to drill vertically before turning the wellbore horizontally, enabling access to a much broader area of the underground reservoir. This technique not only improves efficiency and production rates compared to traditional vertical drilling, but also reduces surface disruption, thereby minimizing the environmental footprint of extraction operations. Hydraulic fracturing, commonly known as fracking, complements this process by enabling producers to release oil and natural gas trapped in dense rock formations. Wells are typically drilled to depths of around 7,500 feet—well below drinking water aquifers—and then injected with a high-pressure mixture of water, sand, and chemical additives to fracture the rock. These fractures allow the hydrocarbons to flow to the surface for collection. Taken together, these technologies have and will continue to enable America to unlock vast domestic energy resources while reducing surface-level land impacts and strengthening U.S. energy security.

To evaluate the economic potential of expanding domestic oil and gas production, in a Heritage Foundation *Backgrounder* I recently published with my colleagues Mario Loyola and Austin Gae titled, “Time for U.S. Energy Dominance: Unlocking America’s Oil and Gas Potential through Innovation and Policy,” we utilized the Heritage Energy Model (HEM) to simulate the impact of increasing recoverable shale oil and natural gas resources by 50 percent relative to the EIA’s current business-as-usual reference case.[xiv]

While not tied to a specific legislative proposal, this scenario reflects the kind of production gains that could be potentially be achieved through targeted regulatory reform or technological advancement. These results are based on the same assumptions that the EIA makes in its annual high oil and gas case scenario. The results underscore the substantial long-term economic benefits of policies that facilitate greater resource development. Our results are contained in Charts 14 and 15:

CHART 14

How Unleashing America's Energy Abundance Would Affect U.S. Jobs



SOURCE: Heritage Foundation calculations using Heritage Energy Model. See the appendix for details.

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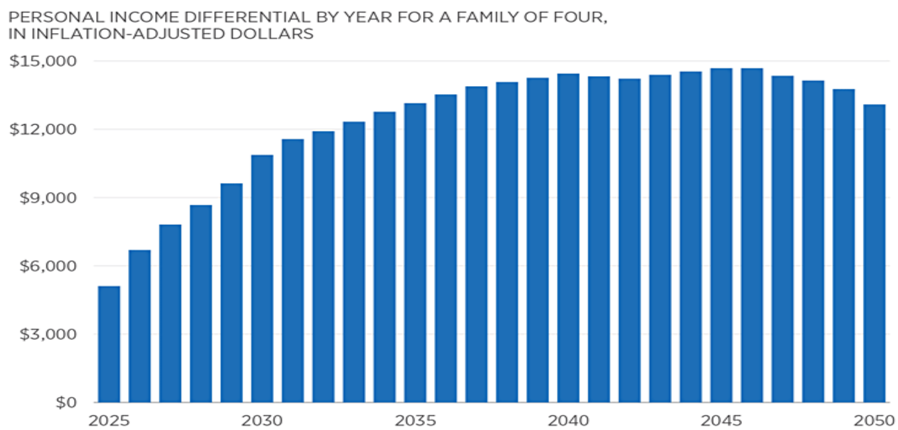
CHART 15

How Unleashing America's Energy Abundance Would Affect Family Income



SOURCE: Source: Heritage Foundation calculations using Heritage Energy Model. See the appendix for details.

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As Charts 14 and 15 illustrate, according to the EIA's own assumptions, such an increase in recoverable reserves would – over a twenty-five year time horizon (2025-2050) – lead to:

- An overall average gain of more than 5.27 million jobs per year,
- A peak employment gain of more than 6 million jobs,
- A total income gain for a family of four of more than $300,000 with an average annual gain of $12,418, and
- An aggregate GDP gain of more than $25 trillion through 2050.

Of course, critics may claim that, since these policies increase the use of carbon-based energy, they may exacerbate climate change. To answer this question, we again utilized the Model for

Assessment of Greenhouse Gas Induced Climate Change, juxtaposing the same business as usual scenario (RCP 6) presented in Section II against a scenario where U.S. carbon emissions are increased in accordance with emissions increases suggested by our HEM analysis. Our results, again under a variety of climate sensitivity assumptions suggested by the IPCC, are contained in Chart 16 in the appendix.

As seen in Chart 16, even under a 5 degree Celsius sensitivity, there is no more than a 0.03 degree Celsius increase in global temperature. As a result, it is clear that using the vast oil and gas resources here in the United States will offer significant increases in economic growth with little or no impact on global temperature.

IV. Conclusion

Access to affordable and reliable energy is foundational to economic prosperity, public health, and human flourishing. As demonstrated throughout this testimony, policies that restrict carbon-based energy come with significant economic costs while delivering little measurable impact on global temperatures. Meanwhile, expanding domestic energy production offers substantial benefits—including millions of jobs, higher incomes for American families, and trillions in additional economic output—without meaningfully affecting climate outcomes. Policymakers should focus on enabling energy abundance through innovation and regulatory reform, rather than pursuing restrictive policies with high costs and low returns. The data makes it clear: empowering energy access is a policy choice with transformative, measurable benefits.

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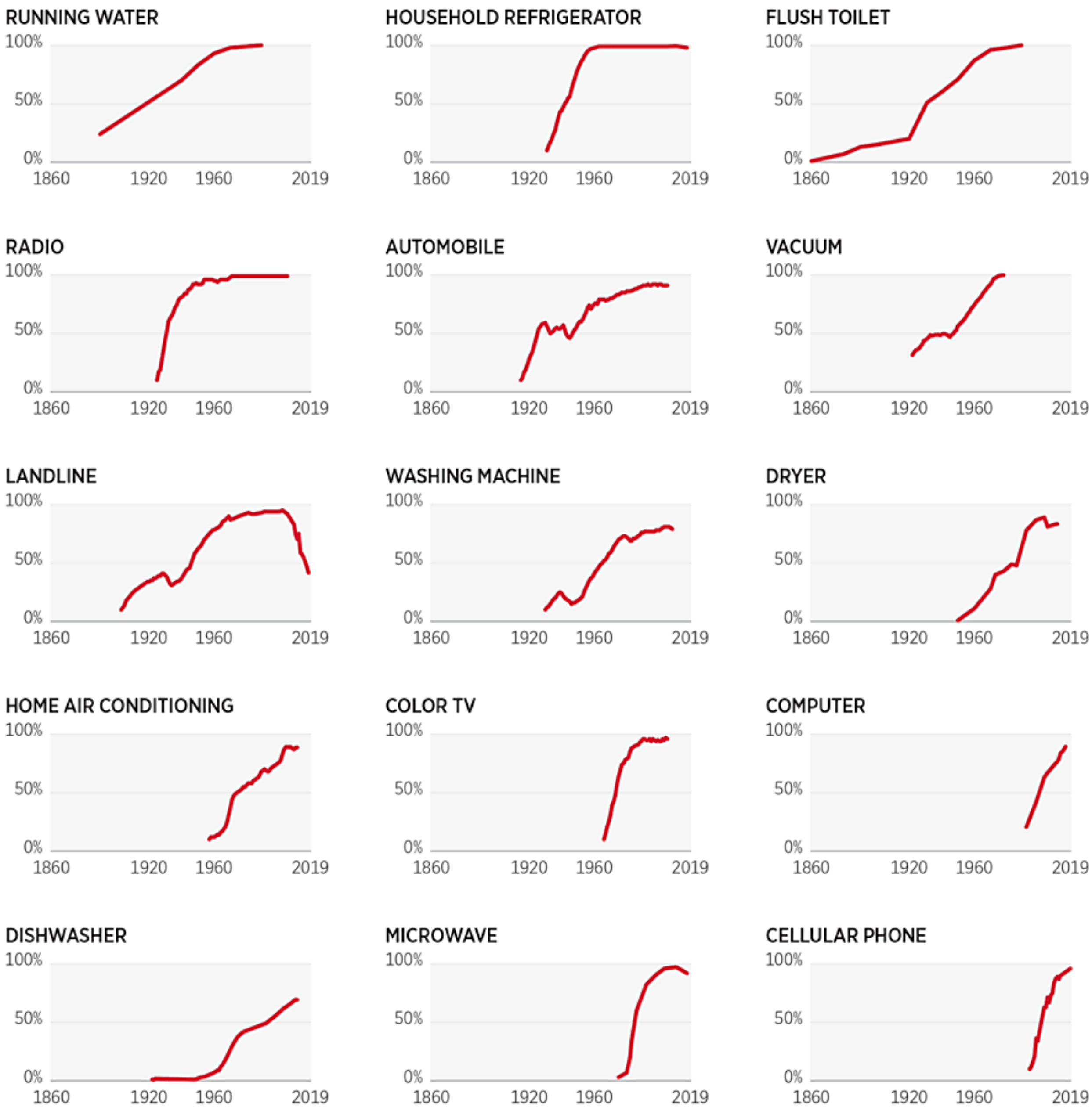
Appendix

CHART 1

Share of U.S. Households Using Specific Technologies



SOURCES:

- Our World in Data, "Share of United States Households Using Specific Technologies," https://ourworldindata.org/grapher/technology-adoption-by-households-in-the-united-states (accessed November 29, 2023).
- National Bureau of Economic Research, "Historical Cross-Country Technology Adoption (HCCTA) Dataset," https://www.nber.org/research/data/historical-cross-country-technology-adoption-hccta-dataset (accessed November 20, 2023).

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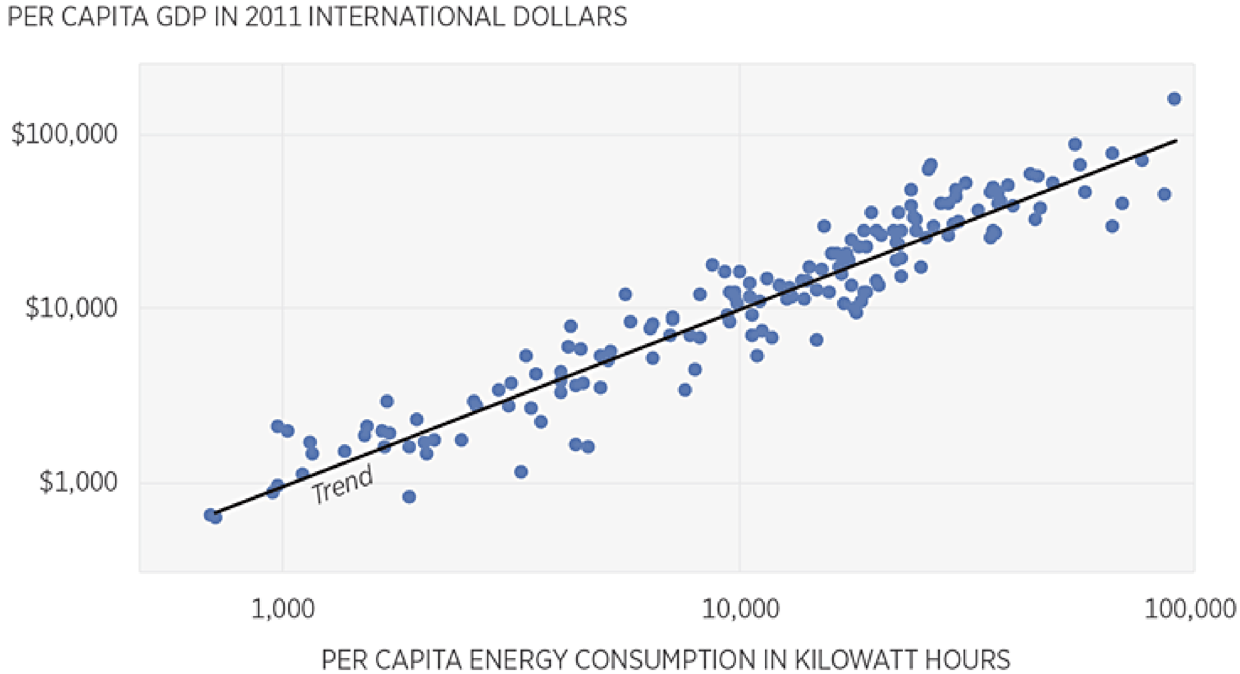
CHART 6

Global per Capita Energy Consumption and per Capita GDP, 2018



NOTES: Each dot represents a country. International dollars are a metric presented by Our World in Data: "International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent." See Our World in Data, "GDP per Capita, 2018," https://ourworldindata.org/grapher/gdp-per-capita-maddison (accessed November 30, 2023).

SOURCES:

- Our World in Data, "GDP per Capita, 1820 to 2018," https://ourworldindata.org/grapher/gdp-per-capita-maddison?tab=chart (accessed November 29, 2023).
- Our World in Data, "Energy Use per Person. 2022," https://ourworldindata.org/grapher/per-capita-energy-use (accessed November 29, 2023).
- University of Groningen, "Maddison Project Database 2020," October 27, 2020, https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2020 (accessed November 29, 2023).
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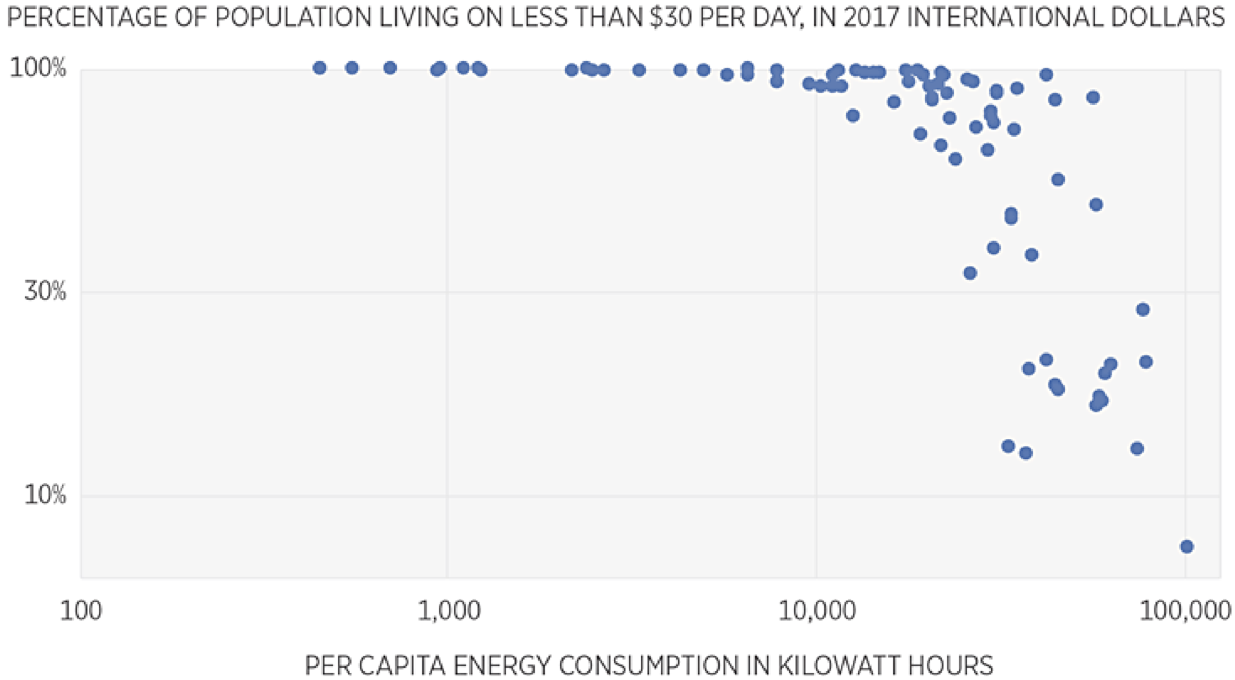
CHART 7

Global per Capita Energy Consumption and Population Living on Less than $30 per Day, 2018



NOTES: Each dot represents a country. International dollars are a metric presented by Our World in Data: "International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent." See Our World in Data, "GDP per Capita, 2018," https://ourworldindata.org/grapher/gdp-per-capita-maddison (accessed November 30, 2023).

SOURCES:

- Our World in Data, "Poverty: Share of Population Living on Less than $30 a Day," https://ourworldindata.org/grapher/poverty-share-on-less-than-30-per-day (accessed November 29, 2023).
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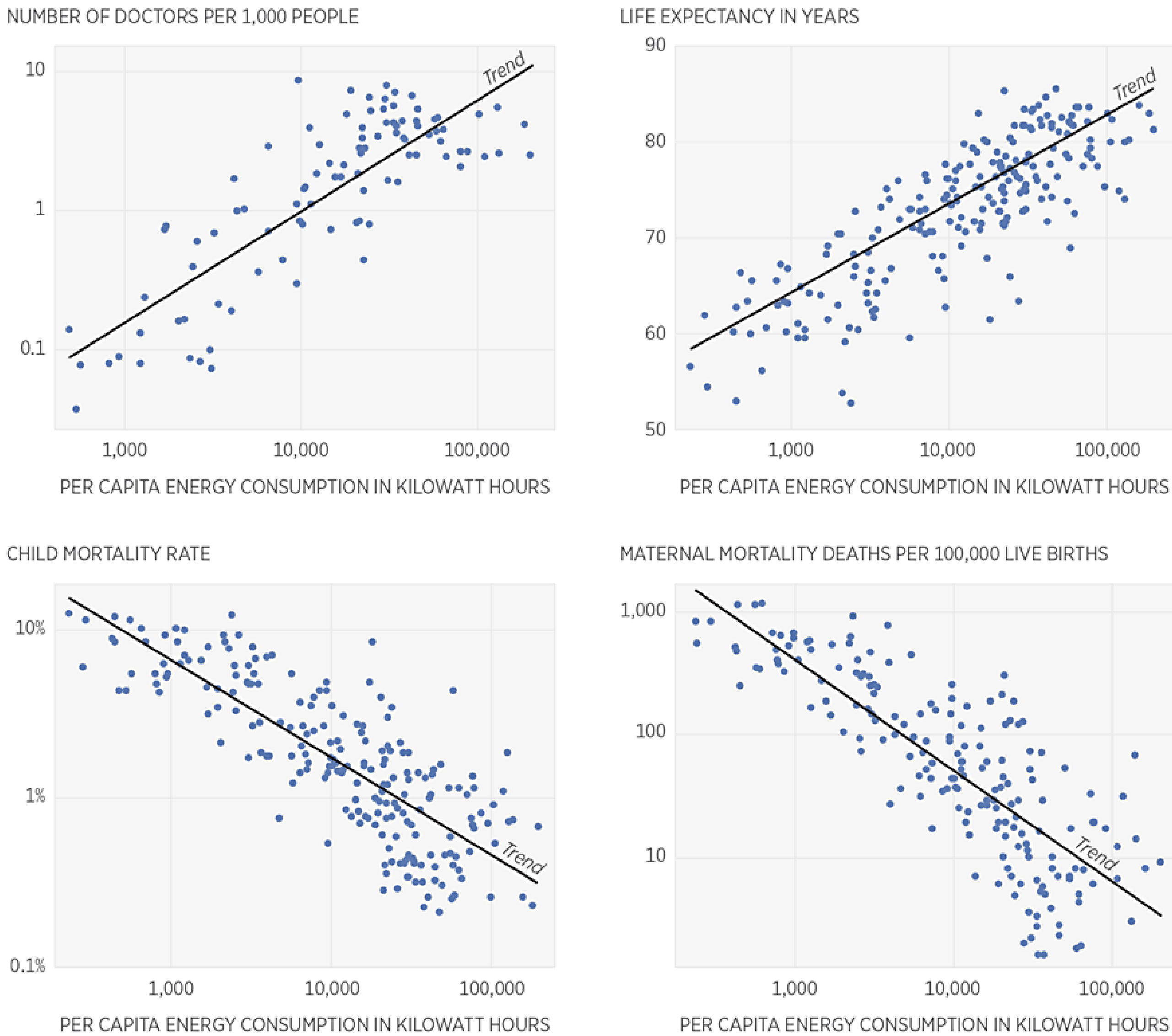
CHART 8

Global per Capita Energy Consumption and Four Key Health Metrics



NOTES: Each dot represents a country. All figures are from 2018 except maternal mortality deaths per 100,000 live births (2017). Our World in Data defines the child mortality rate as the estimated share of newborns who die before reaching the age of five. The maternal mortality rate is defined as the number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination per 100,000 live births.
SOURCE: Heritage Foundation research. For more details, see Appendix B.

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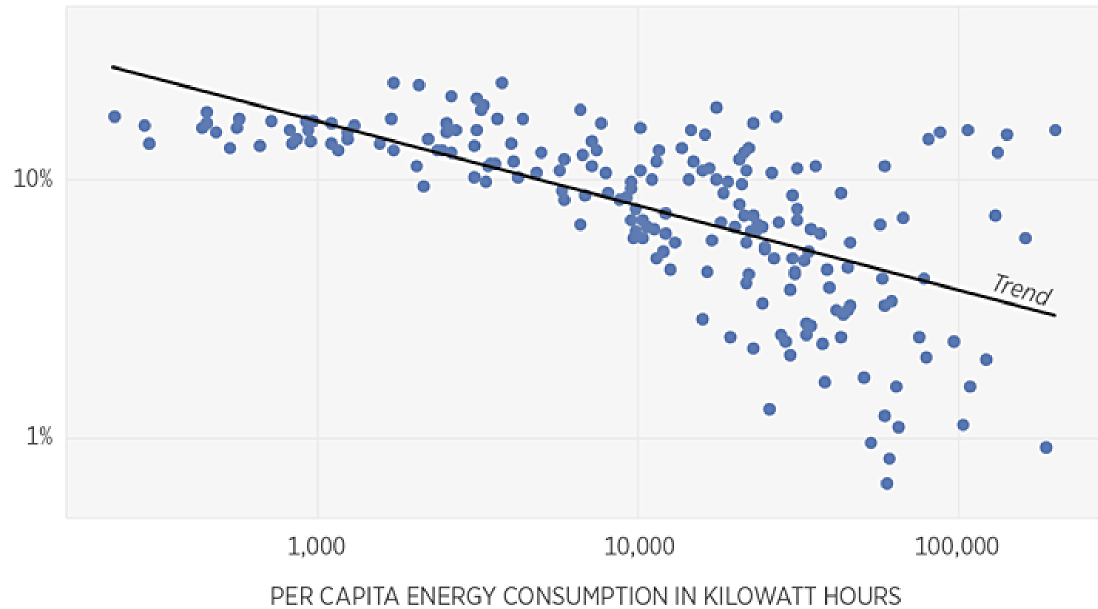
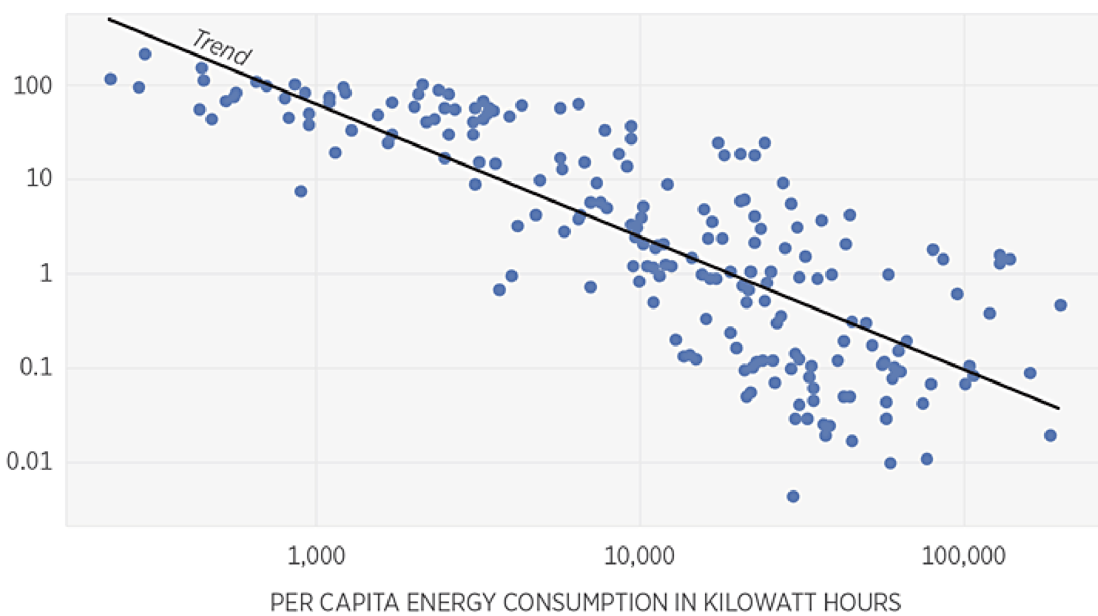
CHART 9

Global per Capita Energy Consumption and Two Key Environmental Metrics, 2018

PERCENTAGE OF DEATHS ATTRIBUTABLE TO AIR POLLUTION



DEATHS PER 100,000 DUE TO UNSAFE DRINKING WATER



NOTE: Each dot represents a country.
SOURCE: Heritage Foundation research. For more details, see Appendix B.

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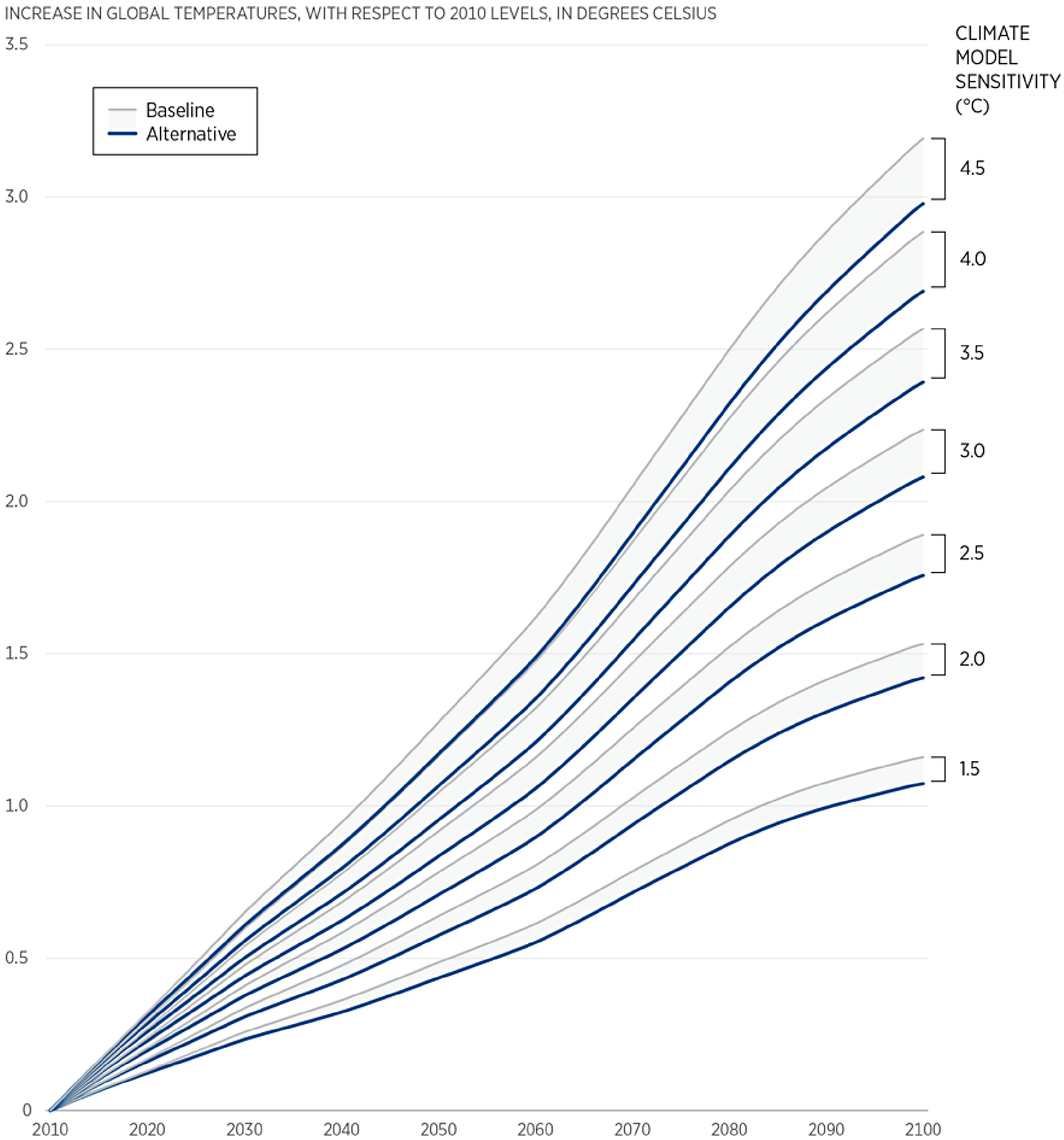
CHART 12

Eliminating All U.S. CO_2 Emissions Would Barely Affect Global Surface Temperatures, Based on Various Climate Sensitivities



SOURCE: Authors' calculations based on Model for the Assessment of Greenhouse Gas Induced Climate Change (Version 6.0) simulations. For more information, see the methodology in the appendix.

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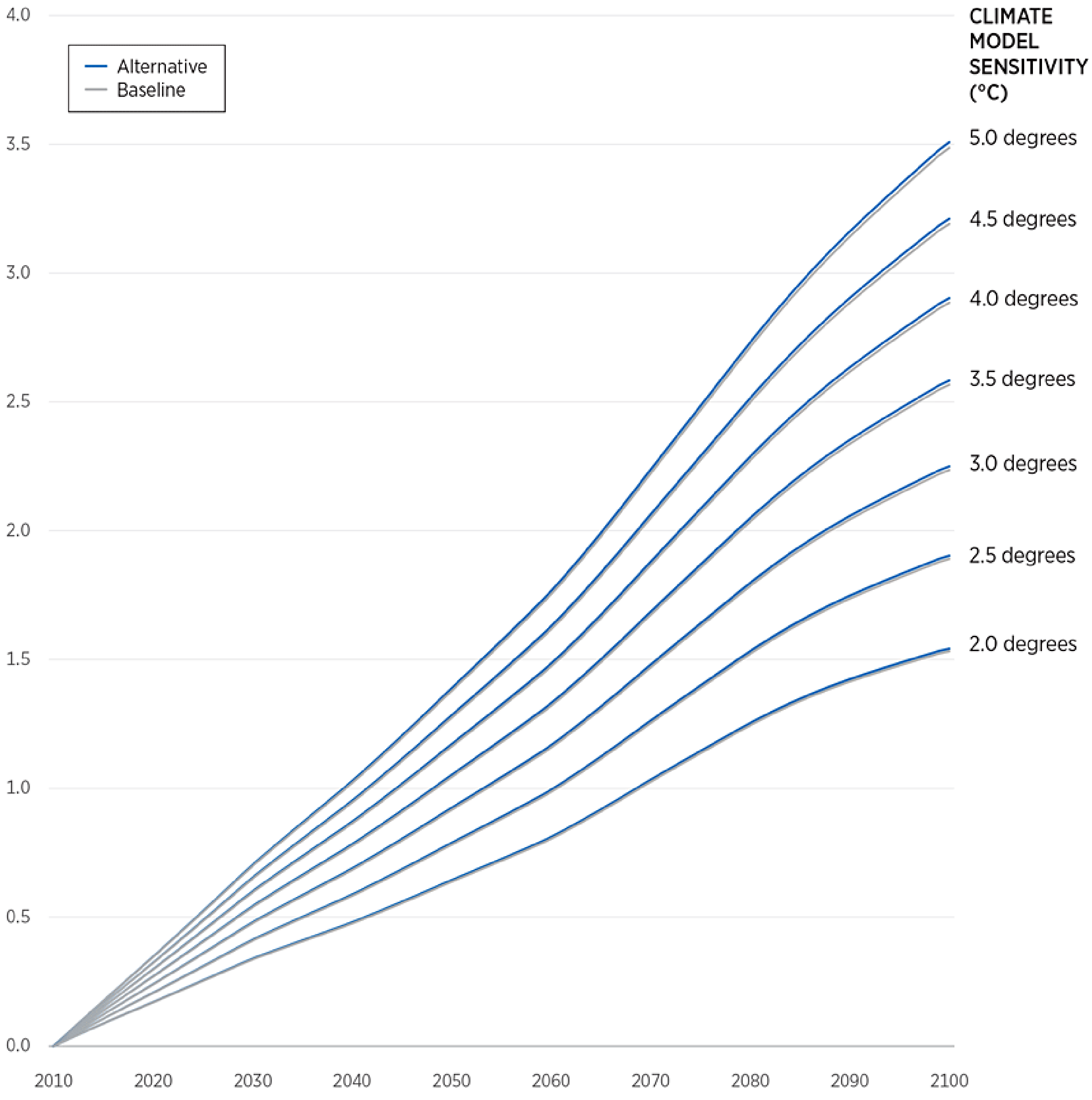
CHART 16

Expanding U.S. Energy Production Would Have Little Effect on the Climate

INCREASE IN GLOBAL TEMPERATURES WITH RESPECT TO 2010 LEVELS, IN DEGREES CELSIUS



SOURCE: Authors' calculations based on Model for the Assessment of Greenhouse Gas Induced Climate Change (version 6) simulations. For more information, see the appendix.

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