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Subcommittee on Energy

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Summary Page

- A robust energy sector is crucial for maintaining national security, energy security, and economic stability.

- Next to raw materials and the cost of labor, energy is the third most expensive cost driver. The cost of energy can grow or restrain the economy and our security.

- Energy is a critical component of our economy and national security. We are blessed to possess abundant natural resources, a strength many countries simply do not have or have mismanaged.

- During periods of energy abundance, America has helped win multiple world wars, reduced risk from unstable and hostile energy providers, and insulated the country against geopolitical instability.

- Policymakers should reflect upon previous domestic and global missteps, such as the 1973 Arab Oil Embargo and the ongoing European Energy Crisis.

- Energy abundance enhances economic and national security, while energy poverty weakens the country by undermining our domestic and foreign policy.

- Energy is an essential tool of diplomacy. We can support allies while constraining adversaries, but only from a position of energy abundance.

- Energy security is the ability to ensure the uninterrupted availability of reliable and affordable energy.

- Throughout human history, global energy demand has only risen. This is especially true of advanced countries where energy usage is, in many ways, a reflection of the wealth of a nation.

- Technology and AI are driving energy demand. To some extent, this is a race against time, and the country should take a whole of government approach to increase baseload energy capacity. Poor energy policies make even energy rich countries poor.

- Our approach should convey a stable and predictable regulatory environment to the private sector to maximize investment potential.

- Energy policy represents an opportunity for bipartisan agreement to ensure our security and that of our allies while responsibly addressing pollution and holding China and others accountable.

I. Introduction

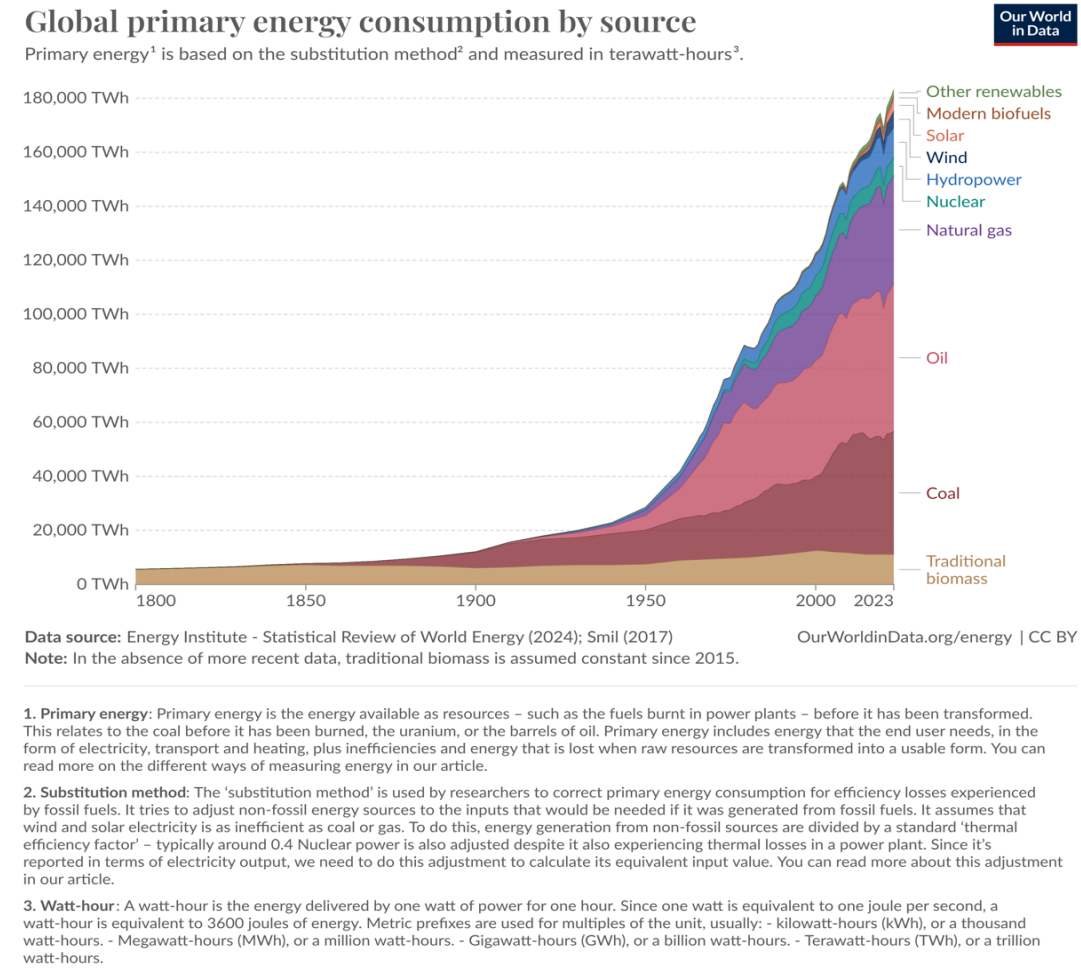
Chairman Latta, Vice Chairman Weber, Ranking Member Castor, and subcommittee members, thank you for the opportunity to appear before you and testify this morning. I am Brigham McCown, a Senior Fellow at Hudson Institute and Director of their Initiative on American Energy Security. I also serve as a Professor and an Executive in Residence at Miami University in Oxford, Ohio, where I teach and research issues relating to law, policy, and public and regional affairs.

My background includes nearly three decades of active and active reserve global service as a naval officer and Naval Aviator. I have also spent much of my career in the private sector and have led multiple companies. On the public sector side, I have held multiple senior appointments in the executive branch and have worked for cabinet secretaries from both parties. My educational background includes degrees and studies in law (Chase-KY), business (W&M-VA), energy (Stanford-CA), and diplomacy and foreign affairs (Miami-OH). The views I express here today are mine alone and do not represent the position of any entity.

Through the ages, scientists, theorists, and visionaries have sought to harness energy for the betterment of humankind. Clinically, energy is the capacity to do work, such as the ability to move an object (of a given mass) by the application of force. Today's hearing is extremely important for the United States. Energy is literally the lifeblood of the economy. At its core, energy is necessary to sustain life. It is the secret sauce that makes our way of life possible. It is the lifeblood of our economy as it powers our factories and cities. It enables us to reach for the stars and to visit friends and family. It also sustains our farming and makes farm-to-table possible. Life is not sustainable without energy.

II. Energy's Crucial Role

At its core, energy is harnessed for the betterment of society, and one universal truth is that throughout human history, the world has never used less energy. With each passing year, we require more energy to power our economies. Our national interest is served through understanding the benefits of unleashing American energy.



Reference[1]:

[1] https://ourworldindata.org/energy-production-consumption

Energy transitions are constantly occurring. The truth is, however, that they occur over a much longer period than one might think. Our view of history is compressed, yet energy transitions take far longer. Attempts to demand an energy transition cannot be willed by policymakers. Physics beats policy every day of the week. There is nothing wrong with a diverse energy mix, and that mix will naturally change over time. Energy evolves, as we have experienced. Innovation, technology, reliability, and affordability are not static. For example, we have witnessed a significant reduction in coal usage as natural gas became more available due to advances in technology.

Even now, some are championing a rapid switch toward an energy mix that is less resilient and less reliable and whose fuel sources create less energy. By leveraging the best of the above, we can and should invest in energy sources that include renewables. Nevertheless, we must be clear-eyed about the benefits and costs of our energy mix.

III. National Security Implications

International events have brought into acute focus the intrinsic relationship between energy, economics, and national security. It has also highlighted the degree to which an American strategic asset—abundant energy resources—has been needlessly undermined by policy decisions that haphazardly sought to constrain this strength without considering the long-term implications of government picking winners and losers.

Even with remarkable improvements in technology and energy efficiency, economic growth and prosperity require energy. National Security, particularly the United States' ability to project power globally to protect American and allied interests, requires secure access to multiple energy sources and raw materials for our energy mix.

Market access to the quantities and types of energy, when and where needed, along with the security and resiliency of energy systems, requires thoughtful and sustained long-term capital investments in production, distribution infrastructure, storage, and research and development. The key to maximizing energy to our advantage is to ensure a predictable and stable policy environment.

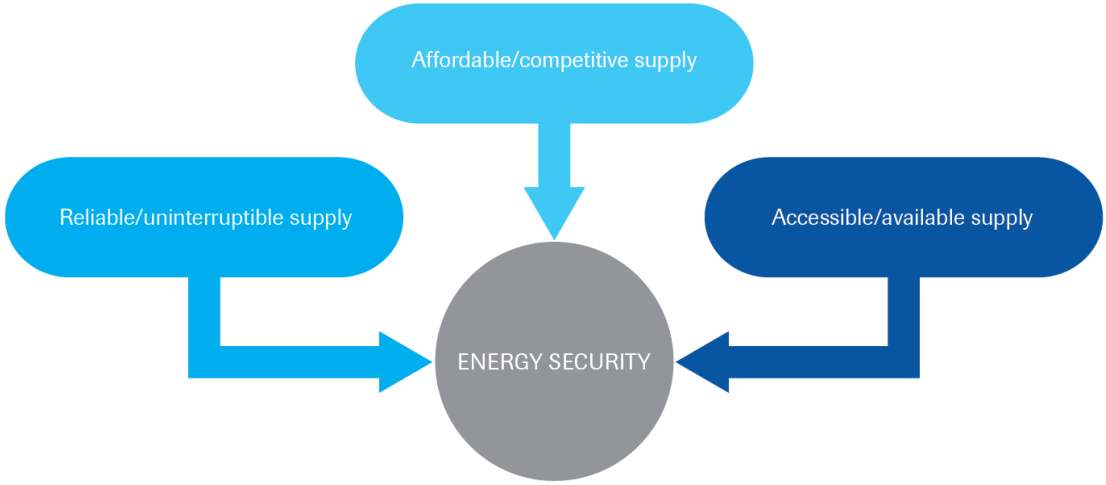
The same is true for our allies who depend on stable supplies of energy products. Without LNG exports to Europe in the aftermath of Russia's invasion of Ukraine in 2022, Europe would have faced even more difficult circumstances than it has already endured. Similarly, countries like Japan require oil and gas be purchased from external sources.

Energy abundance enhances economic and national security while energy poverty weakens the country by undermining our domestic and foreign policy. By working together, we can unleash one of our inherent strengths. We can reach energy independence and new levels of success as a nation. Some might refer to this as energy dominance, but regardless of the term, we have a unique opportunity to protect ourselves against geopolitical instability as discussed below.

IV. Energy Security

Energy Security is the ability to ensure the uninterrupted availability of reliable and affordable energy sources for consumption. It encompasses the stable supply of energy resources, the resilience of energy infrastructure, and the ability of a country to meet its current and future energy demands while also dealing with emergencies, natural disasters, and geopolitical tensions that could disrupt supplies.

The International Energy Agency (IEA)[2], distinguishes between short- and long-term dimensions of security of energy supply. Long-term energy security policy focuses on establishing A stable investment environment to support national goals. Short-term energy security focuses on the ability of the energy system to react promptly to sudden changes within the supply-demand balance. Both are critically important.



Reference[3]

A. Availability

Available energy means these natural resources are made available as supplies to heat our homes, run our factories, and power our transportation systems. Commonly referred to as our "energy mix," we utilize energy resources that can be produced. Within this context, America has

[2] The *International Energy Agency* is an international energy forum comprised of 29 industrialized countries under the Organization for Economic Development and Cooperation (OECD).
The IEA was established in 1974, in the wake of the 1973-1974 oil crisis, to help its members respond to major oil supply disruptions, a role it continues to fulfill today. https://www.energy.gov/ia/international-energy-agency-iea#:~:text=The%20IEA%20was%20established%20in,it%20continues%20to%20fulfill%20today.

[3] IEA, referenced https://www.clingendael.org/pub/2017/monitor2017/energy/

seen decades where it was able to meet its required energy demands, and decades where it became dependent upon overseas suppliers. For example, energy security means producing needed quantities of baseload electrical power for everyday needs while ensuring additional power can be generated on demand and dispatched to balance load requirements.

B. Reliability

Once energy is available, we must ensure that modern infrastructure can move energy whenever and wherever it is needed. While this seems straightforward, the resiliency and reliability of our energy infrastructure are crucial to this effort. Whether from a generation facility, refinery, the transmission grid, ships, or pipelines, the country requires a reliable and interruptible flow of energy delivered to wherever it is needed in quantities that are needed. We must ensure our infrastructure is resilient, redundant, and secure from natural events or man-made interference. This includes the need to protect our infrastructure from cybercriminals and State Actors.

C. Affordability

Finally, energy security depends on delivering affordable energy. Next to the cost of raw materials and labor, energy is the next largest cost of manufacturing goods and delivering services. Available energy is useless if the costs are so high that it disrupts the economy. Energy poverty exists when there is insufficient energy, or the available energy is too expensive to meet private, commercial, and industrial needs. Next to raw materials and the cost of labor, energy is the third most expensive cost driver, making energy the economy's lifeblood.

V. Recommendations

There exists a golden opportunity to forge bi-partisan agreement on this topic. As energy demand rises, we are reminded that we are in a great power competition with China. Energy enables our quality of life and powers the instruments of commerce. Energy abundance helps

support figurative rivers of commerce. Whether bringing goods to market, enabling services, or food to our table, energy powers it all.

To that end, we should be outcome-driven and immediately unleash energy development by being agnostic to the means and confident in the outcome. America requires more energy, and we are unlikely to meet projected demand without a significant realignment of priorities. Data centers and advances in Artificial Intelligence (AI) will drive energy demand well into the next decade, and we must meet this challenge head-on. If we seek cleaner fuel, then look to the significant greenhouse gas reductions made possible by natural gas, a critical bridge fuel for the energy transition.

In years past, natural gas has been used mainly for combustion. Today, innovators are capable of "cracking" natural gas to create hydrogen in a way that delivers cleaner power while producing valuable co-products that can be used directly to build and enhance infrastructure like roads, bridges, and critical manufacturing components. Through distributed methane pyrolysis, in particular, natural gas can be converted into clean hydrogen and solid carbon, resulting in no CO_2 emissions, no new infrastructure buildouts like burdening the electrical grid or requiring specialized pipelines, and no new investments in costly storage and transportation solutions, all while delivering both maximum clean power and building material to strengthen our infrastructure and economy.

We should also embrace nuclear energy and advanced reactor designs, including Small Modular Reactors (SMRs) and mico-reactors. By concentrating on standard designs, we can replicate and build nuclear facilities safely and faster than in previous years.

One needs only look to Europe, where politically motivated policies have decimated the continent, which was once a powerful economic engine. Germany, in particular, has lost its way

while not meeting its own self-imposed carbon emission reductions.

By focusing on the core tenets of energy security, we can be good stewards of the environment and our citizens and allies. This includes ensuring that we utilize public lands to their best use while simultaneously ensuring stewardship that will last for generations.

Second, meaningful investment in needed Infrastructure requires a stable policy environment. America's Achilles heel is self-imposed. Ensure federal regulations are performance-based and technology-agnostic. Real permitting reform is required to deploy much-needed infrastructure rapidly. NEPA is not a bedrock environmental law; it is a procedural law whose yoke has become harder to bear than was ever intended and inhibits all infrastructure priorities.

Third, energy abundance raises people and creates strength for all. A rising tide lifts all boats. It helps us to grow the economic pie and protects against external threats. Energy scarcity, or energy poverty, has the opposite effect. It also slows or even reduces our economic output, fails to protect us economically, and weakens our security. Western Europe, particularly Germany, is a cautionary tale of what goes wrong when intellectuals believe that policies can bend molecules. Energy is the lifeblood of our economy.