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***CONGRESSIONAL TESTIMONY***

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**Restoration of the Transatlantic  
Dialogue: The Global Fight against  
Climate Change**

**Foreign Affairs Subcommittee on Europe, Energy, the  
Environment and Cyber**

**U.S. House of Representatives**

**April 20, 2021**

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My name is Nick Loris and I am the Deputy Director and Herbert & Joyce Morgan Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation. The views I express in this testimony are my own and should not be construed as representing any official position of The Heritage Foundation. Thank you for this opportunity to appear before the subcommittee to discuss the restoration of the transatlantic dialogue in the global fight against climate change.

Strong transatlantic relationships generate many important benefits for Americans and Europeans alike. U.S. cooperation with transatlantic partners can positively affect the economy, national security interests and the environment. Promoting free and open societies contributes to economic well-being and higher levels of prosperity. Identifying and addressing common threats improves geopolitical stability in these regions and around the world.

In the context of global climate change, policies rooted in free enterprise will drive innovation, strengthen economies, reduce emissions and build more resilient infrastructure. Policy reforms that reduce barriers to investment both in the U.S. and Europe will lower the cost of cleaner technologies and expand their deployment. As the Biden administration submits a new nationally determined contribution (NDC) for America's re-entry into the Paris Agreement, transatlantic dialogue should include the following issues:

### **Transparency and Accountability**

When negotiating the Paris Agreement in December 2015, Secretary of State John Kerry provided noteworthy remarks about the futility of unilateral action toward mitigating global climate change. Secretary Kerry said:

The fact is that even if every American citizen biked to work, carpoled to school, used only solar panels to power their homes, if we each planted a dozen trees, if we somehow eliminated all of our domestic greenhouse gas emissions, guess what – that still wouldn't be enough to offset the carbon pollution coming from the rest of the world.

If all the industrial nations went down to zero emissions – remember what I just said, all the industrial emissions went down to zero emissions – it wouldn't be enough, not when more than 65 percent of the world's carbon pollution comes from the developing world.<sup>1</sup>

The reality is 90 percent of carbon dioxide emissions growth is set to come from countries outside of the Organization for Economic Co-operation and Development (OECD).<sup>2</sup> The Paris Agreement has no enforcement mechanisms in place and no repercussions for failing to meet emissions reduction targets. Consequently, it is likely to be climatically ineffective. According to

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<sup>1</sup> Nicolas Loris, "John Kerry's Surprising Comments on International Regulations and Climate Change," *The Daily Signal*, December 11, 2015, <https://www.dailysignal.com/2015/12/11/john-kerrys-surprising-comments-on-international-regulations-and-climate-change/> (accessed April 14, 2021).

<sup>2</sup> Philip Rossetti, "Climate Solutions Need Innovation," American Action Forum, July 30, 2019, <https://www.americanactionforum.org/insight/climate-solutions-need-innovation/#ixzz6s2KJgKT7> (accessed April 16, 2021).

a November 2019 report from the Universal Ecological Fund, “Of the 184 climate pledges, 36 were deemed sufficient (20 percent), 12 partially sufficient (6 percent), 8 partially insufficient (4 percent) and 128 insufficient (70 percent)” for reaching the emissions reduction targets set out by the agreement.<sup>3</sup>

Nevertheless, one way for the U.S. and Europe to work together is calling for stronger transparency and accountability, particularly with respect to the world’s largest greenhouse-gas emitter China. In 2020, China had its highest coal producing year since 2015.<sup>4</sup> According to a recent report in *GreenBiz*, “A total of 247 gigawatts of coal power is in planning or development, nearly six times Germany’s entire coal-fired capacity. China also has proposed additional new coal plants that, if built, would generate 73.5 gigawatts of power, more than five times the 13.9 gigawatts proposed in the rest of the world combined.”<sup>5</sup> Technically, China is not violating its voluntary emissions commitment as China said it would peak its emissions by 2030 at the latest.

Data are useful benchmarks for discerning the country’s commitment and trustworthiness to uphold its international commitments. China has previously underreported its emissions, making it difficult to track where their progress on climate (or lack thereof) stands.<sup>6</sup> Historically, the Chinese government has had a poor reputation for reporting energy and environment data consistently or accurately due to decades of fraudulent, inconsistent, nonexistent, or undisclosed national data.

Andrew Erickson, professor at the U.S. Naval War College, and Gabriel Collins, research fellow at Rice University’s Baker Institute for Public Policy noted, “Xi’s bullish talk of combating climate change is a smokescreen for a more calculated agenda. Chinese policymakers know their country is critical to any comprehensive international effort to curb greenhouse gas emissions, and they are trying to use that leverage to advance Chinese interests in other areas.”<sup>7</sup>

Inaccuracies, data gaps and uncertainties in emissions reporting make it difficult to enforce any accountability. Outside pressure from the Chinese people, other countries and non-governmental organization has marginally improved environmental culpability, but a lot of work remains.

Ramping up accountability efforts from both sides of the Atlantic should be a priority for any transatlantic dialogue on climate change. This holds true not just for China but other bad actors. Russia, the world’s fifth largest emitter, is only likely to meet its NDC because it is incredibly

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<sup>3</sup> Robert Watson et al., “The Truth Behind the Climate Pledges,” Universal Ecological Fund, November 2019, <https://drive.google.com/file/d/1nFx8UKTyjEteYO87-x06mVEkTs6RSPBi/view> (accessed April 16, 2021).

<sup>4</sup> Muyu Xu and Shivani Singh, “China’s 2020 Coal Output Rises to Highest Since 2015, Undermining Climate Pledges,” *Nasdaq*, January 17, 2021, <https://www.nasdaq.com/articles/chinas-2020-coal-output-rises-to-highest-since-2015-undermining-climate-pledges-2021-01-17> (accessed April 14, 2021).

<sup>5</sup> Michael Standaert, “China pledged to cut emissions, then went on a coal spree,” *GreenBiz*, April 15, 2021, <https://www.greenbiz.com/article/china-pledged-cut-emissions-then-went-coal-spre> (accessed April 16, 2021).

<sup>6</sup> Tom Phillips, “China underreporting coal consumption by up to 17%, data suggests,” *The Guardian*, November 4, 2015, <https://www.theguardian.com/world/2015/nov/04/china-underreporting-coal-consumption-by-up-to-17-data-suggests> (accessed April 16, 2021).

<sup>7</sup> Andrew S. Erickson and Gabriel Collins, “Competition with China can save the planet,” *Foreign Affairs*, May/June 2021, <https://www.foreignaffairs.com/articles/united-states/2021-04-13/competition-china-can-save-planet> (accessed April 16, 2021).

weak.<sup>8</sup> Otherwise, subsidies, regulations and mandates to curb greenhouse emissions will have high costs to consumers, taxpayers and the economy at large, with little to no climate mitigation to show for it.

### **Nuclear power's potential to achieve economic, security and climate objectives**

Commercial nuclear energy has great potential to improve strategic relationships and provide more emissions-free power around the world. One example of nuclear collaboration with transatlantic allies is the existence of Urenco USA in New Mexico. Urenco, a consortium of German, Dutch, and UK companies, is the only commercial enrichment services facility in America.

Public policy decisions in the U.S. and Europe affect the ability for governments and the private sector to develop commercial nuclear operations and inform aligned security goals. To that end, opportunities to expand market-driven, peaceful uses of emissions-free nuclear power include:

- **Improving domestic and international regulatory efficiency.** The more countries coordinate regulations, safety protocols and technical standards, the less companies in the U.S. and elsewhere will have to navigate through a patchwork of requirements to build new reactors. Transatlantic cooperation could also help provide the framework for developing countries (where more of the power generation will likely be needed) to peacefully develop their commercial nuclear programs. For the U.S., regulation of nuclear exports moves through a multitude of regulatory agencies, resulting in a burdensome and often confusing licensing process. Having the U.S. Nuclear Regulatory Commission lead a transparent and predictable process on import and export licensing will increase American nuclear competitiveness. Efficient regulatory processes that continue to protect public health and safety will help U.S. and European companies with joint venture reactor bids and bids on parts of a plant's extensive supply chain. Nuclear companies in the U.S. and around the world can also supply their technical expertise. Expanded commercial nuclear trade would incentivize both cooperation and competition—and help bring new nuclear technologies to the market to meet countries' climate targets.
- **Collaborating on research and non-proliferation goals.** Another important aspect for transatlantic dialogue is ongoing cooperation on government research and development and non-proliferation objectives. Government-to-government participation should bring together expertise from governments, research laboratories, the private sector, regulatory bodies and other interested stakeholders. They should discuss technological breakthroughs, economic opportunities as well as current and emerging security threats. One example of such leadership on economic and nonproliferation goals is the State

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<sup>8</sup> Climate Action Tracker, Russian Federation, <https://climateactiontracker.org/countries/russian-federation/> (accessed April 16, 2021).

Department’s “New Approach to Civil Nuclear Cooperation Agreement.”<sup>9</sup> A strong alliance between the U.S. and Europe and with Canada, Australia, Japan, South Korea, India, etc. will strengthen transparency, share pertinent information and provide a unified front in addressing any threats from rogue nations, countries, and individuals.

- **Learning from allies on nuclear waste management progress.** One of the biggest hurdles to nuclear waste management in the United States is a severely broken incentive structure. Currently, the federal government, per the 1982 Nuclear Waste Policy Act, is responsible for managing and disposing of the spent fuel produced by private businesses. The result is that the federal government has done little to fulfill its statutory obligation to collect and manage spent nuclear fuel. By contrast, in Finland nuclear power operators are responsible for the management of their spent fuel and carrying out the development of a deep geologic repository. Market mechanisms, community participation and educational outreach could fix broken incentives and solve nuclear waste management challenges in the U.S.
- **Revise and clarify U.S. foreign ownership caps.** Congress prohibits the Nuclear Regulatory Commission (NRC) from granting licenses to nuclear facilities “owned, controlled, or dominated” by a foreign entity or to an entity which “would be inimical to the common defense and security or to the health and safety of the public,” according to the Atomic Energy Act.<sup>10</sup> However, the NRC has taken an unnecessarily restrictive interpretation of this standard and blocked investment by American allies committed to nonproliferation. At a minimum, the NRC should clarify guidance with a position on what meets the Atomic Energy Act’s standard. Ideally, such guidance would follow the clear intent of the Atomic Energy Act to advance nonproliferation objectives while achieving energy goals. The NRC could maintain a case-by-case approach that permits even complete foreign ownership—provided that national security interests are protected—separating the concepts of ownership, construction, and operation.
- **Avoiding protectionist policies.** Through 1984, the federal government prevented uranium imports by denying enrichment services for imported uranium to be made into nuclear fuel. Heritage senior policy analyst Katie Tubb explains, “The expressed purpose of these policies was to temporarily block competition to help launch a civilian nuclear industry independent from strategic wartime infrastructure. Instead, these policies distorted markets and grossly misinformed the domestic uranium mining industry about actual customer demand. Domestic uranium prices ballooned and ultimately created uranium stockpiles large enough to cover years’ worth of demand. Protectionism also pushed the limits of reciprocal trade agreements with allies, mobilizing nations like

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<sup>9</sup> Christopher Ford, “A New Approach to Civil Nuclear Cooperation Policy,” remarks at the Hudson Institute, Washington, D.C., February 26, 2019, <https://www.state.gov/a-new-approach-to-civil-nuclear-cooperation-policy/> (accessed April 16, 2021).

<sup>10</sup> Code of Federal Regulations § 50.38 (1978), and U. S. Nuclear Regulatory Commission, “Foreign Ownership, Control, or Domination (FOCD) of Commercial Nuclear Power Plants,” December 14, 2016, <https://www.nrc.gov/reactors/focd.html>

France, Great Britain, Germany, and the Netherlands to break the U.S. monopoly on enrichment.”<sup>11</sup> Imposing trade barriers are costly and counterproductive. Any legitimate trade disputes should be filed through the World Trade Organization.

### **Natural gas offers a cost-competitive, clean energy choice**

The U.S. has been the world’s top natural gas producer for approximately a decade. America’s energy renaissance has not only lowered energy bills but also greenhouse gas emissions. The Environmental Protection Agency reported that “since 2005, national greenhouse gas emissions have fallen by 10%, and power sector emissions have fallen by 27% -- even as our economy grew by 25%.”<sup>12</sup>

Increased domestic production has also expanded opportunities for companies to export liquefied natural gas (LNG). The U.S. and its allies stand to receive substantial, long-lasting economic and geopolitical advantages from the liberalization of energy markets. Diversification will loosen Russia’s grip on the energy market. As of 2018, Europe had 28 large-scale LNG import terminals with several others planned, committed, or under construction. U.S. LNG provides a reliable, clean source for Europeans who want more energy freedom.

A September 2019 study from the Department of Energy’s National Energy Technology Laboratory analyzed life cycle greenhouse gas emissions from U.S. LNG exports. In different scenarios of comparing U.S. LNG shipped to European and Asian markets, when compared to coal use or Russian piped gas, the life cycle emissions from U.S. LNG exports are lower.<sup>13</sup> Regrettably, some countries in Europe are turning down American natural gas exporters.<sup>14</sup> Greenhouse gas regulations on the U.S. natural gas industry may change the European perception of natural gas as a climate friendly source. However, it is also worth noting that decisions to reject LNG exports may result in the use of more GHG-intensive resources, like Germany’s decision to decommission its nuclear plants.<sup>15</sup>

In fact, European decisions to deny LNG imports could result in reliance on dirtier Russian piped gas through the controversial Nord Stream 2 natural gas pipeline. In 2016, President Biden called

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<sup>11</sup> Katie Tubb, “National Security Imperative Lacking, Protectionism Abounding in Section 232 Uranium Case,” Heritage Foundation Backgrounder No. 3360, November 2, 2018, <https://www.heritage.org/sites/default/files/2018-11/BG3360.pdf>

<sup>12</sup> Press release, “Latest Inventory of U.S. Greenhouse Gas Emissions and Sinks Shows Long-Term Reductions, with Annual Variation,” U.S. Environmental Protection Agency, April 13, 2020, <https://www.epa.gov/newsreleases/latest-inventory-us-greenhouse-gas-emissions-and-sinks-shows-long-term-reductions-0> (accessed April 16, 2021).

<sup>13</sup> Selina Roman-White, Srijana Rai, James Littlefield, Gregory Cooney, and Timothy J. Skone, “Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update,” National Energy Technology Laboratory, September 12, 2019, <https://www.energy.gov/sites/prod/files/2019/09/f66/2019%20NETL%20LCA-GHG%20Report.pdf> (April 15, 2021).

<sup>14</sup> Sergio Chapa and Anna Shiryayevskaya, “Europe turns down more U.S. LNG on greenhouse gas concerns,” *World Oil*, January 15, 2021, <https://www.worldoil.com/news/2021/1/15/europe-turns-down-more-us-lng-on-greenhouse-gas-concerns> (accessed April 16, 2021).

<sup>15</sup> Daniel Oberhaus, “Germany Rejected Nuclear Power—and Deadly Emissions Spiked,” *Wired*, January 23, 2020, <https://www.wired.com/story/germany-rejected-nuclear-power-and-deadly-emissions-spiked/> (accessed April 16, 2021).

Nord Stream 2 a “bad deal” for Europe.<sup>16</sup> In February, Polish and Ukrainian foreign ministers voiced their opposition to Nord Stream 2, writing that “lasting peace in Europe is impossible to sustain without a harmonized democratic development across Europe.”<sup>17</sup> Russia’s past and potential future manipulation of energy markets for political purposes is something the U.S. and Europe must take seriously.

### **Renewable energy and critical mineral supply chains**

At the center of many countries’ nationally determined contributions is the expansion of renewable power and the electrification of the transportation sector. Much of the public policy focus has centered around government subsidies and regulations, often resulting in high costs for emissions abatement and opportunity costs where public spending steers private investment toward certain projects at the expense of others. Alternatively, transatlantic cooperation should address critical mineral supply chain concerns and cut red tape for more efficient and timely green deployment. U.S. and European policymakers should commit to:

- **Diversifying the supply chain.** The 17 rare earth minerals that exist in the world are necessary inputs for many industries (including renewable energy hardware and batteries) because of their relative strength, light weight, and highly conductive properties. Rare earths are often found mixed together with other minerals, and the ores must be thoroughly refined before they can be used in manufacturing. While a lot of rare earth activity occurs in China, a previous attempt by the Chinese government to manipulate the rare earths market against the Japanese backfired. Prices increased and the market for both mining and processing rare earths began to diversify. In 2010, China produced 97 percent of the ore; by 2014, it was down to 70 percent.<sup>18</sup>

Eugene Gholz, an associate professor of political science at the University of Notre Dame, also remarked, “[N]on-Chinese firms operating in Malaysia, Estonia, France, Thailand and elsewhere are able to process the raw ore, and for firms that have already done the research and development like MP Materials and their Australian competitors, the capital costs and delays involved in building new capacity are not large. There are also non-Chinese companies, including some in the United States like Eutectix and Hitachi, at other stages of the rare earths supply chain who are eager to expand their operations when market conditions warrant.”<sup>19</sup> The pace and efficiency of a market response will be of important economic and strategic interest for the transatlantic

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<sup>16</sup> Jeff Mason and Simon Johnson, “Biden: Nord Stream 2 pipeline is a 'bad deal' for Europe,” *Reuters*, August 25, 2016, <https://www.reuters.com/article/us-energy-europe-usa/biden-nord-stream-2-pipeline-is-a-bad-deal-for-europe-idUSKCN1101AP> (accessed April 16, 2021).

<sup>17</sup>Zbigniew Rau and Dmytro Kuleba, “Nord Stream 2 has damaged the West enough. Time to put an end to it.” *Politico*, February 22, 2021, <https://www.politico.eu/article/nord-stream-2-pipeline-has-damaged-the-west-enough-time-to-put-an-end-to-it/> (accessed April 16, 2021).

<sup>18</sup> Brad Plumer, “China no longer has a stranglehold on the world's supply of rare earth metals,” *Vox*, October 22, 2014, <https://www.vox.com/2014/10/22/7031243/china-grip-rare-earth-metals-supply-weakening> (accessed April 16, 2021).

<sup>19</sup> Eugene Gholz, “The rare earths industry can weather any Chinese trade battle,” *CNN*, July 23, 2019, <https://www.cnn.com/2019/07/23/perspectives/rare-earths-china-argentina-trade-war/index.html> (accessed April 16, 2021).

partners. Policymakers in the U.S., Canada and Europe should ensure that the private sector can respond to changes in market conditions rather than be bogged down by unnecessarily lengthy permitting decisions. That will ensure the pace of innovation, investment and diversification is able to withstand any potential market manipulation attempts from China. In addition, transatlantic dialogue should discuss opportunities to collaborate on critical minerals for national defense and security-related technologies.

- **Learning from allies on permitting efficiency:** In the U.S., siting and permitting may be difficult for wind and solar for a number of reasons. Not only are the projects subject to standard permitting, zoning and NIMBYism challenges, additional transmission lines are necessary to take the power from remote to densely populated places. George Bilicic, head of power, energy and infrastructure at Lazard, said the obstruction is not a matter of cost or access to capital but permitting.<sup>20</sup> Onerous regulations force companies to hire more lawyers and consultants to navigate complex permitting processes and combat lawsuits.

Similarly, the heads of eight renewable trade organizations in Europe recently called for the European Commission to simplify and streamline their regulatory processes. Specifically, the letter said the permitting procedures are “too complex and lengthy” will erode investor confidence and without reform, the aggressive renewable targets set by the EU will be merely an “academic” exercise.<sup>21</sup> Proper environmental review with public participation is essential; however, the U.S. and European countries can learn from allies like Canada and Australia that have strong environmental records and pragmatic regulatory approaches.

- **Opening markets through free trade.** Yet another policy that senselessly drives up the cost of renewable energy is tariffs. Section 201 tariffs hurt the growth of the solar industry,<sup>22</sup> and steel and aluminum tariffs increase construction costs of renewable projects.<sup>23</sup> Most critically, tariffs are effectively taxes that hurt consumers. The Biden Administration should pursue a zero-tariff policy.

### **Continue the momentum of the Three Seas Initiative**

The Three Seas Initiative (3SI) is a bipartisan-supported effort that bolsters the economic, security and environmental interests of the U.S. and Eastern Europe. The potential for economic

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<sup>20</sup> Jinjoo Lee, “Biden’s Grid Proposal May Be a Square Peg in a Round Hole,” *The Wall Street Journal*, April 5, 2021, <https://www.wsj.com/articles/bidens-grid-proposal-may-be-a-square-peg-in-a-round-hole-11617627329> (accessed April 16, 2021).

<sup>21</sup> David Weston, “Renewables sector in EU permitting plea,” *Wind Power Monthly*, May 14, 2020, <https://www.windpowermonthly.com/article/1683168/renewables-sector-eu-permitting-plea>

<sup>22</sup> Solar Energy Industries Association, “Section 201 Solar Tariffs,” <https://www.seia.org/research-resources/section-201-solar-tariffs> (accessed April 16, 2021).

<sup>23</sup> American Wind Energy Association, “U.S. China Tariffs Hurt Wind Industry Jobs in Your State,” [https://www.awea.org/Awea/media/About-AWEA/US-China-Tariffs-Wind\\_10-12-2018.pdf](https://www.awea.org/Awea/media/About-AWEA/US-China-Tariffs-Wind_10-12-2018.pdf) (accessed April 16, 2021)



growth and the geographic positioning of the 12 countries<sup>24</sup> in 3SI make it imperative for mutual transatlantic interests. With an emphasis on expanding infrastructure (traditional and energy) and electric grid development, open markets can spur economic investment, reduce emissions and counter the influence of China and Russia.

As Heritage senior policy analyst in European Affairs Daniel Kochis emphasizes, the region is of vital strategic importance:

The three pillars of the 3SI projects address the areas where the region is most vulnerable to China (digital and transportation) and Russia (energy). China launched the 16+1 Initiative (now 17+1) in 2012 as an effort to build inroads to countries in Eastern and Central Europe. Every 3SI member with the exception of Austria is also a member of the 17+1. In the past nine years, 17+1 has lost steam and thus far failed to achieve the impact for which China had hoped. For instance, Chinese investment in Eastern Europe remains relatively small. In 2019, Eastern European nations accounted for only 6.6 percent of all Chinese investments in Europe.

However, China remains ambitious, looking to make long-term investments in the region, especially in critical sectors, to garner economic, diplomatic, and political influence. The U.S. must remain keenly aware of China's ambitions and of the importance of American investment. If nations in Central and Eastern Europe cannot get American, British, or German investments, they will turn to China.

The nations involved in the 3SI are largely dependent on Russian energy, and the threat from Russia, especially in the realm of cyberattacks, influence operations, and propaganda, is real. The 3SI will help these nations to resist Russian pressure, while also developing greater interconnections between the nations themselves, and providing an opportunity to build strengthened transatlantic business, energy, and geopolitical ties with the United States.<sup>25</sup>

In large part, the economies of the 3SI countries had strong economic growth before the COVID-19 pandemic struck.<sup>26</sup> As countries formulate policy responses to stimulate growth, an emphasis on open markets is essential. Further, competitive markets will spur a greener recovery. Zuzanna Nowak of the Polish Institute for International Affairs writes, "compared to the early 1990s, due in large part to the transition from command to free market economies, the countries of the region have made great progress in cutting their GHG emissions, reducing carbon intensity, and increasing the energy efficiency of their economies."<sup>27</sup> It would be wise for 3SI countries to continue down that path.

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<sup>24</sup> Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia

<sup>25</sup> Daniel Kochis, "The Three Seas Initiative Is a Strategic Investment that Deserves the Biden Administration's Support," Heritage Foundation Issue Brief No. 6051, February 18, 2021, <https://www.heritage.org/europe/report/the-three-seas-initiative-strategic-investment-deserves-the-biden-administrations>

<sup>26</sup> Ibid.

<sup>27</sup> Zuzanna Nowak, "Greening the Three Seas Initiative with the U.S.," The Polish Institute of International Affairs, January 27, 2021, [https://pism.pl/publications/Greening\\_the\\_Three\\_Seas\\_Initiative\\_with\\_the\\_US](https://pism.pl/publications/Greening_the_Three_Seas_Initiative_with_the_US)

While there are clear efforts to use carrots and sticks to accomplish climate objectives, private sector-led investment could spur deployment of clean renewable, hydrogen and natural gas projects in the region. That diversification would strengthen economic relationships, make progress toward environmental targets and reduce Chinese and Russian influence in the region.

## **Research and Development**

Knowledge sharing, scientific inquiry and entrepreneurial drive are fundamental to solving the environmental challenges we face. A collaborative effort that harnesses the value of human ingenuity, state-of-the-art research facilities, top-tier universities and Silicon Valley-like culture will help identify challenges and threats and cost-effectively solve them.

For instance, the Department of Energy's role through its system of national laboratories and scientific research facilities, should be to conduct the basic research to meet national objectives that the private sector would not undertake. To the extent possible, and without compromising national security interests, the U.S. and Europe should open their research facilities to expand opportunities for the commercialization of groundbreaking technologies.

The Department of Defense can also be a good conduit for innovative breakthroughs on energy technologies. Alternative technologies provide advantages that enhance mission capabilities. Lighter, longer-lasting batteries lengthen the duration of a foot soldier's mission and reduce the weight of a soldier's backpack. Solar photovoltaics can also lighten a soldier's load and extend the travel distance of a drone. More fuel-efficient engines reduce the need for refueling. Developing micro grids and utilizing very small modular nuclear reactors can safely provide reliable power to isolated bases for long periods of time.<sup>28</sup>

Another opportunity for cooperation is fusion power. Fusion technology has much potential to offer inexhaustible quantities of energy without the byproduct of spent nuclear fuel that results from nuclear fission—the way that conventional nuclear power plants produce electricity. Transatlantic participation in ITER, as well as dialogue with private sector startups, should ensure that commercialization processes are safe but efficient. One company, TAE Technologies, believes it can be commercially viable by 2030.<sup>29</sup> Government-imposed obstacles should not be what stunts its progress.

## **Conclusion**

Thank you for this opportunity to submit written testimony. A strong transatlantic relationship is critical to economic and environmental progress. Dialogue that bolsters accountability and policy

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<sup>28</sup>Dorothy Robyn and Jeffrey Marqusee, "The Clean Energy Dividend: Military Investment in Energy Technology and What It Means for Civilian Energy Innovation," Information Technology and Innovation Foundation, March 2018, [http://www2.itif.org/2019-clean-energy-dividend.pdf?\\_ga=2.133613257.674204463.1551967655-1212308.1551734962](http://www2.itif.org/2019-clean-energy-dividend.pdf?_ga=2.133613257.674204463.1551967655-1212308.1551734962) (accessed April 16, 2021).

<sup>29</sup>Jonathan Shieber, "A startup using a new tech to make hydrogen extracts cash from Bill Gates' climate tech fund," Tech Crunch, February 9, 2021, <https://techcrunch.com/2021/02/09/a-startup-using-a-new-tech-to-make-hydrogen-extracts-cash-from-bill-gates-climate-tech-fund/> (accessed April 16, 2021).

reform that unleashes clean, innovative technologies will best meet the energy needs of Americans and Europeans while driving down emissions.

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