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We affirm: The United States federal government should substantially increase its investment in domestic nuclear energy.

Contention 1 is the environment

US energy independence is a deadly lie

Max, 10-26-2024, "The Energy Independence Myth.", UNFTR,

<https://www.unftr.com/blog/energy-independence> (Max is a pseudonym. He decided to launch UNFTR in the 2020s (completely left)).

The Energy Independence Myth. October 26, 2024 8 min read A man standing in a warehouse filled with oil drums. Image Description: A man standing in a warehouse filled with oil drums. Summary: This week we focus on a thin slice of the energy pie to disabuse the notion of "energy independence." When politicians reference this concept they speak narrowly in terms of oil and gas production in the United States. As though if we could somehow pump enough of our own oil specifically, we could break our

Moreover, we import crude and refined oil from allies.

Moreover, we import crude and refined oil from OPEC. Access the

Corresponding Show Resources: 12.6 million barrels of oil per day. That's how much crude oil the United States technically consumes. 12.9 million barrels each and every day. I say technically because crude oil consumption estimates are just that. Estimates. And I'll explain why in a moment. On the other side of the ledger we have production. The United States currently produces around 11 million barrels of oil per day. Parity, right? Now, get this... We import about eight and a half million barrels of oil each

The United States produces enough crude oil to supply the entire nation so we theoretically don't

have to look outside of the U.S. for oil. **On paper** that is. **In reality, oil is** a lot **murkier** than that. Pun intended. Crude Definitions Let's begin with some fun facts. More than **18,000 miles of abandoned oil pipes lay** on the ocean floor **in the Gulf of Mexico. There are more dormant oil wells** in the Gulf **than** there are **productive ones**, about 14,000 in fact.

To cap the crew in federal waters with concrete would cost somewhere in the neighborhood of \$30 billion dollars. That's what is supposed to happen when a rig and its wells are decommissioned. Instead, the two agencies with regulatory and enforcement oversight, The Bureau of Ocean Energy Management and the U.S. Coast Guard, have been unable to get the industry to do what it's supposed to do. The industry has been able to avoid the cost of decommissioning by leaving the rigs in place, and the government has been unable to force them to do so.

of Ocean Energy Management and Bureau of Safety and Environmental Enforcement have simply looked the other way. That's a sampling of the waste associated with crude oil production in just one part of the United States. In terms of active capacity, according to Baker Hughes—a company that has tracked oil and gas rig activity since 1944—there are about 585 active oil rigs throughout the United States, most of which are on land. There's somewhere around 18 to 20 active offshore rigs, each of which can manage up to 80 wells at a time, and most of these are in the Gulf of Mexico directed toward the aforementioned abandoned rigs. This is just all we're talking about. We're not even touching on our renewable energy sources, just pure crude oil. This infrastructure alone allows the United States to pump 22% of the world's supply of crude oil. The next largest producer is Saudi Arabia at 12%. People might find this surprising since we paint portraits of such as Iraq, Saudi Arabia and Venezuela as petrostates. But in terms of exportation, we're doing the next level of *industrial countries*. So we have hundreds of rigs on land, a bunch in the offshore, abandoned steelies, almost all the ocean floor, dormant rigs on top of which could have been there for weeks at a time, and no regulator holding them accountable. Our country was a pioneer that was the first to be the biggest oil producer, but now it's down the list. And yet we still promote it as such and a half million barrels are sent from

other countries, which pump air into the windbar politicians who claim we're dependent on foreign oil. To unpack this, consider a few factors. One, if we doubled the amount of oil we pulled from the ground we would still bring it in from other countries because we can't afford to—and shouldn't—expand our infrastructure.

isn't ideally suited for the various uses for it.

The crude oil infrastructure is generally located near the areas in which it's

extracted. Makes sense. Refineries, storage facilities and transportation hubs are centralized in these areas. If we wanted to evenly distribute oil throughout the country to reduce our dependence on foreign sources, we would build a hub and spoke network of pipelines across the country like a spider web and have thousands of refineries. That means that every region, every city and every town would have refineries and storage facilities. Nobody wants that.

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The IMF estimates that the harmful effects of pollution from fossil fuel

The IMF estimates that the harmful effects of pollution from fossil fuel production costs the United States around \$646 billion every single year. They arrive at this by adding up the real costs of wildfires, droughts and premature deaths from heat and pollution.

In the neighborhood of 520 billion in subsidies each year as well. Put another way, holding back 18 months' worth of subsidies could cover the cost to cap all of these abandoned wells, restore to flow methane and pollute the Gulf of Mexico. Put yet another way, a quarter of oil and gas profits are directly tied to handouts from the U.S. government.

goal. Reducing our dependence upon fossil fuel energy sources is

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Oil dependence is horrid for multiple reasons

William **Joyce**, 6-4-2013, "Oil Dependency: a Subtle but Serious Threat", American Security Project, <https://www.americansecurityproject.org/oil-dependency-a-subtle-but-serious-threat/> (Went to Rutgers for a bachelors, and is currently at the US DHS)

Oil Dependency: a Subtle but Serious Threat
Posted by William Joyce on Jan 16, 2013
Weapons of mass destruction, terrorism, and cyber crime are in the headlines as significant threats to our national security. However, over the next twenty to thirty years, America's overwhelming dependence on oil presents a subtler, although no less serious, threat to national security.

The U.S. is the largest consumer of oil in the world, burning through 18.81 million barrels per day. Even if the U.S. produced all petroleum products domestically, Americans would still feel the pinch from global volatility. Oil is a global market, and market prices prevail regardless of origin. Despite policies to improve vehicle efficiency, America remains dependent on oil. This dependency presents several threats to U.S. national security. 22266-C-0108 Oil Well on sunset

First, **oil price volatility hampers American productivity and consumers**. Economic vitality requires stable prices, as spikes in oil prices may reduce output and wages while increasing inflation and interest rates. Most commonly, consumers feel these disruptions at the gas pump. The transportation sector alone consumes 13.223 million barrels of petroleum per day. Petroleum facilitates the functioning of these critical transportation networks, and **small disruptions may lead to cascading price dumps. As volatile oil prices destabilize the economy, they jeopardize U.S. interests and national security.**

Generally, U.S. oil dependency distorts foreign policy. The U.S. imported 40% of its petroleum products in 2012. In order to ensure foreign oil security, the U.S. supports regimes it might not otherwise. Many oil-rich Islamist regimes in the Middle East receive de facto support from America in return for producing stable oil, despite conflicting ideologies and interests. Similarly, estimates show that extended military operations to guard oil supply lines cost the U.S. military \$67.5-\$81 billion per year. This dependency is costly and conflicts with the national security goals.

Lastly, **oil dependency undermines military preparedness and effectiveness.** The Department of Defense consumed 117 million barrels of oil in 2011 in order to fuel the military's vehicles, ships, and planes. The military must complete its missions, and without fuel options, it must endure oil price fluctuations. For **every 25-cent increase per barrel of oil, the Department of Defense pays an additional \$1 billion in fuel costs** per year. Additional fuel costs means the military has to cut costs elsewhere, which have negative impacts on security and military preparedness.

Military energy security requires reduced consumption of petroleum products, yet the Department of Defense depends on oil for 80% of its energy needs. The military may reduce consumption by reforming energy-intensive activities, optimizing energy usage, and developing innovative technologies to reduce energy waste, but sequestration budget cuts will dash future innovation.

Instead of focusing solely on drilling for more oil, the U.S. must pursue a two-pronged approach that focuses on reducing oil demand while at the same time makes investments in developing alternative fuels. **Clean energy technologies could cut imports by 44% which is nearly eight times more than potential domestic drilling production.** Greater efforts to improve vehicle efficiency through corporate average fuel economy standards (CAFE), congestion charges, or fuel taxes can contribute to reducing oil consumption.

However, America's oil dependence puts the U.S. economy because consumers lack fuel options. To that end, investments in alternative sources of fuel – biofuels, natural gas, electric vehicles – can act as a hedge against oil price volatility. Throughout 2012, the U.S. spent \$4.36 billion on energy research, which fell well below IEA recommendations. Due to budget cuts and sequestration, energy research funding will drop substantially over the next few years. Oil dependency is a long-term threat. The rising cost of oil dependence affects all aspects of American society and threatens national security. If the U.S. wishes to reduce these threats in the future, the U.S. must properly fund energy research and development to commercialize technologies that will break America's oil dependency. Only then can we say we have actually achieved energy security.

Luckily, affirming solves

Rafael Mariano **Grossi**, 11-8-2024, "Climate goals require a step change in nuclear investment", World Economic Forum, <https://www.weforum.org/stories/2024/11/meeting-global-climate-goals-requires-a-step-change-in-nuclear-investment/> (Rafael Mariano Grossi is Director General, International Atomic Energy Agency (IAEA))

Meeting global climate goals requires a step change in nuclear investment

New & 2024. Countries are united in their understanding that nuclear must be accelerated to add renewables. Image: Photos by Lubad Lubad on Unsplash. Rafael Mariano Grossi, Director General, International Atomic Energy Agency (IAEA) Share Our Expert What's the World Economic Forum doing to accelerate action on Energy Transition? The big picture begins and unfolds how Nuclear Security is affirming ecosystems, industries and global issues step up to date. Nuclear Security This article is part of Centre for Energy and Materials

Nuclear power is now officially recognized as crucial for global decarbonization, complementing renewables such as wind and solar.

Tripling nuclear capacity by 2050 requires annual investments to grow from \$50 billion to \$150 billion, driven by public-private partnerships and new financial mechanisms. Small modular reactors are key to the energy transition, offering flexibility and scalability but require regulatory harmonisation and further development for widespread adoption. Including nuclear power in the first Global Stocktake agreed at last year's United Nations Climate Conference in Dubai (COP28) was nothing short of historic. After almost 30 years of COPs, nuclear power was, for the first time, explicitly mentioned in a negotiated outcome. All countries – not just those 11 operating nuclear power plants – party to the UN Framework Convention on Climate Change agreed that nuclear acceleration was needed to achieve deep global decarbonization. The first stocktake under the Paris Agreement said wind, solar and other low-carbon sources should be accelerated too but the overwhelming consensus was that renewables needed nuclear power.

And time is of the essence. Climate change-driven events such as heat waves, floods and powerful storms have affected every part of our planet. Last year was the hottest in the 174 years we have data and this year threatens to break that record.

Acknowledging nuclear energy's crucial role in accelerating the energy transition reflects how much global attitudes have shifted in the past few years. Now you need? Explain: Advanced nuclear technologies and their role in the energy transition World's biggest banks back nuclear power, and other top energy stories 5 reasons we must embrace nuclear energy in the fight against climate change Global push to triple nuclear capacity in addition to the agreement reached at COP28, 25 countries (and the nuclear industry) pledged to work towards tripling nuclear power capacity by 2050. The urgency of mitigating carbon emissions was joined by a renewed push for energy security. It shows that fact-based analysis and science have finally overcome miscommunication and disinformation regarding nuclear, which is evident in the data too. The International Atomic Energy Agency (IAEA) recently released nuclear capacity projections show that the high-use scenarios seen nuclear capacity in 2050 is two and half times greater than today. This expansion will require extending the operational span of existing nuclear power plants, many built in response to the

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expect that **1.1 million to 2.55 million people die from fossil fuels used for electricity production each year.**¹²

do not include any health impacts from radiation exposure from mining metals and minerals used in supply chains. While we might think that this would only impact nuclear energy, analyses suggest that the carcinogenic toxicity of other sources – including solar, wind, hydropower, coal, and gas are all significantly higher across their supply chains.¹³ These figures only measure workers' potential exposure to toxic elements. They do not estimate potential death rates, so we do not include them in our

evacuation stress and disruption are estimated to have contributed to several thousand early deaths. **Only one death has been linked to the impact of radiation.** We don't know what the possible death toll

The numbers that have died from nuclear

Katie **Tarasov**, 3-16-2025. "How the U.S. is losing ground to China in nuclear fusion, as AI power needs

<https://www.cnbc.com/amp/2025/03/16/the-us-is-falling-behind-china-in-nuclear-fusion-needed-to-power-ai.html>

ever-increasing power needs of AI data centers. Amazon, Google and Meta have signed a pledge to help triple nuclear energy worldwide by 2050.

power plants, **China is king of new projects.** Despite breaking ground on its first reactor nearly four decades after the U.S. pioneered the tech, **China's now building far more fission power plants than any other country.**

You entered the fusion race in the early 2000s, about 10 years after the U.S., when it joined more than 30 nations to collaborate on the International Thermonuclear Experimental Reactor fusion megaproject in France. But ITER has since hit major delays. The race is on between individual nations, but the U.S. private sector remains in the lead. Of the \$8 billion in global private fusion investment, \$6 billion is in the U.S., according to the PPA. Commonwealth Fusion Systems, a startup born out of MIT, has raised the most money, nearly \$2 billion from the likes of Bill Gates, Jeff Bezos and Google. Washington-based Helion has raised \$1.1 billion from investors like OpenAI's Sam Altman and a highly contentious deal with Microsoft to deliver fusion power to the grid by 2028. Google-backed TAE Technologies has raised \$1.2 billion. "Whoever has expertise shouldn't invest too early... can invest everything you think of," said Matt Binderbauer, CEO

of TAE Technologies. "That is a scary thought if that's in the wrong hands." When it comes to public funding, **China is way ahead.** Beijing is **putting a reported \$1.5 billion annually** toward the effort **while U.S. federal dollars** for fusion have **averaged about \$800 million annually** the last few years, according to the Energy Department's Office of Fusion Energy Sciences.

President Donald Trump requested support for nuclear, including fusion, during his first term, and that continued under former President Joe Biden. It's unclear what fusion funding will look like in Trump's second term, amid massive federal downsizing. U.S. senators and fusion experts published a report in February calling for \$10 billion of federal funds to help keep the U.S. from losing its lead. But the U.S. may already have lost the lead when it comes to reactor size. Generally, the bigger the budget, the more efficiently a reactor can heat and confine the plasma, increasing the chances for net positive energy. A headline image from January 11, 2025, shows a massive nuclear project in Henan, China, that appears to include four laser-laser printing as a containment dome roughly the size of a football field, about twice as big as the U.S. National Ignition Facility laser facility. A satellite image from January 11, 2025, shows a massive nuclear project in Henan, China, that appears to include four laser-laser printing as a containment dome roughly the size of a football field, about twice as big as the U.S. National Ignition Facility laser facility. A series of satellite images provided to CNBC by First Lab shows the rapid building in 2024 of a giant new laser fusion site in China. The containment dome where the fusion reaction will occur is roughly twice the size of NFL, the U.S. team fusion project, CNR Corporation's Deuterium-Lithium said. The China site is likely a fusion fusion hybrid, CNR's hybrid said. "A fusion fusion hybrid essentially is the replicating a fourth, but as a power plant, it would never work, except for a power plant like the United States, where you have a regulatory regime that determines safety," Helion said. "That is a regime the Chinese, when it doesn't matter what the people who have not done so, if the government says we want to do it, we're going to do it." China's existing national tokamak project, EAST, has been setting records, setting with France's project WEST to the last couple months for the longest ever confinement of plasma inside a reactor, although that's a less monumental milestone than net positive energy. Another huge state-funded Chinese project, CRAFT, is set to reach completion this year. The \$700 million 100-arc fusion campus in eastern China will also have a new tokamak called BEST that is expected to be finished in 2027. China's CRAFT appears to follow a U.S. plan published by hundreds of scientists in 2020, Helion said. "Congress has not done anything to spend the money to put this into action," he said.

"We published this thing, and the Chinese then went and built it." U.S. fusion startup Helion told CNBC some Chinese projects are copying its patented designs, too. "China, specifically, we're seeing investment from the state agencies to invest in companies to then replicate U.S. companies' designs," said David Kirtley, founder and CEO of Helion. **Manpower and materials** **China's rapid rollout of new fusion projects comes at a time when American efforts have largely been focused on upgrading existing machines, some of them more than 30 years old.** "Nobody wants to work on old dinosaurs," said TAE's Binderbauer, adding that new projects attract more talent. "There's a bit of a brain drain." In the early 2000s, **budget cuts to domestic fusion research forced U.S. universities to halt** work on new machines and send researchers to learn on other country's machines, including China's.

"Instead of building new ones, we went to China and helped them build theirs, thinking, 'Oh, that's for great. They'll have the facility. We'll be really smart,'" said Bob Mangano, co-founder and CEO of Commonwealth Fusion Systems. "Well, that was a big mistake." China now has more fusion patents than any other country, and 30 times the number of doctorates in fusion science and engineering as the U.S., according to a report from MIT last year. "There's a little later goal in the West that all the companies compete for," Binderbauer said. "That is a fundamental constraint." Commonwealth Fusion Systems (CMFC) claims have assembled in December 2024 in Denver, Massachusetts, a scheduled to use superconducting magnets to heat fusion plasma in 2027. Commonwealth Fusion Systems (CMFC) claims have assembled in December 2024 in Denver, Massachusetts, a scheduled to use superconducting magnets to heat fusion plasma in 2027.

such as high-power magnets, specific metals, capacitors and power semiconductor. Helion's Kirtley said the timeline of the company's latest prototype, Polaris, was set entirely by the availability of semiconductor. **China is making moves to corner the supply chain for many of these materials, in a similar play to how it came to dominate solar and EV batteries.** **"China is investing ten times the rate that the United States is in advanced material development,"** Kirtley said.

"That's something we have got to change." Shanghai-based fusion company Energy Singularity told CNBC in a statement that it "unambiguously" benefits from China's "efficient supply chain." In June, Energy Singularity said it successfully created plasma in record time, just two years after beginning the design of its tokamak. That's all a cry from reaching grid-scale, commercial fusion power. Helion aims to be first with a goal of 2028. Commonwealth has announced the site in Virginia where it plans to bring the first fusion power plant, ARC, online in the early 2030s. "Even though the first ones might be in the U.S., I don't think we should take comfort in that," said MIT's Whyte. "The fresh line is actually a mature fusion industry that's producing products for use around the world, including in AI centers." Watch: <https://www.cbs.com/video/2025/03/13/china-is-casting-the-us-in-nuclear-fusion-race-at-power-demand-front/>

China just had another breakthrough

Haley Zaremba, 3-13-2025, "Nuclear Fusion Race Intensifies With Chinese Breakthrough", OilPrice, <https://oilprice.com/Alternative-Energy/Nuclear-Power/Nuclear-Fusion-Race-Intensifies-With-Chinese-Breakthrough.amp.html>

Nuclear Fusion Race Intensifies With Chinese Breakthrough By Haley Zaremba - Mar 13, 2025, 1:05 PM GMT China's Experimental Advanced Superconducting Tokamak achieved a sustained temperature of 120 million degrees Celsius, marking a significant milestone in nuclear fusion research. The potential of commercial nuclear fusion to provide nearly limitless clean energy is driving a global race, with China investing heavily and aiming for stability by 2050. Despite technological challenges remain in

sustaining high temperatures, achieving energy breakeven, and developing resistant materials for practical nuclear fusion power. **China just achieved another milestone breakthrough for nuclear fusion**

technology, bringing the country closer to achieving its goal of commercial nuclear fusion by 2050. This week scientists announced that the nation's Experimental Advanced Superconducting Tokamak (EAST), **achieved a sustained temperature of 100 million degrees Celsius, shattering previous records and bringing nuclear fusion closer to reality.**

This breakthrough is just the latest in a long line of milestones for China, where the government has been investing heavily in nuclear fusion research and development as part of a global "high-stakes battle for nuclear fusion supremacy." Beijing has been outpacing every other country in the world on fusion

research at approximately \$1.5 billion per year—approximately double Washington's spending. The potential ramifications of achieving commercial nuclear fusion are difficult to overstate. In the words of a recent Daily Galaxy report, **"If China or any other nation succeeds in making fusion commercially viable, it could trigger an energy revolution, transforming how the world powers homes, industries, and even space exploration."**

The EAST experiment, located in Hefei, Anhui province, is often referred to as an "artificial sun," as it generates plasma to mimic the process by which our sun powers itself. This is achieved by fusing hydrogen atoms together, rather than traditional nuclear power production, which generates energy by splitting atoms in a process known as nuclear fission. While nuclear fusion has proven to be much harder to achieve and control, nuclear fusion is seen as the "holy grail" of clean energy, as it doesn't require any radioactive fuel and produces more energy than fusion. However, achieving nuclear fusion requires the creation of extremely high temperatures, similar to the heat at the center of the sun. For this reason, EAST's recent breakthrough is a major one. At 120 million degrees Celsius, several times hotter than the sun's core, plasma is created and stored inside its own magnetic field, naturally fusing and releasing huge bursts of energy in the process. However, despite these recent breakthroughs, the nuclear fusion sector still faces significant challenges in making the technology commercially viable and scalable. As Bloomberg reports, nuclear fusion "is notoriously difficult to carry out in a sustained and scalable manner and one of a handful of countries like the U.S., Russia and South Korea have managed to reach this barrier." Scientists are still struggling to sustain high enough temperatures to maintain plasma for any meaningful length of time. They are also adding so much more time into creating the right conditions that the energy released from the fusion itself doesn't break even with the energy input. There is also off much work to be done based developing materials able to resist ultra-high temperatures for magnetic confinement. Scientists are also looking into other ways to create fusion. While some of the world's biggest nuclear fusion experiments are tokamaks, the donut-shaped plasma machines used in the EAST experiment, breakthroughs have also been made with machines employing beams to capture hydrogen molecules. In 2022, scientists at the National Ignition Facility (NIF) at the Lawrence Livermore National Laboratory in California used lasers to finally overcome nuclear fusion's most significant barrier: creating net positive energy. Now it appears that China is building its own

giant laser facility in Sichuan province to conduct similar experiments with ignition. **Achieving commercial nuclear fusion will be a golden ticket for the nation that achieves it, and China seems determined to be that nation.** But putting politics aside, creating commercial energy through nuclear fusion would be a huge win for the entire world, with the potential to create nearly limitless clean energy and put concerns about climate change to rest.

Aff solves, as The plans are in place -- investment is what's lacking

Jonathan Tennenbaum, 12-24-2024, "US falling behind China in race to nuclear fusion", Asia Times, <https://asiatimes.com/2024/12/us-falling-behind-china-in-race-to-nuclear-fusion/>

National Laboratory, where scientists successfully achieved "ignition" to produce a fusion reaction. Photo: Damien Jemison / Lawrence Livermore National Laboratory China is moving with awesome speed to take the global lead in realizing nuclear fusion as a commercial energy source. With the scheduled completion of the Comprehensive Research Facility for Fusion Technology (CRAFT) in Hefei Province in 2025, China will possess a unique scientific and engineering infrastructure for its fusion effort. A

prototype fusion power plant, the China-Fusion Engineering Test Reactor, is on the drawing boards, and a key intermediate step, the Burning Plasma Test Reactor, will go into operation in 2027. China's EAST fusion reactor holds the record for plasma containment; and other important fusion experiments are in progress in different locations of the country.

This is nothing less than a scandal, given all the talk in Washington about maintaining the US edge in technology vis-à-vis China. Fortunately for the US, private sector investments in the US and China. The FIA has established itself as the voice of the private fusion industry worldwide. The present interview follows up an earlier one that Asia Times published in

AH: The US has been a global leader in fusion since the very beginning of fusion research by governments back in the '50s. The United States, first working with the UK and then with Japan and Europe as well, has always been the leading country in pushing forward research, first in plasma physics, and then concerning how

of relative openness in the global system. A lot of the leading Chinese scientists have done work in US and European labs and Japanese labs. There is a long history of collaboration, both in ITER and elsewhere.

The US program on fusion has always been ambitious, but

The US fusion community and the US government have a plan for what they

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IT: Apart from the need to increase its

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You need to have user

Because the words have no inherent bias, it only won't support researchers that use techniques, aren't scientists etc. The word "misleading" just means either of having or being new information misrepresenting someone in the United States, has anyone release their sources has someone who mislead to mean that it would have taken this strategy mislead away from the United States.

To me, there is nothing

I would think that should spawn the US to say, we had

It's gotten through. Ahh: Well, even if it has gotten

as an ITCC class machine – a machine that will reach fusion break-even. They are building it right now in Hefei, in Anhui province, far from the CASIT platform, the Comprehensive Research Facility for Fusion Technology. What's interesting is that if you look at the company registrations and funding, a very significant amount of funding into this government program has come from, nominally, private investors. Leading among these is the electric vehicle company NIO. We've done some digging into Chinese public corporate records and it looks like NIO is at least partially funding the building of BEST and it is unclear who is funding the China Fusion Corporation. To be clear, I haven't actually talked to them and I don't know and of that for sure. And it's hard to be sure about any of this, because China is a different system than I'm 10 years ago. It's not as open. But that said, Chinese scientists, both public companies and private companies, are fully engaged in the international fusion sector, and they participate in global meetings on fusion science. They're there to learn and they are there to share their skills. Still, some aspects remain opaque. There was an announcement late last year of the formation of a China Fusion Corporation; a press release was put out by the China National Nuclear Corporation. But within a day or two, that press release was taken off the Internet. I have an English language translation, but you can't get the source anyway. It's in view of all the talk about China as a strategic rival of the US,

Do you see a national security angle in the race to realize a pilot fusion power plant? AH: Any concentrated source of electric power that doesn't rely on energy resources from an unstable world is national security related. (2) What if China were to win the race to commercial fusion energy?

AH: If the Chinese get to fusion first, we shouldn't expect that this would just be a pure market-based approach. What we should expect is that China will use its newfound leadership in fusion in global geopolitical affairs. We should expect that they will use it throughout their Belt and Road partner nations, further tying them into a centralized, Beijing-led whole order. So fusion is more than just something the United States should do because it's good for business and good for the climate. Examples from other industries show that China will take this and make it central to their global effort to put China at the center of the global geopolitical order.

(3) Should you compare this with the race to get to the Moon? AH: It's similar in that we're seeing a global race and multiple players work towards something very technologically challenging. But, I have to say – while going to the Moon was and is an extraordinary achievement – if you can produce power without emissions and without dependence on potentially hostile external sources, it's much more impactful on the day-to-day life of the people living in your country.

Letting China surpass the US ensures geopolitical chaos and great-power war.

Glickman, 18 — Gabriel Glickman is a nonresident associate fellow at the Begin-Sadat Center for Strategic Studies, Bar-Ilan University. (2-12-2018; "Back to the Future: The Potential of Great-Power Conflict," *National Interest*; <https://nationalinterest.org/feature/back-the-future-the-potential-great-power-conflict-24464/>; //GrRv)

What does the DOD mean by "order?" In the field of international relations, the terms "revisionist state" and "status-quo state" are used to describe, respectively, countries that seek to change the current international system and those that uphold it. In the twentieth and twenty-first centuries, the international system has been defined by American hegemony and the spread of Western liberal democracy rather than its challengers—notably, fascism and socialism. This is commonly referred to as the liberal world order. Under that world order, the United States is the most powerful country in the world. It often intervenes in international conflicts at a high cost, thus keeping dissatisfied nations from overturning the system. The NDS, however, refers to a recent shift in the current world order with an observation that, "We are facing global disorder, characterized by decline in the long-standing rules-based international order." The basis for that observation is the argument that the United States under the Obama administration took a brief, but arguably consequential, step back from the job of world-order maintenance. As proof of this, foreign-policy pundits often refer to Obama's favorite quote (which he got from Martin Luther King Jr, who in turn got it from a nineteenth-century clergyman named Theodore Parker): "[T]he arc of the moral universe is long, but it bends toward justice." The implication of this quote is that history is ultimately on the side of good rather than evil (e.g., dictatorships), and therefore the United States needn't concern itself with great power competition or world order strategy. Critics point out that the president's faith in that sentiment was put to poor use, however, because it led him to apologize for American power and to enact a more restrained foreign policy that in turn allowed revisionist states like Russia, China and Iran to flourish at the expense of their respective regions' security. As Charles Krauthammer harshly wrote in the final months of the administration: "The consequent withdrawal of American power ... has yielded nothing but geopolitical chaos and immense human suffering." (See Syria.) And that's not exactly a partisan argument either. In addition to conservative critics like Krauthammer, left-leaning foreign policy scholars, like Shadi Hamid of the Brookings Institute, also have been critical of the results of the Obama administration's well-intentioned foreign policy. The NDS promises to reverse the "arc of history" approach to security policy with a three-tiered approach that prioritizes the "revisionist powers" of China and Russia, then "rogue regimes" like Iran and North Korea, and finally "nonstate actors" such as ISIS. Of course, this new approach may alleviate serious concerns about the NSS—including my own—that the United States government no longer cares about global security. But policy will only follow well-written sentiment if President Trump himself can accept that America is the glue holding together an entire world order. With China now poised to reclaim its previous spot in world history as a global hegemon, the proverbial clock is turning back. And that appears to be the reason why the DOD is serious about America being in the business of world order maintenance. As stated in the NDS: "Inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security." Indeed, China already has a strong economy. It represents almost 15 percent of the global GDP to America's roughly 24 percent. But, to put that in a slightly different perspective, China has grown astronomically in the last decade to overtake Japan as the second largest global economy. Thus, there is a real possibility that in the near future (likely decades) it may be able to surpass even the United States and then harness its capital to develop superior military technology. At that point, China would be capable of overthrowing the current international system. The world has not seen global conflict the likes of World War I and II since the United States became the dominant power. Nor, for that matter, has it seen a recurrence of the great power conflicts of the eighteenth and nineteenth centuries. As the new defense strategy implies, take U.S. hegemony out of that equation and great powers may clash once again to the detriment of a cherished world order.

GPW Goes nuclear leading to extinction

Stephen Clare, 6-xx-2023, "Great power war", 80,000 Hours,

<https://80000hours.org/problem-profiles/great-power-conflict/>

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Great power war by Stephen Clare · Published June 2023 · (opens in new window) (opens in new window) (opens in new window) (opens in new window) (opens in new window) Introduction Why might preventing great power war be an especially pressing problem? International tension has risen and makes other problems worse How likely is a war? A new great power war could be devastating How likely is war to damage the long run future? Even if it doesn't cause extinction or civilizational collapse, a major war could affect our long term trajectory Overall view What are the major arguments against this problem being especially pressing? It's less neglected than some other top problems There aren't many possible actions which are clearly justified Maybe it's better to focus instead on more specific risks What can you do to help? Where can you work? What issues should you focus on? Find vacancies on our job board Learn more Top recommendations Further recommendations 10 / 10 00:00 / 01:19:45 Speed 1x Hi some

point in the 21st century, an unmitigated war may be fought. **A modern great power war could see nuclear weapons, bioweapons, autonomous weapons, and other destructive new technologies deployed on an unprecedented scale. It would probably be the most destructive event in history, shattering our world. It could even threaten us with extinction.** We've come perilously close to just

this kind of catastrophe before. On October 27, 1962 — near the peak of the Cuban Missile Crisis — an American U-2 reconnaissance plane set out on a routine mission to the Arctic to collect data on Soviet nuclear tests. But, while flying near the North Pole, with the stars obscured by the northern lights, the pilot made a navigation error and strayed into Soviet airspace. Soviet commanders sent fighter jets to intercept the American plane. The jets were picked up by American radar operators and nuclear armed F-102 fighters took off to protect the U.S. Fortunately, the reconnaissance pilot realized his error with enough time to correct course before the Soviet and American fighters met. But the airman emerged Soviet Premier Nikita Khrushchev, who was already on high alert about the crisis in Cuba. "What is this, a provocation?" Khrushchev wrote to US President John F. Kennedy. "One of your planes violates our frontier during this anxious time when everything has been put into combat readiness." The U-2 pilot had strayed further west, or the Soviet fighters had been fast enough to intercept it, this incident could have played out quite differently. Both the United States and the USSR had thousands of nuclear missiles ready to fire. Instead of a nearly forgotten incident, the U-2 incident could have been a trigger for war, the de facto assassination of Peace Enforced. Competition among the world's most powerful countries shapes our world today. And whether it's through future incidents like the lost U-2, or something else entirely, it's possible that it could escalate and lead to a major, devastating war. Is there anything you can do to help avoid such a terrible outcome? It's, of course, difficult to imagine how any one individual can hope to influence such world historical events. Even the most powerful world leaders often fail to predict the global consequences of their decisions. But I think the likelihood and severity of great power war makes this among the most pressing problems of our time — and that some solutions could be impactful enough that writing on them may be one of the highest-impact things to do with your career. By taking action, I think you can create a future where the threat of great power war is a distant memory rather than an ever-present danger.

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