On underview - PF is whole res - us reading an aff is a turn to their case AND line by line in PF isnt the norm - no reason impact turns are uq its not sandbagging procedurals its the norm to read new offense up till rebuttal

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

C1) Heg

US heg is eroding

Warner 25 (Daniel Warner is the author of An Ethic of Responsibility in International Relations. (Lynne Rienner),February 14, 2025,"The United States is Falling Apart and the World is Taking Notice", Counterpunch,https://www.counterpunch.org/2025/02/14/the-united-states-is-falling-apart-and-the-world-is-taking-notice/, DOA 3/11/25) KC

The United States is imploding. The reign of Donald Trump is not only challenging and threatening the very foundations of its constitutional democracy, it is calling into question the U.S.'s post-World War II hegemonic role. Empires or hegemonic powers rise and fall. Often they are defeated by emerging powers. Sometimes their decline takes place over time. But rarely do they self-destruct as spectacularly as the U.S. is doing. **The U.S. implosion is dramatic in its intensity and rapidity. In just over three weeks, Donald Trump has been able to redefine the United States' position in the world from a global power to an international outcast.** Despite whatever military and economic power the U.S. still has, its image and global leadership have been undermined by President Trump's foreign policy decisions. The word "implode" is rarely used in international relations. The decline of empires or hegemonic powers is usually due to external forces. The Roman Empire fell because of a series of invasions by "barbarian tribes." The Ottoman Empire fell because it aligned with Germany during World War I and was formally dismantled after the War because it had chosen the losing side. The United States is now in the throes of losing its global position by an implosion based on President Trump's policies. Internationally, Trump has undermined the U.S.'s global image and influence by systematically provoking allies, neutrals and competitors. Besides targeted tariff threats and proposals for territorial expansion into Greenland, Panama and Canada, the president has made two policy decisions that have led to universal condemnation with major global repercussions. The first is his decision to gut the United States Agency for International Development (A.I.D.). While there are certainly inefficiencies in any institution that spent $38 billion in 2023 and operates in 177 different countries, A.I.D. has been fundamental in projecting a positive American image throughout the world. As an example of its outreach, Samantha Power, the former administrator of A.I.D., wrote in The New York Times how out of the $38 billion spent, "nearly $20 billion was for health programs (such as those that combat malaria, tuberculosis, H.I.V./AIDS and infectious disease outbreaks) and humanitarian assistance to respond to emergencies and help stabilize war-torn regions…Other U.S.A.I.D. investments…pay dividends in the longer term, such as giving girls a chance to get an education and enter the work force, on growing local economies." Foreign assistance is all about human capital. It is a crucial element in projecting soft power. When President John F. Kennedy established A.I.D. in 1961, he said in a message to Congress; "We live at a very special moment in history. The whole southern half of the world–Latin America, Africa, the Middle East, and Asia–are caught up in the adventures of asserting their independence and modernizing their old ways of life. These new nations need aid in loans and technical assistance just as we in the northern half of the world drew successively on one another's capital and know-how as we moved into industrialization and regular growth." He acknowledged that the reason for the aid was not totally altruistic, "For widespread poverty and chaos lead to a collapse of existing political and social structures which would inevitably invite the advance of totalitarianism into every weak and unstable area. Thus our own security would be endangered and our prosperity imperilled. A program of assistance to the underdeveloped nations must continue because the nation's interest and the cause of political freedom require it." The fear of Communism was obvious in 1961. The motivation behind U.S. foreign assistance is always humanitarian and political at the same time; the two can never be separated. **Today, the United States is competing with China and its Belt and Road Initiative for global influence. Trump's freezing and defunding U.S. foreign assistance is not a defeat to China; it's a default, a no-show. Defunding and freezing foreign assistance effects millions of people throughout the world and invites even allies to look to China as a partner in trade and development.** Whereas the A.I.D. example is an excellent case study of a major power purposefully retreating globally (withdrawal from the World Health Organization and the Paris Accord on climate change included), Trump's proposal for the Gaza Strip is an outright, active, foreign policy autogoal. (A former advisor to Bernie Sanders called it Trump's "apocalyptic daydream.") Trump's insistence that the United States will take control of Gaza, evicting almost two million people from their homeland in order to create a place "better than Monaco," "the Riviera of the Middle East,"

has generated international condemnation. "Forcible displacement of an occupied group is an international crime, and amounts to ethnic cleansing," Navi Pillay, chair of the United Nations Commission of Inquiry on the Occupied Palestinian Territory, told Politico. "There is no way under the law that Trump could carry out the threat to dislocate Palestinians from their land," she said. Politically, the Foreign Ministry of Saudi Arabia, a key actor in stabilizing relations in the Middle East, forcefully dismissed the proposal; "Saudi Arabia also reiterates its previously announced unequivocal rejection of any infringement on the legitimate rights of the Palestinian people, whether through Israeli settlement policies, the annexation of Palestinian lands, or attempts to displace the Palestinian people from their land," it said. Egypt, Jordan and other Arab countries have also rejected the plan. King Abdullah II of Jordan gracefully avoided directly responding to the plan during his joint press conference with Trump. But following the meeting, the King said on X, "I reiterated Jordan's steadfast position against the displacement of Palestinians in Gaza and the West Bank. This is the unified Arab position." The only country who seem pleased is Israel, with Prime Minister Netanyahu smiling like a Cheshire cat listening to Trump present the plan during their joint press conference. In three weeks, Donald Trump has imploded whatever positive image the United States might have had internationally. While he may think he is doing what his MAGA followers want, international reactions – save Israel's – are further nails in the coffin of United States hegemony.

The US is behind on nuclear developments

Nordquist 24 (DJ Nordquist is an advisory board member at ClearPath and a senior advisor at the Center for Strategic and International Studies. She previously served as the executive director representing the United States on the Board of Directors of the World Bank Group and chief of staff at the Council of Economic Advisers in the White House. DJ is a member of Carnegie's taskforce on U.S. Foreign Policy for Clean Energy Supply Chains,"Embracing an All-of-the-Above Strategy for Energy and Economic Development", November 1, 2024, Carnegie Endowment, https://carnegieendowment.org/research/2024/10/nuclear-power-united-states-energy?center=china&lang=en, DOA 3/8/25) KC

Dependence on Adversaries and the Importance of the Other Low-Carbon Power Source: Nuclear **China dominates global supply chains for renewable energy and batteries and is now setting its sights on becoming a superpower in nuclear energy.**11 **China understands the simultaneous need for clean baseload power in the form of nuclear (despite China's current heavy reliance on coal) in addition to intermittent renewable energies. Over the past several decades, as the West has grown increasingly cautious about nuclear, China has forged ahead and is now building twenty-five reactors, more than the next six countries combined.**12 **In fact, it has more nuclear reactors under construction than any other nation in the world, and approved ten new reactors in each of the past two years.13 The country is expected to surpass France and the United States to become the world's leading atomic power generator by 2030, according to BloombergNEF**.14 **It also is responsible for a new breakthrough: a meltdown-proof nuclear reactor, which has been a goal for several U.S. companies like X-energy and Kairos, as well as the U.S. Department of Defense, but which China is building faster**.15 **China's new nuclear dominance would be added to its control of solar, wind, and EVs (through the magnetic motor and lithium-ion battery supply chain).16 It already processes 90 percent of rare earth elements and 60 to 70 percent of lithium and cobalt (which China manufactures with very low environmental and labor standards).17 Overall, the United States is reliant on other countries for its critical minerals, needing to import more than half its supply of thirty-one out of the thirty-five minerals defined as critical by the government in 2018; the country also has no domestic production at all for fourteen of those minerals.**18 **The United States must double-track its energy efforts just as China has: work to increase nuclear power as a workhorse that can ensure the United States has reliable electricity, while also (re)establishing domestic renewable supply chains and manufacturing. In other words, America needs to build—and lead—in multiple forms of energy.** Unfortunately, it seems the United States cannot get out of its own way. According to a 2022 International Energy Agency (IEA) analysis that describes the path to reach net zero by 2050, the world would need to double its nuclear energy capacity even with the assumed exponential growth in solar and wind.19 The IEA's model assumes an average of 30 gigawatts of new nuclear capacity coming online every year starting in the 2030s and staying on that track for another two decades, until 2050. The math then becomes

clear: **the world needs to build and turn on the equivalent of 180 more 1,000-megawatt reactors, or twenty-five more new reactors per year, by 2030, with further growth afterward in order to hit the 2050 target.20 If all of those reactors are built by China and Russia, not just for their domestic use but also for export, other countries will be locked into their tech and supply chains for decades. Russia supplies more than 40 percent of the world's enriched uranium, including about 20 percent of what the United States uses, which means one in twenty American households were powered by Russian-enriched nuclear fuel in 2022**.21 Fortunately, lawmakers passed the Prohibiting Russian Uranium Imports Act, signed by President Joe Biden in May 2024, which bans unirradiated low-enriched uranium from Russia or Russian firms from being imported into the United States, with the goal of increasing U.S. production.22 The law includes nearly $3 billion in federal funding to expand the domestic uranium industry in hopes of building demand, and will also help build new low-enriched uranium supply (which is what current reactors use as fuel) as well as create capacity to produce high-assay low-enriched uranium (HALEU, which is what advanced and next-generation reactors use as fuel). **Adding Russia and China together, these two U.S. adversaries control nearly 60 percent of the world's supply of enrichment needed to fuel the next generation of reactors.23 China also intends to build a total of 150 new nuclear reactors between 2020 and 2035, which includes a target of selling thirty nuclear reactors via its Belt and Road Initiative to states it considers its vassals.**24 And thanks to its massive state support system, **China can build a lot cheaper: it has already bid to build Saudi Arabia's first nuclear plant at a price at least 20 percent lower than competing bidders.25 China now seems to be at least a decade ahead of the United States in nuclear power, specifically because of its ability to field fourth-generation reactors; is poised to build six to eight new nuclear power plants each year; and is expected to surpass the United States in nuclear-generated electricity by 2030.**26 **China is expected to finish its first commercially operating SMR by 2026, while leading U.S. advanced nuclear firm TerraPower is expected to be online by 2030.**27 **In addition, the current U.S. nuclear fleet is aging. The vast majority of American nuclear capacity was built between 1970 and 1990**, with the country's newest plant (Plant Vogtle's AP1000 reactor in Georgia) completed in 2024.28

Aff investment is key

Ezell 24 (Stephen Ezell, vice president for global innovation policy at the Information Technology and Innovation Foundation (ITIF) and director of ITIF's Center for Life Sciences Innovation. He also leads the Global Trade and Innovation Policy Alliance. His areas of expertise include science and technology policy, international competitiveness, trade, and manufacturing. 17 June 2024, "How Innovative Is China in Nuclear Power?", Information Technology & Information Foundation, https://itif.org/publications/2024/06/17/how-innovative-is-china-in-nuclear-power/, DOA 3/1/2025) ESR

Unfortunately, as industry analyst Luongo observed, "**It is generally agreed the U.S. has lost its global dominance in nuclear energy**."103 Therefore, the United States needs to develop a coherent national strategy and whole-of-government approach to reanimating the deployment of modern nuclear reactor technology. This should be predicated on the recognition that **America's current nuclear installed base is aging rapidly, and**, more importantly, that **modern nuclear reactor technologies are substantially safer and more efficient** (in producing energy from a given set of fuels) **than previous designs**. It should also be predicated on a recognition **that if the United States is to contribute to global clean energy and decarbonization objectives, an embrace of nuclear energy must be part of an "all-of-the-above" energy strategy**. A recent U.S. Department of Energy (DOE) report suggests that if the United States commits more to nuclear, **it could triple its nuclear-power generation to 300 GW by 2050** (and make an important contribution toward meeting America's net-zero emission goals).104 **This would also promote U.S. energy security and the resilience of America's energy system. Policymakers will need to both fund the future and provide necessary funding today to appropriately maintain America's existing fleet of nuclear reactors, building upon Congress's creation**

of a $6 billion relief fund in the 2021 Bipartisan Infrastructure Investment and Jobs Act (BIIJA), whose intent is to preserve America's existing nuclear fleet and related jobs through 2031.105 The 2022 Inflation Reduction Act also includes tax credits through 2032 for existing U.S. reactors. (The advanced nuclear tax credit under Section 45J of the Energy Policy Act of 2005, which offers a maximum 1.8 cent per kilowatt-hour credit, continues to be the only currently available federal generation credit for new nuclear electricity generation facilities not yet placed into service.)106 **DOE's Advanced Reactor Demonstration Program (ARDP), launched in 2020, seeks to speed the demonstration of advanced reactors through cost-shared partnerships with U.S. industry**. Since its 2020 launch, Congress has appropriated $3.2 billion to the program, including $2.48 billion in funding through FY 2025 as part of the BIIJA. The agency is extending awards to applicants developing: 1) advanced reactor demonstrations, which are expected to result in a fully functional advanced nuclear reactor within seven years of the award; 2) advanced reactor concepts 2020 (ARC 20), which will support innovative and diverse designs with potential to commercialize in the mid-2030s; or 3) risk reduction for future demonstrations.107 In total, DOE is supporting 10 U.S. advanced reactor designs to help mature and demonstrate its technologies.108 **There are many promising potential U.S. nuclear power innovators**. For instance, **Bellevue, Washington, and Bill Gates-backed TerraPower is developing a sodium fast reactor combined with a molten salt energy storage system and X-energy is developing a Gen-IV High-Temperature Gas-Cooled reactor**. (Bechtel is the engineering, procurement, and construction provider for TerraPower in deploying its Natrium technology.)109 In June 2024, TerraPower announced it was commencing construction in Wyoming on its advanced nuclear reactor, with an expected launch date of 2030.110 Elsewhere, NuScale seeks to launch a scaled-down light water reactor (LWR) and Westinghouse is developing the AP300, its own scaled-down LWR.111 Yet, **none of these are expected to enter even the demonstration stage until 2030, at the earliest, which means China has opened a significant lead over the United States in the development of fourth-generation nuclear technology**. And **even considering the prior generation of reactors, notably the Westinghouse AP1000, China was deploying their versions of them as early as 2017, while as noted the Vogtle Unit 4 has just now come online, meaning that China is years ahead of the United States in even deploying our country's own technologies. Policymakers will also need to support the economics of new nuclear technologies. DOE estimates that nuclear reactors will need to cost about $3,600 per kilowatt to be built quickly and scaled around the country, but first-of-their-kind reactors are costing anywhere from $6,000 to $10,000 per kilowatt.**112 **The United States will also need to work to develop domestic fuel enrichment capacity for these projects. For instance, DOE is currently trying to enable domestic high-assay low-enriched uranium** (HALEU) **production capabilities** via the HALEU Availability Program, through which DOE will acquire HALEU through purchase agreements with domestic industry partners and produce limited initial amounts of material from DOE-owned assets.113 Of course, production at scale can reduce per-unit costs, but this requires a sustained commitment to comprehensive buildout. Another challenge pertains to skills: DOE estimates that if the United States is to meet the aforementioned 2050 target of tripling nuclear energy production, America would need an additional 375,000 skilled engineers, technicians, and construction personnel in the sector to support such a buildout.114 As such, the United States needs to revamp its approach to supporting next-generation nuclear initiatives. Notably, both ARDP and the Nuclear Regulatory Commission (NRC) need more resources, in terms of funding and manpower, in part so they can pay market rates to the staff that will be needed to evaluate the wider variety of proposed nuclear designs to come. ARDP also needs a better down-selection process for the demonstration projects it's currently funding. In particular, it appears that the current DOE approach envisions going from start-up to commercialization immediately; instead, DOE should have grant recipients produce a pilot-scale demo, such as in the 5–10 MW range, as part of the down-selection process, before going full commercial. If nuclear energy is going to become a considerable export product for the United States again, then U.S. companies well need to be better supported in their efforts to sell into global markets. The United States should develop a "one-stop-shop" approach, including the U.S. Export-Import Bank (EXIM), U.S. State Department, and other relevant agencies so that foreign buyers of U.S. nuclear exports can deal with a single entity rather than multiple agencies to complete deals (as Russia's Rosatom does). It should also be made clear that nuclear is a qualifying technology for the EXIM's China and Transformational Exports Program (CTEP), whose intent is to assist U.S. exporters facing competition from China and which makes qualifying companies in the program eligible for reduced fees, extended repayment terms, exemptions to EXIM policy requirements, and other benefits.115 To its credit, America's State Department has established partnerships with more than a dozen countries to help them fund and develop nuclear-energy programs and, eventually, SMRs.116 Here, **the United States could also expand the Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology** (FIRST) **program, a multiagency U.S. government initiative that provides capacity building support to help partner countries safely and responsibly build an SMR or other advanced reactor program, to include more countries.**117 The United States also has to negotiate civil nuclear cooperation agreements with foreign governments (Section 123 agreements) and has been quite slow in doing this; enhanced staffing at DOE and the State Department could better support this, along with making a list of priority countries in the Global South with which to promote U.S. nuclear technology exports. The United States has historically been a leader in nuclear fusion research, most notably with regard to the National Ignition Facility achieving the first net-energy gain nuclear fusion reaction in December 2022.118 Still, **the United States needs to build a comprehensive nuclear fusion strategy and strengthen investments therein**: While the federal government will invest $790 million in fusion science programs in 2024, advocates had sought for at least $1 billion in investment.119 Moreover, as one commentator observed, "The Biden administration has taken steps in the right direction with its development of a Bold Decadal Vision, recognizing the technology's potential as a clean energy source, but has not translated this into a large-scale push."120 U.S. policy should work to more strongly coordinate government, academic, and private sector efforts in nuclear fusion and empower DOE with a mandate to achieve commercial fusion power as soon as possible.121 A comprehensive strategy and sustained investment will be needed, for nuclear fusion represents yet one more arena where the technical, scientific, and commercial competition will be fierce between China and the United States in the years ahead. For this reason, recent administrations have clamped down on the transfer or export of nuclear technologies to China. In January 2019, the Trump administration scuttled a 2015 agreement TerraPower had signed with CNNC to build a prototype 600 MW reactor at Xiapu in Fujian province.122 Further, in August 2019, the United States placed China General Nuclear Power Group and three of its subsidiaries on its Entity List because they had "engaged in or enabled efforts to acquire advanced U.S. nuclear technology and material for diversion to military uses in China."123 And in August 2023, the Biden administration further tightened controls on the export of materials and components for nuclear power plants to China.124 China has become America's leading geostrategic competitor, and America needs to completely cease any sharing of its nuclear technologies with the country. Lastly, the United States needs to be working more closely with its own allies, including France, Germany, Japan, South Korea, and Sweden (among others), to collaborate on R&D for advanced nuclear technologies and to help promote nuclear exports from techno-democracies to third-party markets. Indeed, considerable collaboration could be achieved in the regulatory, procurement, and contracting spaces. For instance, the United States could allow foreign companies in allied countries to own reactor licenses in the United States in order to promote foreign investment and accelerate domestic deployment. Further, the United States could lean into international efforts to standardize and harmonize design and testing standards, such as those embodied in IAEA's SMR Platform and Nuclear Harmonization and Standardization Initiative.125 NRC should provide limited endorsement of internationally recognized quality assurance standards, testing standards, design methodologies, and safety analysis methodologies for advanced reactors. That would allow U.S. suppliers to learn and assess what allied countries are doing without reinventing the wheel in the United States and open the door for more international collaboration while limiting redundant qualification work. The United States could also further relax import or export control of non-fuel or non-nuclear safety-related components (e.g., vessels, piping, testing services, etc.) to and from allied nations. This could include limited authorizations to be exempt from domestic sourcing on the procurement of systems, subsystems, and components related to advanced reactors from specific allied countries. Further, DOE could forge more bilateral agreements with allied R&D centers (e.g., the French Alternative Energies and Atomic Energy Commission (CEA), the UK Atomic Energy Authority (UKAEA), and the Korea Atomic Energy Research Institute (KAERI)) to provide funding to advance joint small R&D projects and data sharing. The United States could also explore joint financing of projects among allies; for instance, a foreign firm might be the prime contractor on a project, but firms from other countries could be involved too. That matters, for, ultimately, **every nuclear project America**, France, Germany, Japan, South Korea, or Sweden (or other allied countries) **completes instead of China and Russia in developing countries or other third-party markets represents a win for democratic, free-market economies.**

The time is now

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In addition, the current U.S. nuclear fleet is aging. The vast majority of American nuclear capacity was built between 1970 and 1990, with the country's newest plant (Plant Vogtle's AP1000 reactor in Georgia) completed in 2024.[28] **The United States should not wait decades to commission its next nuclear power plant; it is down from its peak of 112 reactors in 1990 to ninety-four operating today.29 Moreover, now is the time to double down on U.S. nuclear development and leverage a domestic workforce that has recently absorbed the know-how of nuclear reactor construction from Vogtle—what economists call diffusion of knowledge, which is essential for economic dynamism and innovation.**[30] **The longer the United States waits to construct a reactor, the more it risks a brain drain of the first batch of expertise gained in decades: some 14,000 workers (including engineers, welders, masons, electricians, mechanics, and support staff) helped to construct the Vogtle plant and could be deployed to build another AP1000 as quickly as possible to keep domestic know-how alive and to maintain nuclear power momentum.31** Meanwhile, China is taking the same approach with nuclear that it took with other forms of green energy: establish and subsidize domestic capacity as a foundation for competitive reactor exports. Beijing's "dual circulation" strategy to keep its economy from being reliant on imports, particularly from the West, was even enshrined in its constitution.32 It has successfully created Chinese dominance in mineral processing and overcapacity in clean tech, which are killing many domestic producers, not just those in the United States.33 China also got a great deal of help from the United States: one of the main U.S. nuclear firms, Westinghouse, agreed to license its tech to China over several years, even agreeing to allow China to export its technology—which seems like unwise policy in retrospect.34 Beyond that voluntary tech transfer, China's military also hacked Westinghouse and stole its "confidential and proprietary technical and design specifications for pipes, pipe supports, and pipe routing within the AP1000 plant buildings," as well as sensitive emails, according to the U.S. Department of Justice indictment.35 (Russia has also been charged with hacking Westinghouse in an effort to steal the company's IP.)36 **If the United States aims to avoid falling behind China on nuclear power, it will have to make producing energy within its own borders easier. That starts with making it easier to mine and build.** The Need for Permitting and Other Reforms to Enhance U.S. Energy Supplies **It's time to get moving. The United States must accelerate project timelines and streamline processes so developers can get more certainty from regulatory agencies at all levels (federal, state, and local). Costs would come down with increased system efficiency, which would make projects more viable financially from the get-go, and those savings could be passed on to consumers. Permitting reform would also improve investor confidence, particularly in newer, riskier technologies. And of course, permitting reform would allow the United States to be less dependent on foreign sources of energy such as China, which has shown that it is willing to use its economic dominance to punish countries that stand up against it. For example, after Australia called for an international investigation of the origins of COVID-19 in 2020, China banned imports of Australian coal for two years, as well as placing high tariffs on Australia's agricultural exports.37 China has been able to exert major economic influence thanks to its policy of creating state-owned enterprises that are given various subsidies, tax, and labor advantages, allowing them to dominate global strategic sectors—known as brute force economics.38 It would be a mistake for the United States, which reached full energy independence in 2019, to trade dependence on the Middle East's oil fields for dependence on China's energy supply chain.**[39] On the nuclear side of the energy ledger, the Accelerating Deployment of Versatile Advanced Nuclear for Clean Energy (ADVANCE) Act, signed into law in July 2024, is a sign of progress toward making it easier to produce

energy in the United States.40 The law will help **push forward more advanced nuclear projects by improving the regulatory regime, lowering licensing fees (with special incentives for next-generation SMRs), and giving the Nuclear Regulatory Commission more flexibility; it also strengthens international coordination.41 The United States needs to mine its own uranium for its nuclear plants, for which it also needs permitting reform. The country has 48,000 metric tons of identified recoverable uranium resources, yet only mined 6 tons, or 0.1 percent, in 2020.42 The United States has successfully mined uranium in the past—as recently as 2014, when U.S. production was 319 times higher at 1,919 metric tons.**43 While the new ban on Russian uranium imports will help, the United States also gets one-quarter of its uranium from Kazakhstan, making it the second-largest source of supply to the United States after Canada.44 Recently, Kazakhstani company Kazatomprom, the world's largest uranium producer, announced a 17 percent production cut, potentially signaling a closer alliance between Russia and Kazakhstan.45 Amending the National Environmental Policy Act (NEPA) and minimizing red-tape bureaucracy would be a boon for the United States in developing these resources at home, especially the enriched HALEU fuels needed for SMRs, which today are only produced by Russia's state-owned nuclear firm, Rosatom.

This is k2 heg

Hiltibran et al 24 (Christel Hiltibran, Director of International Policy, Climate and Energy Program, Rowen Price, Policy Advisor for Nuclear Energy, Ryan Norman, Senior Policy Advisor for Clean Energy Finance, Climate and Energy Program, Alan Ahn, Deputy Director for Nuclear, 31 January 2025, "Trump Has Been a China Hawk on Nuclear Energy. But Congress Could Compromise That During Reconciliation.", Third Way, https://www.thirdway.org/memo/trump-has-been-a-china-hawk-on-nuclear-energy-but-congress-could-compromise-that-during-reconciliation#:~:text=A%20strong%20US%20nuclear%20energy,valuable%20hundred%2Dyear%20geopolitical%20relationships., DOA 3/1/2025) ESR

President **Trump has long considered himself a China hawk,** stoking a trade war with the country, supporting ever-increasing tariffs on its goods, and using aggressive rhetoric to combat its growing global influence. **But his approach has a blind spot, failing to mitigate China's increasing dominance in the energy sector, especially in nuclear energy development and deployment**. Until we confront China's rising role in global energy markets, **the US will continue to cede market share and lose geopolitical influence, threatening national security both in the US and among our allied nations**. The US needs a synchronized foreign policy to counter Chinese attacks on American hegemony. But since the election, **the incoming administration and Congress have signaled misaligned approaches to foreign energy policy**. The Trump Administration's Day 1 executive orders reaffirmed the President's commitment to domestic energy production—now it's up to Congress to ensure legislation is going to support energy goals. Nuclear Energy Must Be a Foreign Policy Priority Beyond bilateral trade barriers, the US must also dominate critical global industries to remain competitive. **There is broad consensus that investments in national defense, space, artificial intelligence, and quantum computing will help make America more secure and more prosperous. The same is true of investments in nuclear energy. A robust domestic nuclear supply chain has corollary benefits, including reliable energy supply, that are foundational to our defense and technology sectors**. Moreover, **the strength of our nuclear industry directly supports our competitiveness abroad, which in turn affects our ability to uphold the highest global norms in nuclear security and nonproliferation. Failure to compete overseas will enable China, Russia, and other rivals to erode our influence on these international standards and cement century-long geostrategic partnerships around the world. Putting the US at the forefront of global civil nuclear markets will make us stronger, more secure, and more influential on the global stage**. Our adversaries understand the stakes. **China and Russia have state-owned, heavily subsidized nuclear industries that are a key part of their efforts to gain allies and influence throughout the developing world.** China and Russia view nuclear exports as a way to develop century long partnerships in Africa, Asia, and Eastern Europe. Their interest in advanced nuclear power is less about economics, and more about influence. The competition is well underway and the United States is losing. According to the

International Atomic Energy Agency, **85% of all new reactors currently under construction in 2024 are Russian or PRC designs; 0% are US designs.** This year, President Trump and the new Republican Congress have an opportunity to do just that—through budget reconciliation. Trump Could Cede Critical Geopolitical "Energy Dominance" to China in His First 100 Days by Compromising America's Nuclear Industry—But It's Not Too Late Put simply, **if we want to outcompete China, Congress needs to continue to prioritize clean energy.** The incoming Trump administration has made no secret of its hostility to the Inflation Reduction Act (IRA) and its clean energy provisions, especially its investments in wind and solar. But despite recent bipartisan alignment in support of nuclear energy, **Trump's agenda not only targets renewables but may also incidentally deal a significant blow to programs supporting nuclear development and demonstration in the US.** During the 117th Congress, **IRA and the Bipartisan Infrastructure Law (BIL) created tax credits, grants, and loan programs to finance the research, development, demonstration, and even the deployment of emerging clean energy technologies**, including nuclear. In a flurry of signals issued during the lame-duck period, the incoming administration and Republican Congressional leadership have made clear **that many of these programs are on the chopping block in the first 100 days of the second Trump administration**. In competition with state-backed civil nuclear programs such as China**, the US needs to bolster its federal government funding for nuclear, not decrease it. China is churning out large reactors at home, demonstrating** (i.e., building and operating) **advanced reactor technologies, and marketing advanced reactors cheaply along its "Belt and Road."** To stay relevant in this race for international market share, **the US must rapidly finance the demonstration and subsequent commercialization of US nuclear small modular reactors** (SMRs) **and advanced nuclear reactors. The time is now, in the 2025 reconciliation process, to save this critical sector from opening its global market to China.** Why? **The decisions the US government makes this year will dictate whether US nuclear developers have the resources they need to keep pace and ground test these technologies. In the interest of national security and to ensure US competitiveness, Congress must robustly appropriate funding for advanced nuclear demonstrations and maintain federal programs critical to the scale-up of these technologies**. The following programs are all essential to preserve or expand during budget reconciliation.

Nuclear energy is increasingly geopolitically significant

Baker et al 17 (Suzanne Hobbs Baker: Former Visiting Fellow for Nuclear Security. Ryan Fitzpatrick: Senior Director of Domestic Policy, Climate and Energy Program. Matt Goldberg: Fellow, Clean Energy Program. 1/10/17, "Getting Back in the Game: A Strategy to Boost American Nuclear Exports", Third Way, https://www.thirdway.org/report/getting-back-in-the-game-a-strategy-to-boost-american-nuclear-exports //. DOA: 3/16/25)JDE

BACKGROUND Competing in the global civilian nuclear energy market should be a top economic priority for the U.S. **The Department of Commerce predicts that global demand for nuclear energy technology will total $500-$740 billion over the next decade**.1 And that's just the beginning. Leading authorities including the International Energy Agency **expect the world's nuclear capacity to double by 2050**,2 as developing economies try to keep pace with growing energy demand and most nations turn increasingly to low-carbon sources to meet emissions targets.3 **Capturing even a portion of a market this size would produce enormous rewards for American businesses and workers.** Also of interest for the United States, **nuclear deals create strong geopolitical ties between the selling country and the host country—a commitment lasting as long as the life of the project (between 50 and 100 years).** In essence, where you have civilian nuclear power deals, you have **long-term partnerships and greater chances for international cooperation. The U.S. was the dominant force in the global civilian nuclear trade for decades, enjoying both the rewards and responsibilities that come along with that**. As pioneers in nuclear energy innovation, the U.S. was able to develop world-class products and establish a successful export regime in the 1970's and 1980's. We are still making profits off of some of those earliest deals. Today, America has a multi-billion dollar nuclear energy industry that employs a domestic workforce of more than 100,000 people.4 At the same time, the U.S. has used its commercial leadership to establish global security standards. We have long been

the largest contributor to the International Atomic Energy Agency, the United Nations' nuclear non-proliferation watchdog.5 The U.S. government also helps other nations with regulatory, safety, security, and innovation needs—even when there is no commercial benefit involved. We consistently put the safety and security interests of the global community first. This is what being a responsible world leader looks like. **In recent decades, however, the U.S. has lost its edge as a global exporter. Our products have a harder time competing with all-inclusive deals offered by Russia's state-supported industry and may soon face additional challenges like lower-cost Chinese reproductions.**6 **Losing this market** share hurts more than just the bottom line for our producers and workers. It **limits our ability to influence global standards. It also allows our competitors to lock-in long term, influential alliances with countries that are important to American foreign policy strategy.** To help our domestic industry adapt to the realities of today's market and regain global leadership, the U.S. needs a new policy strategy.

Energy is specifically key

Hale 02 (Hale, Cameron Edward (The University of Wisconsin - Madison). 2002, "Energy and hegemonic power", Ads, https://ui.adsabs.harvard.edu/abs/2002PhDT.....127H/abstract, DOA 3/11/25) RK

Current theories of hegemony have, for the most part, ignored energy as a factor. It is argued here, however, that **there are three reasons to expect energy to be a factor in the rise of nations to hegemonic power. First, societies require flow-throughs of energy, material, and information in order to maintain themselves, grow, and develop. Second, the types of energy systems used by a society set somewhat predictable limits on what humans can do and on how they will be organized. And third, since different energy sources and their associated technologies exhibit different capabilities and limitations, advantages may be conferred on one society over another based on the energy sources used by those societies. Case studies of the economic, military, and energy systems of the four nations that have achieved hegemony---Portugal, the Netherlands, the United Kingdom, and the United States---found that changes in energy systems were a significant factor in each instance of hegemony.** Also examined was the premise that the rise and decline of hegemonic powers may reflect the movement away from, and subsequent return to, a condition of steady-state---where a society's energy systems, and those parts of the society that respond to changes in energy factors, change very slowly over time. It was postulated that an extended period of stable energy conditions in conjunction with the diffusion of technology would erode any energy-based differences in power among nations. While, on the other hand, the movement away from a condition of steady-state brought on by changes in a society's energy systems might provide that society with enough advantages that it could seek hegemony. Evidence for an association between the movement from one steady-state to another and the rise and decline of hegemony was found in only two of the four cases.

The impact is Chinese power

China's rise will cause conflict

Kim 19(Min-Hyung Kim, Department of Political Science and International Relations, Kyung Hee University, Seoul, South Korea, 2-4-2019, "A real driver of US–China trade conflict: The Sino–US competition for global hegemony and its implications for the future," No Publication, https://www.emerald.com/insight/content/doi/10.1108/ITPD-02-2019-003/full/html, DOA: 4-7-2022)ET

US hegemony over the last seven decades or so has recently been challenged by China's rise. Since the economic reforms launched in December 1978, China has achieved a remarkable economic development. China's real-Gross Domestic Product (GDP) growth rate over the last four decades is about 10 percent on average (World Bank, 2018; also see Kim, 2016b, p. 707). While the size of China's economy (in terms of GDP) is currently the number two in the world only after the USA, China already became the world's largest exporter in 2010. In 2011, China ranked as the world's first destination for inward foreign direct investment (FDI) and the world's first investor for outward FDI among developing countries[4]. Also, in 2013, China became the world's largest trading country in goods, overtaking the USA (Anderlini and Hornby, 2014). Moreover, measured on a purchasing power parity basis that adjusts for price differences, China ranked in 2017 as the world's number one (Central Intelligence Agency, 2018). Given that China's size of GDP on a PPP basis in 1980 was one-tenth that of the USA, China's economic growth is truly remarkable (International Monetary Fund, 2018). **China's rapid ascendance as an alternative hegemonic power poses a significant challenge to US hegemony in the world.** As a matter of fact, competing with the USA in many areas, China has quickly strengthened its economic, technological and military power and as a consequence has started to threaten US global hegemony. Accordingly, many scholars now often talk about a declining US hegemony and a forthcoming Chinese hegemony (see, for instance, Layne 2018, 2012). Some of them even predict a hegemonic war between the USA and China during the hegemonic transition period (see, e.g., Ulf and Ikenberry, 2014; Mearsheimer, 2014; Friedberg, 2005). Underlying these arguments for an inevitable war between the two superpowers is PTT. PTT originally formulated by Organski (1958) posits that war is likely when the power of the dominant state in the international system (i.e. hegemon) is declining and that a dissatisfied rising challenger substantially reduces the power gap between the hegemon and itself. Unlike balance of power theory, PTT argues that the war is most likely when there is near power parity between a dominant state and a rising and dissatisfied challenger (Organski and Kugler, 1980, pp. 19-20)[5]. A rising power here is generally dissatisfied with the existing international order and initiates war against a declining hegemon in order to impose orders that are more favorable to itself (Organski 1958, pp. 364-367). Layne (2018, p. 110) put these power transition dynamics quite succinctly as follows: "Over time, however, the relative power of states changes, and eventually the international order no longer reflects the actual distribution of power between or among the leading Great Powers. When that happens, the legitimacy of the prevailing order is called into question, and it will be challenged by the rising power(s)." And when the balance of power between a dominant state and a rising challenger changes sufficiently, a new order replaces an old one typically by a hegemonic war (2018, p. 104). Paying close attention to the growing Sino–US competition over hegemony in the twenty-first century, therefore, Shirk (2007, p. 4), China specialist, argues that "History teaches us that rising powers are likely to provoke war." **On the other hand, scholars like Gilpin (1981) contend that the power transition war between great powers is likely to occur when a hegemonic state whose power is declining due to imperial overstretch[6] views "preventive war as the most attractive means of eliminating the threat posed by challengers"** (Ned Lebow and Valentino, 2009, p. 391), although they do acknowledge that there might be some "ways to prolong the period of its power preponderance vis-à-vis the rising challenger, so that the rapidly rising power will not dare to challenge the hegemonic leadership" (Kim and Gates, 2015, p. 221). **In this case, the initiator of war is a declining hegemon, rather than a rising challenger. The declining hegemon who fears a rising challenger's overtaking its power in the near future sees war as a better option than other options of maintaining its hegemony such as reducing its commitments abroad and appeasing a rising challenger.** In light of the power transition perspective, **the three most recent examples of China's challenges to US hegemony in the world are the Belt and Road Initiative (BRI), the creation of the AIIB, and Beijing's plan for "Made in China 2025."** First of all, China's BRI, which is also called the "One Belt, One Road" initiative or the Initiative of "the Silk Road Economic Belt and the 21st-Century Maritime Silk Road," is Chinese President Xi Jinping's signature project. The BRI was first announced in 2013 when Xi visited Central and Southeast Asia. It seeks to connect Asia, Africa and Europe to promote regional economic cooperation, infrastructure construction, and world peace. It was motivated by "the Silk Road Spirit" (i.e. peace and cooperation, openness and inclusiveness, mutual learning and mutual benefit) of more than two millennia ago that is, China claims, "a historic and cultural heritage shared by all countries around the world" (The State Council of the Republic of China, 2015). According to the "Action Plan on the Belt and Road Initiative" published jointly by the National Development and Reform Commission, the Ministry of Foreign Affairs, and the Ministry of Commerce (MOFCOM), accelerating the construction of the BRI "can help promote the economic prosperity of the countries along the Belt and Road and regional economic cooperation, strengthen exchanges and mutual learning between different civilizations, and promote world peace and development" (The State Council of the Republic of China, 2015). Hence, Beijing contends that BRI "is a great undertaking that will benefit people around the world" (The State Council of the Republic of China, 2015). The BRI currently includes about 70 countries that accounts for 70 percent of the world's population, 55 percent of the world's Gross National Product and 75 percent of global energy reserves (Cwanma, 2018). Many countries in the world (e.g. "from Panama to Madagascar, South Africa to New Zealand" (Kuo and Kommenda, 2018)) have officially pledged support for the BRI. Second, the AIIB is a China-led multilateral development bank, which was originally launched by Chinese President Xi in 2003. Among others, Beijing's frustration with the slow reform process of economic governance in the aftermath of the global financial crisis in 2008, its intention to popularize the Renminbi (China's currency) as a global reserve currency, and its hope to increase its voice in global financial institutions were the important motivations of the creation of the AIIB. With $100bn of initial capital, the AIIB, headquartered in Beijing, officially came into operation in January 2016. The stated main goal of the AIIB was to "improve social and economic outcomes in Asia" (AIIB, 2018a) by providing finance to the various infrastructure projects of the region's developing countries. Beijing claims that AIIB-funded projects will better connect people, markets and services to promote sustainable growth, development, and prosperity (AIIB, 2018b). Along with the New Development Bank (NDB),[7] which is formally called the BRICS (Brazil, Russia, India, China, South Africa) Development Bank headquartered in Shanghai, and Chinese lending institutions such as the Silk Road Fund and Chinese policy banks, the launch of the AIIB represents China's major financial initiatives that could rival US-led multilateral institutions. As of October 2018, the AIIB has 87 approved members (68 members and 19 prospective members) around the world and its total investment amounts up to $6.4bn. As Tekdal (2017, p. 375) notes, although the AIIB has no official link to the BRI, a primary motivation of its creation was to fund projects in BRI partner countries. As an emerging economic hegemon, which is dissatisfied with the global economic governance in which its voting share in the existing multilateral institutions like the IMF, the World Bank, the Asian Development Bank does not match its economic power as the world's second largest economy and the world's biggest trading nation, China's initiatives of the BRI, the AIIB and the NDB demonstrate its long-term goal of reshaping the global economic order. Third, "Made in China 2025" is Beijing's ten-year industrial development plan. First, announced and approved by China's State Council in 2015, it is "a blueprint for Beijing's plan to transform the country into a high-tech powerhouse that dominates advanced industries like robotics, advanced information technology, aviation, and new energy vehicles" (Laskai, 2018). By enhancing Chinese industries' competitiveness and innovation and reducing China's dependence on foreign technology through achieving 40 percent of domestically manufactured basic components and basic materials by 2020 and 70 percent of self-sufficiency in core components and basic materials in industries like aerospace equipment and telecommunication equipment by 2025 (Morrison, 2018, p. 47; Laskai, 2018), its goal is to make China a manufacturing superpower that dominates the world market in future high-tech industries. Indeed, while the term "Made in China" has typically meant cheap products such as clothing, shoes and consumer electronics with low quality, "Made in China 2025" intends to turn China into an independent and cutting-edge technology-driven economy. Beijing believes that by moving toward higher value-added high-tech industries, they could escape the so-called "middle-income trap that has plagued many developing countries" (Hopewell, 2018) with the problems of increased wages and low productivity. China's initiatives of the BRI, the AIIB and Made in China 2025 certainly threaten the global hegemony of the USA, which is now over seven decades. Layne (2018, p. 96) points out that "Since the onset of the Great Recession,[8] China has successively taken top position in the world in exports (passing Germany); in trade (passing the USA); and in manufacturing (claiming a title the USA had held for a century)." Based on these facts, he argues that the **Great Recession and the rapid rise of China as a leading economic power have demonstrated the reality of American decline – i.e. the end of the unipolar era or Pax Americana**(p. 104). Layne, 2012, p. 204). **Although China repeatedly claims that it does not seek to replace US hegemony in the world, its behavior revealed by the initiatives of the BRI, the AIIB and Made in China 2015 illustrates that its ultimate goal is to be a global hegemon**[10]. This is not surprising because all the rising powers in history invariably sought to first dominate the region they are situated (Mearsheimer, 2014, 2014) and expand their power globally (Gilpin, 1981). **Given that "It is more difficult for the leaders of a declining hegemon to accept the reality or prospect of their country's diminished influence and status"** (Chan, 2008, p. 50), **the USA has every reason to prolong its hegemony in the post-1945 world, which has served its own interests** (Layne, 2018, p. 105). **These efforts to maintain US hegemony are well observed in the case of American actions against China's initiatives of the BRI, the AIIB and Made in China**

2015.[end of ad] **despite China's claim that the BRI aims to promote world peace and development, many analysts in Washington view it as a Chinese version of Marshall Plan that seeks to boost Chinese investment around the world for global dominance. They think that as "a top-level design for which the central government has mobilized the country's political, diplomatic, intellectual, economic and financial resources"** (Rolland, 2018), the BRI is Beijing's "attempt to remake global commerce on China's terms and project Chinese power far and wide" (Chellaney, 2018). **As the BRI expands in scope, it could give China too much leverage and control over other countries, especially those that are small and poor** (Kuo and Kommenda, 2018). Also, by making China a major hub of global investment, trade, and finance, the BRI contributes to build a Chinese version of hub-and-spoke network system. **Thus, Harry Harris, head of US Pacific Command Admiral, argued in early 2018 that the BRI is "a concerted, strategic endeavor by China to gain a foothold and displace the USA and our allies and partners in the region"** (Harris, 2018). Moreover, given "almost all the ports and other transport infrastructure being built can be dual-use for commercial and military purposes" the BRI is regarded not simply as China's plan to build roads and railways across Eurasia and Africa or the Indo-Pacific, but as Beijing's grand strategy for the next decades and its vehicle to write new rules that reflect Chinese interests (Kuo and Kommenda, 2018). Indeed, Beijing has made a link between the BRI and the concept of China's core national security interests. For example, Wei Fenghe, China's Defense Minister, told Pakistan's Navy chief in 2018 that "China was ready to provide security guarantees for the One Belt, One Road project" (Smith, 2018). Therefore, Eisenman contends that with no exact definition of its scope and contents, the BRI is China's attempt to "create a new Sinocentric era of globalization using both traditional tools of Chinese statecraft as well as new types of economic incentives and debt financing arrangements" (Eisenman, 2018). In other words, the BRI reflects China's increasing relative power in the world as well as growing Beijing's ambitions to shape global economic governance (Tekdal, 2017, p. 378). It "exemplifies how China is flaunting its global ambitions" (Chellaney, 2018). As the BRI is increasingly seen as a major source of China's political and economic influence of the world, US policy makers have expressed their concerns[11] and have begun to take some measures against it. For example, the USA, along with Japan and India, have discussed trilateral efforts to foster infrastructure development in the Indo-Pacific region since 2015. In particular, the Trump Administration has sought to create a development finance mechanism, which is designed to counter the negative effects of the BRI. It has also begun to explore ways to become more proactive in promoting regional connectivity and infrastructure initiatives in partnership with Japan. Moreover, reviving their Quadrilateral Strategic Dialogue in November 2017, the USA, together with Japan, Australia and India, discussed not only the need to foster a new vision for regional infrastructure but also the need to further support the Asian Development Bank and the World Bank in order to enhance lending for infrastructure projects in the region. Furthermore, the joint statement released after the meeting between the US President Trump and India's Prime Minister Modi at the White House in June 2017 made it clear that the two countries agreed to promote a vision for regional ties by strengthening "regional economic connectivity through the transparent development of infrastructure and the use of responsible debt financing practices, while ensuring respect for sovereignty and territorial integrity, the rule of law, and the environment" (The White House, 2017). This is, in fact, an announcement by the leaders of the two countries of the vision, which is completely at odds with the BRI. In addition, drawing careful attention to the "neo-colonialist characteristics"[12] of the BRI, the US–Japan Business Council and the US–India Business Council jointly launched in May 2018 a new private-sector initiative, called the Indo-Pacific Infrastructure Trilateral Forum, which aims to insulate sovereign states from external coercion, support good governance and liberty, promote market-based economics, and help support quality and sustainable infrastructure development in the Indo-Pacific region (Smith, 2018). **Likewise, the USA sought hard to prevent the creation of the AIIB.** Despite its stated goal of helping to finance the various infrastructure projects of the developing countries in Asia, the USA viewed the AIIB as China's efforts to weaken existing financial institutions such as the World Bank, the IMF and the Asian Development Bank, which are largely under the influence of the USA and its close ally, Japan (Kim, 2018, p. 618; Kim, 2016c, p. 69). Hence, the USA strongly lobbied against the creation of the AIIB. Washington even pressured its allies not to agree to the AIIB's creation. Although US opposition to the AIIB was reportedly due to US doubts that the AIIB would stick to the same level of transparency and governance structure as the IMF, the World Bank and the Asian Development Bank, the real reason was Washington's concerns about the shifting balance of power between the USA and China (Layne, 2018, p. 103). In any case, US efforts to prevent a China-led financial institution in Asia miserably failed. Indeed, despite USA's strong resistance and pressures, the AIIB was successfully launched and most US allies except Japan (e.g. Germany, Great Britain, France, Italy, Australia, Israel, South Korea, etc.) joined the AIIB as its founding members. In total, 57 countries all over the world participated in the AIIB as its founding members. After all, China's ability to attract widespread support for the creation of the AIIB was seen by Washington as a significant threat to America's global economic leadership (Layne, 2018, p. 102). By showing that Washington was not able to keep its allies onside in the face of Beijing's growing power, the establishment of the AIIB illustrated that US economic power in the world is declining whereas China's economic influence is increasing. To some observers, China's AIIB initiative and US failure to prevent its creation signaled that "the Sino-American balance of power now is tilting towards Beijing" (Layne, 2018, p. 103). **By the same token, Washington views China's initiative of "Made in China 2015" as a very serious challenge to US hegemony in the world. Since Made in China 2015 calls for achieving China's self-sufficiency through technology substitution and aims to transform China into a high-tech powerhouse that dominates advanced industries, the USA views it as a real threat to US technological leadership in the world** (Lukas, 2018). According to the US President Trump, the Made in China 2025 program unfairly disadvantages US companies because it involves Chinese government's subsidies and heavy investments in innovation and research as well as Beijing's policies to promote the forced technology transfer of US companies in exchange for obtaining access to the lucrative Chinese market (Hopewell, 2018). Therefore, he contends that "Made in China 2025" must be stopped (Landlke, 2018). Although the Trump Administration's policy of imposing tariffs on foreign steel affects not only China but also US allies like South Korea, its main goal is to fight China's industrial policy in high-tech manufacturing sectors such as artificial intelligence, aerospace, robotics, and energy-saving vehicles. As China's persistent economic growth brings it into direct competition with the USA, Trump has explicitly stated that the proposed US tariffs are indeed designed to impede the program of Made in China 2025 (Hopewell, 2018). Seen from Beijing, this sort of US policy appears as if Washington aimed to "prevent China (from) moving into the industries of the future so as to ensure continued American dominance of the most profitable sectors of the global economy, and the most strategically-significant technologies" (Rachman, 2018). Given that China is the most serious competitor to the USA in the twenty-first century, the contest over future industries and technologies underscores the fact that the Sino–US trade rivalry has important strategic implications (Rachman, 2018). **Since the end of the Second World War, the USA has undoubtedly been a global hegemon. With its preponderant military and economic strength, it has created a liberal international economic order and maintained it by promoting global free trade.** USA sudden turn to protectionism under the banner of "America First" in the Trump administration illustrates **"US fear" that its hegemony or Pax Americana is declining vis-à-vis China's growing power. It also demonstrates that the USA now seeks to deter China from overtaking its hegemony so as to keep US hegemony as long as possible.** Currently, the USA and China are waging a trade war. What is important to note here is that the driving force of the trade war between the world's two largest economies is more political than economic. That is to say**, as China's economic and political influence in the world vis-à-vis that of the USA increases, US fear about China's power also grows. Under these circumstances, Washington makes every effort to assert its global dominance by deterring China's challenge to its hegemony[13]. It is this sort of "US fear" about hegemonic power transition from Washington to Beijing that brought about US policies against the BRI, the AIIB, and Made in China 2015. The fear of hegemonic power transition is indeed a driving force for the US-launched trade war.** Understood this way**, the trade war between the USA and China may be a harbinger of a much larger-scale conflict between the two parties, since as PTT predicts, war is more likely to occur when the power gap between a declining hegemon and a rising challenger is getting closed. As China's economic, technological, military and political rise continues down the road, the USA will try to contain it in order to maintain its global hegemony. The obvious consequence of this seesaw game is the intensification of the Sino–US competition over global hegemony. The USA and China, the two most powerful states in the world, appear as if they were on a collision course. What this means is that so long as US fear about China's overtaking US hegemony persists, a similar type of conflict between the two hegemonic powers is likely to occur in the future even if the current trade war is over.**

This goes nuclear

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China is a different country today than it was in the time of Mao Zedong, and its arsenal is now better developed, which should induce caution in efforts to discern lessons from the earlier era. Nevertheless, this episode highlights several points with enduring relevance regarding the nuclear implications of conventional wars. China initiated a war in which it believed nuclear weapons would be irrelevant, despite the vast nuclear asymmetry between itself and its opponent. China then radically updated its assessment of the possibility of nuclear [End Page 89] attack to a degree bordering on paranoia once the conventional war did not go as expected. Everything the Soviets did—even sending representatives to negotiate, or not launching a nuclear strike on a day that the Chinese expected it—only fed the narrative among Chinese leaders that a nuclear attack was imminent, even though archival evidence now suggests that the Soviets never intended to follow through on their threat.132 Most worryingly, China prepared to use its nuclear weapons, even though it had to expect devastating retaliation and that merely the preparations to launch raised serious risks of accidental or unauthorized use. Fortunately, China's fears in this case eventually led it to de-escalate the crisis. It is an open question whether a similarly uneventful denouement would occur today in the event of a much larger-scale conventional war involving actual destruction of components of the country's nuclear arsenal and stakes radically more significant than uninhabited islands in the Ussuri River. //// Conclusion **Chinese nuclear escalation in the event of a conventional war with the United States is a significant risk**, although for reasons not fully surfaced in the existing debate. A U.S. conventional campaign would indeed pose a large, though not total, threat to China's nuclear arsenal. More important than the purely military-technical implications of the U.S. campaign, however, is what China is likely to believe the campaign signals about U.S. intentions in a world where conventional deterrence has just failed. **Reasonable Chinese fears that the United States might be attempting**

conventional counterforce, or considering or preparing for nuclear counterforce, could lead China to engage in limited nuclear escalation to gain military advantage or coercive leverage—despite China's no-first-use policy.

Causes extinction

Starr 14 (Steven Starr: Director, Clinical Laboratory Science Program at the U of Missouri. Senior scientist for Physicians for Social Responsibility. 5/30/14, "The Lethality of Nuclear Weapons: Nuclear War has No Winner", Centre for Research on Globalization, http://www.globalresearch.ca/the-lethality-of-nuclear-weapons-nuclear-war-has-no-winner/5385611 // DOA: 4/1/21)JDE

Paul Craig Roberts held top security clearances. He has repeatedly warned that a US-Russian nuclear war would wipe out the human race, along with all other complex forms of life. As a scientist with expert knowledge, I wish to echo and explain his warning.//// **Nuclear war has no winner**. Beginning in 2006, several of the world's leading climatologists (at Rutgers, UCLA, John Hopkins University, and the University of Colorado-Boulder) published a series of studies that evaluated the long-term environmental consequences of a nuclear war, including baseline scenarios fought with merely 1% of the explosive power in the US and/or Russian launch-ready nuclear arsenals. They concluded that **the consequences of even a "small" nuclear war would include catastrophic disruptions of global climate**[i] **and massive destruction of Earth's protective ozone layer**[ii]. These and more recent studies predict that **global agriculture would be so negatively affected by such a war, a global famine would result, which would cause up to 2 billion people to starve to death**. [iii]//// These peer-reviewed studies – which were analyzed by the best scientists in the world and found to be without error – also predict that **a war fought with less than half of US or Russian strategic nuclear weapons would destroy the human race**.[iv] In other words, a US-**Russian nuclear war would create such extreme long-term damage to the global environment that it would leave the Earth uninhabitable for humans and most animal forms of life**.//// A recent article in the Bulletin of the Atomic Scientists, "Self-assured destruction: The climate impacts of nuclear war",[v] begins by stating://// "A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, **an attack by either side could be suicidal, resulting in self-assured destruction**." In 2009, I wrote an article[vi] for the International Commission on Nuclear Non-proliferation and Disarmament that summarizes the findings of these studies. It explains that **nuclear firestorms would produce millions of tons of smoke, which would rise above cloud level and form a global stratospheric smoke layer that would rapidly encircle the Earth. The smoke layer would remain for at least a decade, and it would act to destroy the protective ozone layer** (vastly increasing the UV-B reaching Earth[vii]) as well as block warming sunlight, thus creating Ice Age weather conditions that would last 10 years or longer.//// Following a US-Russian nuclear war, **temperatures in the central US and Eurasia would fall below freezing every day for one to three years; the intense cold would completely eliminate growing seasons for a decade or longer. No crops could be grown, leading to a famine that would kill most humans and large animal populations.//// Electromagnetic pulse from high-altitude nuclear detonations would destroy the integrated circuits in all modern electronic devices**[viii], including **those in commercial nuclear power plants. Every nuclear reactor would almost instantly meltdown; every nuclear spent fuel pool** (which contain many times more radioactivity than found in the reactors) **would boil-off, releasing vast amounts of long-lived radioactivity. The fallout would make most of the US and Europe uninhabitable. Of course, the survivors of the nuclear war would be starving to death anyway**.////

C2) Food

Farmland declining substantially

Zulauf et al 24 (Carl Zulauf: Department of Agricultural, Environmental and Development Economics, Ohio State University. Gary Schnitkey, Jonathan Coppess and Nick Paulson: Department of Agricultural and Consumer Economics, .University of Illinois. 9/18/24, "Loss of US Farmland in the 21st Century: The National Perspective from the Census of Agriculture", farmdoc daily, https://farmdocdaily.illinois.edu/2024/09/loss-of-us-farmland-in-the-21st-century-the-national-perspective-from-the-census-of-agriculture.html // DOA: 3/27/25)JDE

One of the widely-watched variables tracked by the US Census of Agriculture is land in farms. This article is the first of two that examines changes in land in US farms between the Agricultural Censuses of 1997 and 2022. This quarter-century period is of interest because the 1996 Farm Bill enacted a fundamental change to US farm policy by eliminating acreage set aside programs that in various forms had existed since modern US farm support policy began in 1933, thus giving farmers, with a few exceptions, the freedom to decide what crops to plant and not plant**. Since this seminal change in US farm policy, land in US farms has declined by 74.7 million acres or -8%. By far, pastureland declined the most, accounting for 88% of the total decline. The other two major farmland categories also declined: woodland by -6% and cropland by -2%.** Land in Farms The 1997 Agricultural Census reported 955 million acres of land in US farms (see Figure 1). Cropland, defined as harvested plus abandoned and failed farmland, accounted for 34% of these acres, with woodland accounting for 8% and pastureland for 52%. These three categories totaled 94% of all land in US farms in 1997. Acre Change from 1997 to 2022 The 2022 Agricultural Census reported 880 million acres of land in US farms, or 75 million fewer acres than the 1997 Agricultural Census (see Figure 2). **Cropland and woodland declined by roughly -5 million acres while pastureland declined by -65 million acres**. Pastureland accounted for 88% of the total decline. Definitions are nearly identical between 1997 and 2022 (see Data Note 1). Therefore, a change in definition is not explaining the decline of land in US farms. Percent Change from 1997 to 2022 Since the number of acres varies substantially by land use category, it is important to also look at percent change in acres. **There were 8% fewer acres of land in US farms in 2022 than in 1997** (see Figure 3). Pastureland had the largest percent loss, -13%. Percent decline was roughly half as large for woodland, -6%; but only -2% for cropland. As a result of these differential percent changes between 1997 and 2022, cropland's share of land in farms increased from 34% to 36% while pastureland's share declined from 52% to 49%.

And insecurity is increasing

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Food insecurity increased in 2023, from 12.8 percent in 2022 to 13.5 percent in 2023, the U.S. Department of Agriculture's (USDA) latest food insecurity report finds. Food insecurity has risen two years in a row, reversing a downward trend; food insecurity rates had fallen to a two-decade low in 2021, when significant relief measures, such as expanded food assistance benefits and an expanded Child Tax Credit, were in place in response to the COVID-19 pandemic. The rise in food hardship shows that Congress should protect and improve upon policies that help families afford a healthy diet. **In 2023, 33.6 million adults and 13.8 million children lived in food-insecure households, compared to 30.8 million adults and 13.4 million children in 2022. More**

households had difficulty acquiring food due to lack of resources, as they experienced the impact of the expiration of pandemic-related benefits and high food prices in 2023.

Aff is key for two reasons

First, saving farmland

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U.S. Senators Jon Tester (D-MT) and Mike Rounds (R-SD) recently introduced a bill to bar foreign adversaries—namely, China, Iran, North Korea, and Russia—from buying American farmland. The act was triggered by concerns over Chinese investment in U.S. farmland, although China currently owns less than 1 percent of U.S. foreign-held farmland (Canadian investors hold the largest share -nearly one third - of U.S. foreign-held farmland). Preventing adversaries from investing in U.S. farmland is a necessary but insufficient action. **As the United States progresses with its net-zero transition, the public and private sectors should maximize land efficiency for renewable energy sources. If not appropriately managed, electricity production from renewables to meet decarbonization goals could drive up land use and land-cover change, threatening biodiversity and food security and challenging other environmental and social priorities.** According to Bloomberg, the United States currently uses eighty-one million acres to power its economy, about the size of Iowa and Missouri combined and covering roughly 4 percent of the contiguous United States. If **the U.S. government and energy industry fail to maximize land efficiency in the energy transition process, replacing less land-intensive fossil fuels with more land intensive clean energy sources will dramatically drive up demand for land. Intensified competition for land use risks exacerbating farmland loss.** For example, according to a 2020 Brookings report, electricity generation by wind and solar is at least ten times more land-intensive than coal- or natural gas-fired power plants. A different study, using data from 1,400 real-world observations covering nine electricity sources across 73 countries and 45 U.S. states, also showed that wind and solar are far more land intensive than fossil fuels, and biomass is the least land-efficient source of electricity. To achieve President Joe Biden's pledge to create a carbon-free economy by 2050**, the United States would need the equivalent of four additional South Dakotas to generate sufficient clean power to meet its electricity demand**, according to Princeton University estimates and Bloomberg analysis. The Biden administration has demonstrated a firm commitment to promoting clean energy development in the United States through landmark legislation, such as the infrastructure bill and the Inflation Reduction Act. Policy measures such as subsidies and tax credits make it more lucrative for owners of farms and ranches to lease their land for solar and wind farms in exchange for annual royalty payments. In parts of the country, such as Colorado, solar and wind farms have become the new cash crop, driving a frenzied land rush for renewable energy that has irrevocably altered the landscape. Converting prime agricultural land into clean energy farms has also raised significant concerns and encountered local resistance in rural communities in states such as Texas. **The United States needs a more land-efficient approach. That will require restoring American leadership in nuclear power research, development, and deployment. Researchers have found that nuclear power is by far the most land efficient for electricity generation compared to other energy sources: to generate the same amount of electricity, it needs twenty-seven times less land than coal, eighteen times less than**

hydropower plants, and thirty-four times less than solar. However, developing nuclear energy has not been a priority in the U.S. energy agenda for decades. Between 2013 and 2021, at least twelve [PDF] U.S. nuclear reactors were shut down (representing 9,436 megawatts of electricity generation capacity) due to rising security costs, competition from wind and solar, and power generated by cheap natural gas, leaving just 92 nuclear reactors operating nationwide. Not until the recent disruption in global energy markets triggered by Russia's invasion of Ukraine did the U.S. government step up support for its nuclear energy sector. The Biden administration has correctly recognized that maintaining and expanding nuclear power as a source of carbon-free electricity is crucial for reaching its climate commitment. To that end, the Biden administration recently offered $1.2 billion in aid to extend the life of distressed nuclear power plants. The funding is also available for recently closed plants, marking the first time such support has become available. The challenges of the energy transition to a clean and sustainable future extend beyond monetary costs. **The transition requires careful consideration of land use intensity between competing interests and demands. The U.S. government needs to revitalize the domestic nuclear power industry to drive the decarbonized American economy while protecting farmland and food security.**

Nuke energy is best for land conservation

Brook and Bradshaw 14 (Barry W. Brook The Environment Institute and School of Earth and Environmental Sciences, The University of Adelaide, Adelaide, South Australia, 5005 Australia. Corey J. A. Bradshaw The Environment Institute and School of Earth and Environmental Sciences, The University of Adelaide, Adelaide, South Australia, 5005 Australia. Dec 9 2014, "Key role for nuclear energy in global biodiversity conservation", Society for Conservation Biology, https://conbio.onlinelibrary.wiley.com/doi/10.1111/cobi.12433, DOA 3/10/25) RK

Future of Energy Production **Fossil fuels have supplied most of society's energy demand since the Industrial Revolution. Yet with the mounting problems of climate change, pollution, security, and dwindling supplies, we now face the need for a near-total transformation of the world's energy systems**. We have provided a short critical overview of the challenges and trade-offs in—and **potential solutions for**—**completely decarbonizing our energy supplies while meeting the growing need for increased prosperity** in the developing world. **Of the limited options available, next-generation nuclear power and related technologies, based on modular systems with full fuel recycling and inherent safety, hold substantial yet largely unrecognized prospects for being a principal cure for our fossil-fuel addiction, yet nuclear power still has an undeservedly poor reputation in the environmental community. Solving the energy problem** has broader implications: it **will not only help mitigate climate change, it will also avoid destructive use of natural and agricultural landscapes for biofuels and diffuse energy generation and thus allow societies to reduce their environmental footprint by sparing land and resources for biodiversity conservation**. Based on an objective and transparent analysis of our sustainable energy choices, we have come to the evidence-based conclusion that **nuclear energy is a good option for biodiversity conservation (and society in general)** and that other alternatives to fossil fuels should be subjected to the same cost–benefit analyses (in terms of biodiversity and climate outcomes, as well as sociopolitical imperatives) before accepting or dismissing them. We conclude that **large-scale nuclear power—as a route to an electrified, oil-, gas- and coal-free economy—offers a positive way forward because it provides a low-risk pathway to eliminating the fossil-fuel dependencies, global energy poverty, and wealth imbalances that rank among the major forces driving today's biodiversity crisis. At the very least, nuclear power needs to be considered seriously, alongside renewable sources of energy such as wind and solar power, in any robust sustainable energy mix for the future.**

Second, nuclear technologies

Radiation solves food insecurity

Chen 21 (About the Author: Dr. Janet Chen is a Contractor in the Bureau of International Security and Nonproliferation, and was an AAAS (American Association for the Advancement of Science) Science and Technology Policy Fellow. Nov 24 2021, "Peaceful Uses of Nuclear Science and Technology in Food and Agriculture", US Department of State, https://2021-2025.state.gov/peaceful-uses-of-nuclear-science-and-technology-in-food-and-agriculture/#:~:text=Nuclear%20science%20and%20technology%20play,been%20proven%20safe%20and%20effective., DOA 3/10/25) RK

Nuclear science and technology play a key role in helping improve global access to a safe, secure, and high-quality food supply. Scientists and farmers are continually developing new ways to cultivate crops and raise livestock using nuclear technologies—technologies which have been proven safe and effective. When it comes to agriculture, **nuclear techniques can make an exponential difference before seeds are even planted. One such technique facilitates the breeding of hardier plant varieties. This is done by exposing them to radiation and selecting mutations that make them more likely to survive and flourish; for example, by better withstanding drought conditions or providing higher levels of nutrition. These plants have been proven to be completely safe and free from lingering radiation. In Indonesia, for example, more than 35 new varieties of crops, including soybeans and rice, have been modified to produce more yield, even when they are grown in unfavorable climates. Higher quality crops and produce—like the popular Rio Red grapefruit**, which was produced by the Texas A&M University Citrus Center—**can also be developed using radiation-induced plant breeding.** IAEA fellows from different countries in training under the guidance of the IAEA Plant Breeding Unit at Seibersdorf, Austria. (Photo: D.Calma/IAEA) **Once crops start to grow, farmers use other techniques to maximize their yield. For example, tracing isotopes in water, fertilizer, and soil can reveal whether these resources are being used efficiently rather than lost to the environment, such as through runoff or evaporation. In Kenya, farmers successfully converted to drip irrigation after analyzing water use efficiency with such nuclear techniques, thereby reducing the amount of water needed to produce their crops. Sometimes, nuclear techniques aren't about improving growth, but about stopping the growth of harmful organisms**. The radiation-based Sterile Insect Technique helps reduce populations of pests that damage crops or livestock. **In Mexico, the Moscafrut Fruit Fly Facility produces hundreds of millions of sterile fruit flies each week by irradiating them and then releasing the sterile flies into local citrus and mango crops. There, the sterile flies mate with local pests, thus reducing the number of future offspring.** Similarly, in the Western Cape of South Africa, sterilized false codling moths are introduced, reducing the amount of damage these pests inflict on citrus production. **This same Sterile Insect Technique can also be used to reduce other pests, such as mosquitos and tsetse flies, that plague livestock.** Maasia pastoralists preparing their maize harvest in Narok, Kenya. (Photo: Ami Vitale/FAO) **Even after crops are harvested, nuclear science and technology have a key role in improving food abundance and quality. For years, food irradiation has been used to improve food safety and increase the shelf life of produce. It does so by killing microorganisms and pests that cause illness and rot, all without leaving any residual radiation behind.** Meanwhile, analyzing the isotope composition of produce can authenticate a product's origin and prevent food fraud, especially

when it comes to highly valued foods, like regional coffee. Similarly, watered-down or polluted foods, such as fresh vegetable oil that has been mixed with reused vegetable oil, can be monitored by measuring the isotope composition. There are other ways nuclear science and technology help protect animal livestock. For example, the Food and Agriculture Organization and International Atomic Energy Agency partnered to establish a network of veterinary laboratories, called VETLAB, composed of labs across Asia and Africa. **VETLAB identifies and tracks the spread of diseases that threaten livestock using nuclear-derived diagnostic techniques, thus helping farmers contain these diseases as soon as possible. Nuclear-derived techniques are also used to validate vaccines that are used to combat animal disease. Oceans serve as another vital source of food, and, just as in agriculture, nuclear science and technology can help ensure that the bountiful supply of food provided by the oceans is high-quality and safe to consume. Nuclear techniques are also used to identify the extent and sources of pollution, thereby enabling better protection of critical feeding grounds for fish. Nuclear science and technology can and do play a key role in providing humanity with safer, higher quality, and more bountiful food.** Through these techniques and many others, nuclear science and technology can and do play a key role in providing humanity with safer, higher quality, and more bountiful food. Access to these important tools is facilitated by the Nuclear Non-Proliferation Treaty (NPT). Parties to the Treaty have access to these technologies through the International Atomic Energy Agency (IAEA), which serves as a leader in the development and delivery of several of these nuclear applications. The United States is proud to help IAEA Member States address food security issues through increased access to nuclear technologies and has contributed more than $132 million through the IAEA's Peaceful Uses Initiative (PUI) since it was first established in 2010. **Through further collaboration, and thanks to innovations in nuclear science and technology, we can all do our part to fight hunger across the globe.**

This relies on the aff

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Nuclear power comes from the energy that is released in the process of nuclear fission. Most nuclear power plants use enriched uranium as their fuel to produce electricity. This fuel contains greater amounts of a certain kind (or isotope) of uranium known as U-235. Its atoms are more easily split apart in nuclear reactors. **In fission, the nuclear fuel is placed in a nuclear reactor core and the atoms making up the fuel are broken into pieces, releasing energy. The neutrons that are released by one atomic fission go on to fission other nuclei, triggering a chain reaction that produces heat, radiation, and radioactive waste products.**

The impact is food wars

Lack of Ag land preservation poses an existential risk to US agriculture and society

Freedgood et al 20 Julia Freedgood, Mitch Hunter, Jennifer Dempsey, Ann Sorenson 2020, "Farms Under Threat: The State of the States," American Farmland Trust, 2020, https://s30428.pcdn.co/wp-content/uploads/sites/2/2020/09/AFT_FUT_StateoftheStates_rev.pdf // DOA 7/3/2022 BRP

American farmland provides food security, economic prosperity, and environmental quality. Yet all of these benefits are threatened by 21st century trends, including poorly planned development, weakening agricultural viability, an aging farm population, and climate change. On their own, each of these threats is troubling; together they point to the need for immediate public action. Food Security Food is affordable to most people in the United States, ranking third behind housing and transportation in typical household expenditures.34 Indeed, in 2018, Americans spent less than 10 percent of their disposable incomes on food.35 Still 11.1 percent (14.3 million) of U.S. households were food insecure in 2018 and households with children had a substantially higher rate of food insecurity (13.9 percent) than those without.36 **Poorly planned housing, energy, and transportation development threaten to destroy the land we use to grow our food—especially fruits, vegetables, and nuts.** Yet while agriculture faces increasing pressures and challenges, consumers' expectations for plentiful, high-quality food are increasing. This includes demand for environmentally, ethically, and locally sourced products identified as humane, ecologically friendly, fair trade, organic, or GMO free.37 Part of this trend is toward "local" food, a sector expanding so quickly it is catching up to decades of strong growth in demand for organics.38 We define "local" broadly to mean short supply chains within states or regions where farmers often perform value-added functions, from storing and packaging, to marketing, distribution, and promotion.39 Only partly based on geography, our definition is values-based, emphasizing transparency, ecological farming practices, and connection between growers and eaters. Including direct-to-consumer (DTC) and intermediated sales,5 most local food is produced on small farms near metropolitan areas,40 farms that our analyses show are increasingly threatened. DTC sales more than tripled since 2002,41 indicating that consumer appetite for local food keeps growing. Two thirds of DTC sales come from farms in metro counties, and more than 80 percent of these farms sell all their DTC products within a 100-mile radius of the farm.42 But intermediated markets are driving the sector's rapid growth, reporting more than three times the sales of DTC markets in 201742 as institutional demand increased from schools, hospitals, and restaurants. Meeting demand from these markets will require more land, and more farmers will have to balance the challenges and opportunities of farming in metro and adjacent communities. These areas supply nearly 60 percent of total farm market value for U.S. farm production: 90 percent of fruits, nuts, and berries; 81 percent of vegetables and melons; 66 percent of dairy; and 55 percent of eggs and poultry. **As** low-density residential **development expands across the countryside, this land—and the bounty of fresh food and other products it supports—are especially at risk of conversion. Furthermore, many of these farms are small with low profit margins, thus especially vulnerable to foreign competition as well as competition for land.**44 Indeed, since the 1990s, imports have risen 12 to 34 percent for fruits and 10 to 34 percent for vegetables. **To sustain domestic food supply and increase our ability to produce food locally, we must address the 21st century threats to our most productive farmland.** It is shortsighted to rely on a small handful of states to supply so much of the food we eat—especially our fruits and vegetables. It takes regionally diverse and sometimes redundant systems to support the growing and increasingly complex public demands from agriculture. To ensure resiliency as well as prosperity in our food and farming systems, each state needs to secure a critical mass of high-quality farmland, support agricultural viability and a new generation of farmers and ranchers, and promote regenerative farming practices to build healthy soil and combat climate change.

US ag k2 global food supply

Heslin et al 20 (Alison Heslin, Michael Puma, Philippe Marchland. 1Center for Climate Systems Research, Earth Institute, Columbia University, New York, NY, United States. 2NASA Goddard Institute for Space Studies, New York, NY, United States. 3Institut de Recherche sur les Forêts, Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda, QC, Canada. 3/20/20, "Simulating the Cascading Effects of an Extreme Agricultural Production Shock: Global Implications of a Contemporary US Dust Bowl Event", Frontiers in Sustainable Food Systems, https://www.frontiersin.org/articles/10.3389/fsufs.2020.00026/full //. DOA: 7/19/22)JDE

Risks for Global Food Security Following World War II, **the United States shaped the postwar international food order, becoming a central player in international food aid and trade** (Friedmann, 1982). Over the second half of the twentieth century, through the influence of US policies regarding grain exports, the direction of trade, particularly of grains, shifted to flow toward developing countries. Export subsidies created new markets for US agricultural goods and substantially increased the amount of food imports globally, most dramatically global imports of wheat from the United States and other developed nations (Winders, 2009). While the policies governing agricultural trade have changed over time, **the United States remains central to international food trade, especially for staple commodities. Because of the interconnected nature of the global food system and the role of the United States as a major exporter of agricultural products, disruptions to US production can have far-reaching impacts. The United States is a major exporter of staple foods, accounting for**

around 37, 17, and 16% of internationally traded soy, maize, and wheat, respectively, in 2013 (FAOSTAT, 2019c). From 2012 to 2016, the United States exported wheat and wheat products to 174 different countries (Figure 1) and maize and maize products to 162 countries over the same period (FAOSTAT, 2019b). Using the 2009 cereal trade network, Marchand et al. (2016) simulate the effects of production shocks in different origin countries. They found that the **most substantial supply declines in trade partners are caused by shocks that induce a production drop in the United States.** US production of crops—particularly staple crops of wheat, maize, and soy—remains heavily centered in the Great Plains region (USDA, 2016). This region has experienced periodic drought throughout the twentieth century to present, including severe droughts in the 1950s, 1988, and 2012 (Rosenzweig et al., 2001; Schubert et al., 2004a; Hoerling et al., 2012). Agricultural production in the Great Plains shifted over the twentieth century to rely heavily on irrigation from the Ogallala aquifer, buffering the impacts of droughts on agricultural production since the Dust Bowl (Hornbeck and Keskin, 2014). However, variability in temperature and rainfall, both droughts and floods, as well as the related spread of agricultural pests and diseases, continues to affect agricultural production (Rosenzweig et al., 2001). Additionally, aquifer overexploitation occurring in the Great Plains, particularly during times of drought, threatens the ability of groundwater to continue buffering the effects of drought on American agricultural production (Scanlon et al., 2012). Given the central role of the United States in the international agricultural trade, the consequences of a large-scale production shock would extend far beyond US consumption and food security. Quantitative studies that assess the implications of specific natural disasters on food security via food production and trade are particularly useful, yet scarce (exceptions include Puma et al., 2015; Gephart et al., 2016, and Suweis et al., 2015). Assessing the potential impact of extreme weather events not only on food production, but also on the global trade system, is critical for understanding the far-reaching effects of production shocks in a globalized economy. This article aims to contribute to the nascent literature connecting climate shocks to food supply and trade through modeling the changes in international trade and reserves in response to a Dust Bowl–sized shock on contemporary US production.

Causes instability and nuke war

Porteous 20 (Huon Porteous, Honors Student in Philosophy at the Australian National University, President of the Local Effective Altruism Society, "Food Insecurity", Commission for the Human Future, Human Future, DOP: 2020 https://www.humanfuture.net/food-insecurity/ // DOA: 12/2/24)ops

Widespread and **consistent access to food makes it possible to live in a stable society**. **Without this** guarantee, the incidence of **political instability and war tends to increase**. There is an **emerging body of evidence that food crises can initiate political instability**5,6,7, **increasing the risk of conflict through various means**, such as a decay in the ability of a state to govern its people.8 In one recent example, **the severe drought that struck Syria between 2007 and 2010 contributed to massive crop failures that undermined livelihoods and forced 1.5 million people from rural areas into cities, exacerbating existing social stresses.**9 Though the drought was clearly not the primary cause of the Syrian Civil War, it contributed to a regional refugee crisis that spilt over into Europe, and had profound effects on the politics of countries across the region, which are still playing out today. **Even minor shocks to the food supply** can **have severe consequences**. **From 2006 to 2008, large maize-exporting countries like Brazil, Argentina and Ukraine imposed export bans, which together with droughts and rising oil prices precipitated a price spike of 83%, causing economic instability and social unrest across much of the developing world.**10 Such price volatility in food disproportionately affects the approximately 800 million people living in extreme poverty.11 Political instability is most dangerous when it occurs in countries with access to weapons of mass destruction. **Should a food crisis arise in one of these countries occur that results in civil war and governmental collapse, these weapons could end up in the hands of a group that intends to use them maliciously as an act of terror.** The fact that Pakistan (which has access to nuclear bombs) and Iran (considered capable of producing bioweapons) are ranked the 25th and 44th most fragile states in the world is cause for concern that food insecurity in those regions could have severe consequences.12 Risks of total food production loss When Indonesia's Mount Tambora erupted in 1815, dark volcanic dust and reflective sulphate aerosols thrust into the skies are thought to have lowered global temperatures by 1°C. The United States experienced snowfall in summertime and China, North America and Europe suffered crop failures and ensuing famines.13 We could easily see such effects again in future after a sufficiently large volcanic eruption or even a small-scale nuclear exchange. There is some evidence from climate science that indicates it would take the detonation of only 50-100 nuclear weapons in populated cities to lift millions of tonnes of combustible material into the atmosphere and trigger what is known as nuclear winter, sharply lowering global temperatures over a decade.14,15 Summer temperatures would drop by more than 20°C over much of North America and Asia, and would stay continually below freezing for several years in the mid-latitudes, where most of our food is produced. Such drastic

changes to the climate have the potential to bring food production to a near-complete halt, leaving billions at risk of starvation. While we'd lose almost all of our regular food production, it's likely there would be some food production via cold-tolerant crops and alternative foods such as seaweed and algae. Some human populations would likely survive, though in a vastly different world. The ability of surviving populations to recover an equivalent level of civilization is unclear.16,17 (See also our page on risks from nuclear war.) Catastrophes such as this that result in (near or) total food production loss pose the most severe risks to global food production. The likelihood of such a total food production loss scenario is dominated by the anthropogenic risk of nuclear winter, with the natural risks like supervolcanoes or asteroid impacts having similar effects but being far less likely. Estimates of a total food production loss scenario vary between 1-10% this century, with a risk of human extinction of approximately 0.1%. Risks of significant food production loss Risks of significant food production loss are those that could result in a 3-30% reduction in our food production capacity. While this might sound much less extreme by comparison, keep in mind that all disasters in living memory have been less than a 3% loss. Based on current research18, there is an approximately 80% chance of significant food production loss this century. Sources of such risks include: Global warming resulting in multiple bread-basket failure19; Catastrophic crop disease to staple crops – the grass family poaceae (which includes wheat, rye, and barley) alone contributes 50% of the world's calories20,21; A severe pandemic – pandemics can impact global trade systems, limit movement of agricultural workers, and decrease affordability of food. The ebola virus resulted in a significant reduction in regional food security22, while COVID 19 had impacts on global trade and buying power of global poor.23 Loss of pollinators – in Europe, pollination services represents some 12% of food production, mainly by increasing the yield of fruits, vegetables and nuts.24 Global agricultural losses are estimated at between 3-8% in the event insect pollination were to fail.25 There are also risks of significant food production loss that would occur via failures of the physical infrastructure needed to produce food. We rely on a complex network of interlinked infrastructure – e.g. electricity, fossil fuels, water, telecommunication, etc – to run the industrial systems which provide the goods and services we consume daily. Food production, which has become increasingly industrialized since the 20th century, is highly dependent on the proper functioning of these systems. This is exemplified by modern agriculture's reliance on synthetic fertilizers. An estimated 40-50% of the world's population survives on food produced from fertilizers made through the Haber-Bosch process26, which requires gas (fossil fuel) and electrical infrastructure as well as transportation networks to distribute. Infrastructure is vulnerable to various low probability high impact events such as High Altitude Magnetic Pulse (HEMP)27, space weather (solar storms or coronal mass ejections)28,29,30, pandemics31, and coordinated cyber-attacks.32 Such events could result in major impacts on food systems.33 Conclusion **Food insecurity is a global catastrophic risk factor increasing the likelihood of** other catastrophes occurring (e.g., **nuclear war) or decreasing our resilience to catastrophes. Even if no catastrophe results from prolonged food insecurity, such significant food system failures would be robustly bad, potentially causing hundreds of millions to die.** The complex nature of food security and the highly interdisciplinary nature of the problem, makes it a difficult problem to address.

Hayes 18 continues (Peter Hayes is Director of the Nautilus Institute and Honorary Professor at the Centre for International Security Studies at the University of Sydney. "NON-STATE TERRORISM AND INADVERTENT NUCLEAR WAR," *Nautilus Institute*, 1/18/18, https://nautilus.org/napsnet/napsnet-special-reports/non-state-terrorism-and-inadvertent-nuclear-war/) dwc 18

Conclusion We now move to our conclusion. Nuclear-armed states can place themselves on the edge of nuclear war by a combination of threatening force deployments and threat rhetoric. Statements by US and North Korea's leaders and supporting amplification by state and private media to present just such a lethal combination. Many observers have observed that the risk of war and nuclear war, in Korea and globally, have increased in the last few years—although no-one can say with authority by how much and exactly for what reasons.//// However, states are restrained in their actual decisions to escalate to conflict and/or nuclear war by conventional deterrence, vital national interests, and other institutional and political restraints, both domestic and international. It is not easy, in the real world, or even in fiction, to start nuclear wars.[19] Rhetorical threats are standard fare in realist and constructivist accounts of inter-state nuclear deterrence, compellence, and reassurance, and are not cause for alarm per se. States will manage the risk in each of the threat relationships with other nuclear armed states to stay back from the brink, let alone go over it, as they have in the past. //// This argument was powerful and to many, persuasive during the Cold War although it does not deny the hair-raising risks taken by nuclear armed states during this period. Today, the multi-polarity of nine nuclear weapons states interacting in a four-tiered nuclear threat system means that the practice of sustaining nuclear threat and preparing for nuclear war is no longer merely complicated, but is now enormously complex in ways that may exceed the capacity of some and perhaps all states to manage, even without the emergence of a fifth tier of non-state actors to add further unpredictability to how this system works in practice. //// The possibility that **non-state actors** may **attack without advance warning** as to the time, place, and angle of attack presents another layer of uncertainty to this complexity as to how inter-state nuclear war may break out. That is, non-state actors with nuclear weapons or threat goals and capacities do not seek the same goals, will not use the same control systems, **and** will **use** radically **different organizational**

procedures and systems to deliver on their threats compared with nuclear armed states. If used tactically for immediate terrorist effect, a non-state **nuclear terrorist could** violently attack nuclear facilities, exploiting any number of vulnerabilities in fuel cycle facility security, or **use actual nuclear** materials and even **warheads against** military or civilian **targets**. If a persistent, strategically oriented nuclear terrorist succeed in gaining credible nuclear threat capacities, it might take hostage one or more states or cities.//// If such an event coincides with already high levels of tension and even military collisions between the non-nuclear forces of nuclear armed states, then a non-state nuclear terrorist attack could **impel a nuclear** armed **state to escalate** its threat or even military actions **against other states, in the belief** that **this** targeted **state** may have **sponsored the non-state attack**, or was simply the source of the attack, whatever the declared identity of the attacking non-state entity. **This**outcome could **trigger** these states to go onto one or more of the pathways to inadvertent **nuclear war,** especially if the terrorist attack was on a high value and high risk nuclear facility or involved the seizure and/or use of fissile material. //// Some experts dismiss this possibility as so remote as to be not worth worrying about. Yet the history of nuclear terrorism globally and in the Northeast Asian region suggests otherwise. Using the sand castle metaphor, once built on the high tide line, sand castles may withstand the wind but eventually succumb to the tide once it reaches the castle—at least once, usually twice a day. Also, theories of organizational and technological failure point to the coincidence of multiple, relatively insignificant driving events that interact or accumulate in ways that lead the "metasystem" to fail, even if each individual component of a system works perfectly. Thus, the potential catalytic effect of a nuclear terrorist incident is not that it would of itself lead to a sudden inter-state nuclear war; but that at a time of crisis **when alert levels are** already **high**, when control systems on nuclear forces have already shifted from primary emphasis on negative to positive control, when **decision making is** already **stressed**, when **the potential for miscalc**ulation **is** already **high** due to shows of force indicating that first-use is nigh, when **rhetorical threats promising annihilation** on the one hand, or collapse of morale and weakness on the other **invite counter-vailing threats by nuclear adversaries or their allies** to gain the upper hand **in the "contest of resolve**," and when organizational cybernetics may be in play such that purposeful actions are implemented differently than intended, **then a terrorist nuclear attack** may **shift** a coincident combination of some or all of these factors **to a threshold level where they** collectively **lead to** a **first-use decision** by one or more nuclear-armed states. If the terrorist attack is timed or happens to coincide with high levels of inter-state tension involving nuclear-armed states, then some or all of these tendencies will likely be in play anyway—precisely the concern of those who posit pathways to inadvertent nuclear war as outlined in section 2 above. //// The critical question is, just as a catalyst breaks some bonds and lets other bonds form, reducing the energy cost and time taken to achieve a chemical reaction, how would a nuclear terrorist attack at time of nuclear charged inter-state tension potentially shift the way that nuclear threat is projected and perceived in a four or five-way nuclear-prone conflict, and how might it affect the potential pathways to inadvertent nuclear war in such a system?//// Such a pervasive incremental effect is shown in Figure 6 below. Figure 6: Impact of a Terrorist Nuclear Threat or Attack on Interstate Nuclear Use Control //// Any one or indeed all of these starting nuclear control profiles may be disputed, as might the control profile at the end of the response arrow. (In Figure 6, each nuclear state responds to a terrorist nuclear attack by loosening or abandoning negative controls against unauthorized use, and shifts towards reliance mostly on positive procedural controls biased towards use). But each nuclear armed state will make its moves in response to the posited terrorist nuclear attack partly in response to its expectations as to how other nuclear armed states will perceive and respond to these moves, as well as their perception that an enemy state may have sponsored a terrorist nuclear attack—and considered together, it is obvious that they may not share a common image of the other states' motivations and actions in this response, leading to cumulative potential for misinterpretation and rapid subsequent action, reaction, and escalation.

Causes extinction per Starr.

Thus, we affirm.

REBUTTAL:

They have just not read uq- which means regardless if you affirm or negate, we both remain in cap society, that means you vote for the side that creates the best methods of relief of climate or economic inequality

1980s hurts their prob and tf- either real change beyond this academic space never happens or we have to wait another 50 years for incremental change to happen— if they've conceded our uq on food, we'll be extinct by then its prob try or die

On ROTB

Counter ROTB: Vote for the team with the best weighed offense to answer the current resolution

1. Ground – enables debaters to define a niche ROTB without any ground for the opposing team. This destroys ability to understand different approaches to the problem, killing education. It also decks fairness – impossible for us to debate them b/c we have no ground; they say we must reject current structures, we can't do that as a squo.

2. Predictability — Anchoring debate in resolution centers research around key clashes which means more nuanced and in-depth discussions which links into education. Comparatively, their model of debate makes it impossible to prepare for, destroying clash

They're going to say they have resolutional links – it doesn't matter – their ROTB allows them to warp the resolution into such a narrow version of itself that it's utterly unpredictable and there's no ground for the neg

On their ROTB

1. None of their ev says mental conceptions solve
2. T: thinking youve solved problems by mentally concieving of a better future creates hollow hope where ppl think theyve solved the problem but havent and precludes real change

On their method

1. No reason ballot is key – we are also engaging in debates abt capitalism which is all their McLaren ev requires – if introducing it first is all that matters pf is reduced to a coinflip where the 1st speaking team always win which collapses the activity and is a prereq to reading the K

2. Theres no tangible anti cap movemenyts they can name due to the K- they said its been read since the 80s– they tell you even the smallest resistance is good but if they can't name tangible change they don't access their impacts off cap

On cap

1. NU- Cap is inevitable

Waldman-Brown 18 (Anna Waldman-Brown is a PhD student in political economy at MIT's Department of Urban Studies and Planning, where she researches emerging technologies, manufacturing systems, and the roots of rising inequality. She is a graduate of the Technology and Policy Program and a Fulbright fellow. She holds a bachelor's of science in physics and writing and humanistic studies from MIT. All ideas and interpretations are heavily indebted to Professors Berger and Piore., Feb 3 2018, "Why is American Capitalism so Resilient?", Medium, https://medium.com/@Annawab/why-is-american-capitalism-so-resilient-e3790058efce, DOA 2/22/23) RK

Nonetheless, policies have not particularly changed since Occupy and, according to many metrics, **American capitalism is thriving. The global economy has mostly rebounded — despite the banking crisis, subsequent public disillusionment, and a populist backlash against globalization**. Even though Trump's administration hopes to restrict international trade, their push to de-regulate the national economy is solidly in-line with liberal principles. Today, **American unemployment is remarkably low and GDP growth is nearly back to pre-2008 levels.** The romantic conception of the entrepreneur is more popular than ever among young people worldwide. Drawing from various paradigms of economic thought, I will argue that **the resilience of capitalism has its roots in the flexibility of capitalist institutions, the continued potential for technological innovation, and the prevalence of sociological elements that favor the free market — including a lack of proletarian class consciousness and the renewal of the capitalist mythos**. Definitions of Capitalism First, it is important to clarify what I mean by "**capitalism**," as each political economy paradigm has a somewhat different definition. I will generally employ Polanyi's definition for this essay, since it **is** neutral and succinct: Polanyi (1944) does not define capitalism per se but rather **the "self-regulating market," which "demands nothing less than the institutional separation of society into an economic and political sphere." Capitalism maintains these two spheres as distinct and critical pillars of society — no matter how they may overlap at times. Marx saw capitalism as an inevitable, historical stage of societal organization which, as it progresses, forces all of society into two distinct classes: the bourgeoisie with the means of production, and the proletariat that has nothing to sell but its labor**. The forces of production that form the technological base of society will naturally cause capitalism to disintegrate into class warfare, and then the government will take over the means of production and share profits among all the workers. Eventually, **Marx believed that this government-controlled socialism will transition into communism, in which everyone will be free to pursue their own desires in a sort of post-scarcity world**. While the Marxist defines capitalism by its oppressive features, **the liberal paradigm** (economically liberal, that is, not socially liberal) **defines capitalism by the freedom it engenders through the existence of a free market. The liberal tends to see capitalism as a form of societal organization that comes instinctually to all humans who enter into society**: Keynes (though not a typical liberal) describes the "essential characteristic of Capitalism" as "the dependence upon an intense appeal to the money-making and money-loving instincts of individuals" (Keynes 1932). Friedman (1962) defines capitalism from an outside standpoint as "a society organized through voluntary exchange." He contrasts capitalism with the involuntary exchange necessitated by communist societies, which control (or attempt to control) all commercial activity through centralized organization — entirely merging the economic and political spheres. It is difficult to pin down a single explanation of capitalism for the cultural/sociological paradigm, though the various definitions that exist all utilize the reference frame of society as a whole — and view capitalism as an ethos, beyond Marx's distinct social classes or the mere existence of a free market. Weber (1930) describes how some pre-industrial civilizations had substantial free markets, but the fundamental "spirit of capitalism" did not come about until the Calvinists developed the idea of the "calling": "an obligation which the individual is supposed to feel and does feel towards the content of his professional activity." **Capitalism provides a spectrum of**

varying degrees of market control, whereas communist nations must maintain all commercial activities under control of the state — and thus only the state is to blame in case of failures. It is easy to tell when a communist nation is no longer purely communist: it develops a widely-accepted free market, such as "communism with Chinese characteristics." On the other hand, must a capitalist nation completely abolish its free market in order to become non-capitalist? Soviet Russia had a thriving black market. **Even the smallest, most highly-regulated market could allow for aspects of capitalist society to develop — as long as the market maintains some degree of autonomy. In the absence of exogenous forces, the liberal believes that the resilience of capitalism lies in its ability to perpetually maintain its equilibrium — in any time or place, regardless of social circumstances.** Liberals insist that **free markets emerge from human society — somewhat analogous to the emergence of language — with an ability to automatically equilibrate** through Adam Smith's conception of the "invisible hand." **Since liberals believe all humans to be rational and profit-seeking, the combination of many individuals in selfish pursuit of their own desires — combined with a state that can enforce property rights — will automatically create a free market that can peacefully coordinate prices based upon supply and demand**. Hayek (1948) is so enamored with this emergent system that he claims that if the price mechanism "were the result of deliberate human design…this mechanism would have been acclaimed as one of the greatest triumphs of the human mind." The liberal insists that **capitalism self-regulates when left to its own devices**; Friedman spends many pages celebrating the free market's efficacy in balancing itself, and the hazards (both societal and economic) of government intervention. Mutability of Capitalist Structures Against the advice of the liberal, most capitalist societies have indulged in substantial interventionism. The liberal would claim that this intervention only becomes necessary when societies are afraid to allow their free markets the freedom they require to self-stabilize — yet Keynes, Marx, and the sociological paradigm provide compelling counter-arguments. Keynes states that capitalism is inherently unstable due to people's irrational "animal spirits," while the sociologists note how shifts in how people create and define meaning may lead to a breakdown of capitalist society. Even stalwart supporters of the free market, such as Fed chairman Ben Bernanke, believe that the government must sometimes intervene in the economy to prevent disaster. As shown by the 2008 collapse, advanced capitalist societies are still prone to irrational panics and resulting crises — even though every individual actor, as Bernanke claims, may have acted rationally. In such a case, the only solution is for the government to inject money into the system to stall collapse. A staunch liberal might argue that the 2008 collapse only came about through government interference in the first place — but the combination of mismanagement and irresponsible sub-prime loans leading up to the crash does not seem to support this argument. Following the wide range of socioeconomic models that can still be defined as "capitalism," **one of the reasons why capitalism has proved so resilient is its ability to take different forms to adapt to different contexts. Scandinavia, for example, has high public spending and many socialized services, and yet maintains a free market economy across other sectors**. Although a staunch liberal such as Friedman would protest that the Scandinavian system does not allow for enough market freedoms, **most economists would acknowledge that Scandinavia has remained fundamentally capitalist in spite of expansive government interference**; Polanyi would even argue that **Scandinavia's relative stability and happiness is a direct result of government restrictions on the free market. The wide variety of potential capitalist structures also allows governments considerable flexibility in mitigating financial crises — thus increasing both the resilience and popularity of capitalism**. While the liberal paradigm views the stability of capitalism as an endogenous feature of the free market, the sociological paradigm attributes this stability to the existence of non-market forces — which can promote spending, cause inflation or deflation, protect society through regulations, and affect the rate of societal change. **A capitalist society in crisis can re-stabilize its economy through substantial interference in the free market without destroying the fundamental tenets of capitalism**. Polanyi (1944) points out that the rate at which social change occurs can be just as important as the change itself — "but while the latter frequently does not depend upon our volition, it is the rate at which we allow change to take place which may well depend upon us." Thus, Polanyi celebrates England's process of slowing down the social degradation caused by enclosures in the 17th century. In sharp contrast to the liberal's self-regulating and fundamentally-beneficial system, Polanyi insists that the free market will actively destroy society if left to its own devices. Polanyi uses anthropological examples of pre-industrial societies to demonstrate the fact that humans are not, in fact, economically rational and naturally profit-seeking — the root cause of the liberal theory of self-regulating markets. Following this revelation, Polanyi uses the history of industrialization in England to explain how "the road to the free market was opened and kept open by an enormous increase in continuous, centrally organized and controlled interventionism." Polanyi then claims that free markets not only require continuous intervention, but that society itself must develop protections against the overreach of the market. Instead of the liberal view of free markets emerging naturally from society, Polanyi (along with Weber) asserts that the free market actively re-shapes society in its own image. This "market society" treats land, labor, and money as if they were "fictitious commodities" to be sold — thus separating land from the environment, labor from human beings, and money from the market as a whole. If left unchecked, Polanyi — like Marx — insists that the automatic forces of the market mechanism "would result in the demolition of society" (Polanyi 1944). Labor unions can provide some counterweight against the

dehumanizing forces of capitalism, allowing workers to collectively bargain for better rights and thus ensure their humanity apart from the "fictitious commodity" of labor. Nonetheless, only a strong government can protect land and money, and enforce the rights won by labor unions. While Marx views governments as an extension of bourgeois power and thus incapable of protecting society from the overreach of the free market, Polanyi, along with Akerlof and Shiller, believe that governments can act independently to protect their citizens from capitalism's inherent instability. Polanyi shows how nations like England fluctuate between periods of high and low interventionism in order to stabilize the free market society, as laissez-faire policies can lead to societal strife such as extreme poverty and inhuman factory conditions. In times of crisis, such as the aftermath of the Great Depression in Germany, the only forces promising protection from the free market may be militant nationalists — thus Polanyi (1944) claims that the origins of Nazism and World War II "lay in the utopian endeavor of economic liberalism to set up a self-regulating market system." Keynes views the instability of capitalism as a result of people's "animal spirits" rather than some endemic feature of the free market, though he shares Polanyi's view that the government is sometimes necessary to re-stabilize society in times of market slumps, when "neither the restriction of output nor the reduction of wages serves in itself to restore equilibrium" (Keynes 1935). Following Keynes, a purely free market will never provide enough jobs if people are too concerned about the future to consume goods — governments must join together to inject capital into the market in order to restore confidence. Akerlof and Shiller (2009) reinterpret Keynes for the modern economy: "the proper role of the government… is to set the stage. The stage should give full rein to the creativity of capitalism. But it should also countervail the excesses that occur because of our animal spirits" (Akerlof and Shiller 2009). Unlike the context-independent liberals, Polanyi, Marx, and Keynes see the health of the free market as dependent upon time- and location-dependent social norms and historical events. Crises can change the rules of the game, and new cultural attitudes require new policies and responses. To Polanyi, Kenyes, Akerlof, and Shiller, the resilience of capitalism in fact relies upon society's continued ability to regulate it. Perpetuation of Human Ingenuity Schumpeter (1942) proposes an intriguing potential failure mode for capitalism: the end of growth, or more precisely the "theory of vanishing investment opportunity." As Boltanski and Chiapello (2005) point out, the capitalist system is by nature insatiable, and all capitalist societies must continue expanding indefinitely. Even if one believes the liberal view that human desires are likewise insatiable, national and planetary resources are certainly limited. Historically, many nations that exploited all the resources within their own borders turned to colonialism and appropriated the resources of others. Even today, nations like China seek to purchase mines for rare earth metals around the world. Agriculturalists in the USA have increased their efficiency of production far beyond the capacity of Americans to consume, so they now sell their rice and corn in global markets — often with the express support of the US government. Yet what will happen when, in Schumpeter's (1942) words, the "methods of production have reached a state of perfection which does not admit further improvement"? Progress will either become perfectly automatic (perhaps due to artificial intelligence) or stall completely; in either case, Schumpeter claims, the creative work of today's capitalists in forging new markets will turn to routine bureaucracy. In such a world, Schumpeter posits the disintegration of the bourgeoisie and an inevitable transition to socialism — an eventual outcome similar to Marx, albeit by a very different path. **One reason for the resilience of capitalism is the human ability to innovate, proven by the history of civilization thus far. In addition to international expansion, capitalist firms have survived slumps in the past by finding new, more creative avenues for growth. Although many emerging economies tend to grow most rapidly during their early stages of industrialization, capitalist nations have nonetheless found ways to sustain themselves after all basic needs are met and all infrastructure has been fully developed**. Firms in developed nations have focused their efforts on innovation, developing and bringing new technologies to market to satisfy desires that citizens never knew they had. Thus, **we have met capitalism's insatiable drive for growth by regularly developing new technologies — from steam engines to the Internet — that would seem impossible to previous generations**.

They cant j fiat a shift to communism without reading any uq

Cap Good

1. T: Capitalism and Free markets solves climate change in long term

Luse 21(Jeff Luse, Correspondent for C3, C3, "C3" is a project of C3 Solutions (the Conservative Coalition for Climate Solutions). The mission of our parent organization is to develop, amplify, and elevate solutions that will protect our natural and economic environment, April 20, 2021, "Cleaned by Capitalism: How Economic Freedom Creates a Healthier Environment", https://c3newsmag.com/cleaned-by-capitalism-how-economic-freedom-creates-a-healthier-environment/ // DOA 09.03.22) KG

In the United States, and around the globe, there is a growing consensus that climate change is real. While many conservatives are looking to **address this issue through free markets**, a growing faction of the Left is turning to big government spending to reduce emissions all while painting capitalism as a villain to the health of the planet. **The attack on capitalism is not only misplaced, but it is also counterproductive. In a study released today by C3 Solutions authored by Nick Loris of The Heritage Foundation, titled Free Economies are Clean Economies, Loris outlines the many ways in which capitalism and free markets benefit the environment**. **"Free and competitive markets have reduced emissions, brought millions of people out of poverty, and have led to innovations that have benefitted the health of the planet and its people,"** said Loris in the C3 Solutions press release. "While global environmental issues like climate change are incredibly complex, **economic freedom is the best solution to reduce emissions** and promote economic prosperity." Specifically**, the report found that open markets double the environmental health of countries. "Mostly free" economies, as determined by The Heritage Foundation's Index of Economic Freedom, had a higher score on Yale University's Environmental Performance Index, than "mostly unfree" economies—with scores of 71.72 and 35.17 respectively**. This makes sense. **As markets open and economies of countries grow, efficiency becomes prioritized and consumers have the ability to invest in making the environment cleaner. This purchasing power allows for people to make buildings more energy efficient, and for companies to choose materials that have a lower carbon footprint**. As economist Donald Boudreaux succinctly put it, **we are "cleaned by capitalism." In addition to open markets, private property rights play an important role in environmental well-being**. **Ownership of property incentivizes stewardship and environmental responsibility.** As a 2020 report from the National Academies of Science found, **"territories with full property rights show a significant decrease in deforestation, while the effect does not exist in territories without full property rights."** Perhaps the greatest example of this is seen in the cases of Venezuela and the United States. In Venezuela, Loris points out, the government's ownership of industry and property decreased foreign investments and prosperity, while increasing corruption and environmental degradation. In contrast, private property rights in America made the fracking revolution possible, which substantively lowered our domestic emissions. In the same way that government ownership hurts the environment, overregulation can stifle environmental prosperity. **Overregulating businesses slows down the innovations that are needed to reduce emissions. As seen in the case of nuclear energy, regulations have increased construction costs by 200%, leading in part to the shrinking of America's nuclear energy fleet. Allowing businesses to freely operate greatly improves the health of the economy and the environment.** To analyze this, Loris looks to the World Banks' Ease of Doing Business Index where he found "a strong, positive correlation between the Ease of Doing Business Index and EPI" (Environmental Performance Index). Specifically, countries with the "Most Ease" of doing business had an EPI score twice that of countries with the "Least Ease" of doing business**. With a growing number of people looking to the government to solve climate and environmental issues, it is important to realize that free markets are the best way to lower emissions. As seen in "Free Economies," open markets, limited government, private property rights, and rule of law are the best ways in which we can improve the health of the planet.** While global issues such as climate change are complex, the best way to tackle it is through economic freedom.

There are 2 Warrants

A. Innovation

Schrager 20(Allison Schrager, Allison Schrager is an economist, senior fellow at the Manhattan Institute, and co-founder of LifeCycle Finance Partners, LLC, a risk advisory, Foreign Policy, JANUARY 15, 2020, "WHY SOCIALISM WON'T WORK", https://foreignpolicy.com/2020/01/15/socialism-wont-work-capitalism-still-best/ // DOA 09.03.22) KG

A full government takeover isn't the only option, nor is it the best one. Beyond that**, markets are also good at rationing risk. Fundamentally, socialists would like to reduce risk—protect workers from any personal or economywide shock.** That is a noble goal, and some reduction through better functioning safety nets is desirable. **But getting rid of all uncertainty—as state ownership of most industries would imply—is a bad idea. Risk is what fuels growth. People who take more chances tend to reap bigger rewards;** that's why the top nine names on the Forbes 400 list of the richest Americans are not heirs to family dynasties but are self-made entrepreneurs who took a leap to build new products and created many jobs in the process. **Some leftist economists like Mariana Mazzucato argue that governments might be able to step in and become laboratories for innovation. But that would be a historical anomaly; socialist-leaning governments have typically been less innovative than others.** After all, **bureaucrats and worker-corporate boards have little incentive to upset the status quo or compete to build a better widget. And even when government programs have spurred innovation**—as in the case of the internet—**it took the private sector to recognize the value and create a market.** And that brings us to a **third reason to believe in markets: productivity.** Some economists, such as Robert Gordon, have looked to today's economic problems and suggested that productivity growth—the engine that fueled so much of the progress of the last several decades—is over. In this telling, the resources, products, and systems that underpin the world's economy are all optimized, and little further progress is possible. But that is hard to square with reality. **Innovation helps economies do more with fewer resources—increasingly critical to addressing climate change, for example—which is a form of productivity growth. And likewise, many of the products and technologies people rely on every day did not exist a few years ago. These goods make inaccessible services more available and are changing the nature of work, often for the better.** Such gains are made possible by capitalist systems that encourage invention and growing the pie, not by socialist systems that are more concerned with how the existing pie is cut. **It is far too soon, in other words, to write off productivity. Here, it is worth considering the lessons of a previous productivity boom: the Industrial Revolution.** As the economist Joel Mokyr has shown, it took new innovations like the steam engine more than 100 years to appear in productivity estimates. The same could be happening today with smartphones and the internet. Meanwhile, even as that upheaval transformed the human experience, creating a more comfortable existence for most everyone, it was also messy and disruptive. The early part of that innovative cycle—like others since—displaced existing workers while the gains flowed to the owners of capital first, causing social instability**. This time around, the effects may end up being less wrenching: The divisions between owners of capital and workers are not as clear as they used to be. More Americans than ever own stock through their workplace retirement accounts. Stock ownership is on the rise in many non-U.S. capitalist economies, too.** And several other countries, such as Australia and the United Kingdom, also offer retirement accounts, making their citizens shareholders as well. Unlike 200 years ago, workers' interests are already more aligned with those of management.

B. Property Rights

Luse 21(Jeff Luse, Correspondent for C3, C3, "C3" is a project of C3 Solutions (the Conservative Coalition for Climate Solutions). The mission of our parent organization is to develop, amplify, and elevate solutions that will protect our natural and economic environment, April 20, 2021, "Cleaned by Capitalism: How Economic Freedom Creates a Healthier Environment", https://c3newsmag.com/cleaned-by-capitalism-how-economic-freedom-creates-a-healthier-environment/ // DOA 09.03.22) KG

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2. T: Markets allocate healthcare better

Schrager 20(Allison Schrager, Allison Schrager is an economist, senior fellow at the Manhattan Institute, and co-founder of LifeCycle Finance Partners, LLC, a risk advisory, Foreign Policy, JANUARY 15, 2020, "WHY SOCIALISM WON'T WORK", https://foreignpolicy.com/2020/01/15/socialism-wont-work-capitalism-still-best/ // DOA 09.03.22) KG

One reason to trust **markets** is that they **are better at setting prices than people. If you set prices too high, many a socialist government has found, citizens will be needlessly deprived of goods. Set them too low, and there will be excessive demand and ensuing shortages. This is true for all goods, including health care and labor. And there is little reason to believe that the next batch of socialists in Washington or London would be any better at setting prices than their predecessors**. In fact, **government-run health care systems in Canada and European countries are plagued by long wait times. A 2018 Fraser Institute study cites a median wait time of 19.8 weeks to see a specialist physician in Canada**. Socialists may argue that is a small price to pay for universal access, but **a market-based approach can deliver both coverage and responsive service.**

LI: helps the ppl that they say are hurt most by cap

On the indigenous link

1. Cross app land conservation link – nuke energy is better for indigenous land then all alts

2. T: Nuclear energy is safer for local communities than other forms of energy – it reduces radiation and deaths from accidents

Rhodes 18 (Richard

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Third, **nuclear power releases less radiation into the environment than any other** major **energy source**. This statement will seem paradoxical to many readers, since it's not commonly known that non-nuclear energy sources release any radiation into the environment. They do. The worst offender is **coal**, a mineral of the earth's crust that **contains** a substantial volume of the radioactive elements **uranium and thorium. Burning coal gasifies its organic materials, concentrating its mineral components into the remaining waste**, called fly ash. So much coal is burned in the world and so much fly ash produced that coal is actually the major source of radioactive releases into the environment. In the early 1950s, when the U.S. Atomic Energy Commission believed high-grade uranium ores to be in short supply domestically, it considered extracting uranium for nuclear weapons from the abundant U.S. supply of fly ash from coal burning. In 2007, China began exploring such extraction, drawing on a pile of some 5.3 million metric tons of brown-coal fly ash at Xiaolongtang in Yunnan. The Chinese ash averages about 0.4 pounds of triuranium octoxide (U_3O_8), a uranium compound, per metric ton. Hungary and South Africa are also exploring uranium extraction from coal fly ash.

What are nuclear's downsides? In the public's perception, there are two, both related to radiation: the risk of accidents, and the question of disposal of nuclear waste. There have been three large-scale accidents involving nuclear power reactors since the onset of commercial nuclear power in the mid-1950s: Three-Mile Island in Pennsylvania, Chernobyl in Ukraine, and Fukushima in Japan. **Studies indicate even the worst possible accident at a nuclear plant is less destructive than other major industrial accidents.** The partial meltdown of the **Three-Mile Island** reactor in March 1979, while a disaster for the owners of the Pennsylvania plant, **released only a minimal quantity of radiation to the surrounding population**.

According to the U.S. Nuclear Regulatory Commission: "The approximately **2 million people** around TMI-2 during the accident are estimated to have **received an average radiation dose of only about 1 millirem** above the usual background dose. To put this into context, **exposure from a chest X-ray is about 6 millirem** and the area's natural radioactive background dose is about 100-125 millirem per year… In spite of serious damage to the reactor, the actual release had negligible effects on the physical health of individuals or the environment." The explosion and subsequent burnout of a large graphite-moderated, water-cooled reactor at Chernobyl in 1986 was easily the

worst nuclear accident in history. Twenty-nine disaster relief workers died of acute radiation exposure in the immediate aftermath of the accident. In the subsequent three decades, UNSCEAR — the United Nations Scientific Committee on the Effects of Atomic Radiation, composed of senior scientists from 27 member states — has observed and reported at regular intervals on the health effects of the Chernobyl accident. It has identified no long-term health consequences to populations exposed to Chernobyl fallout except for thyroid cancers in residents of Belarus, Ukraine and western Russia who were children or adolescents at the time of the accident, who drank milk contaminated with 131iodine, and who were not evacuated. By 2008, UNSCEAR had attributed some 6,500 excess cases of thyroid cancer in the Chernobyl region to the accident, with 15 deaths. The occurrence of these cancers increased dramatically from 1991 to 1995, which researchers attributed mostly to radiation exposure. No increase occurred in adults. "The average effective doses" of radiation from Chernobyl, UNSCEAR also concluded, "due to both external and internal exposures, received by members of the general public during 1986-2005 [were] about 30 mSv for the evacuees, 1 mSv for the residents of the former Soviet Union, and 0.3 mSv for the populations of the rest of Europe." A sievert is a measure of radiation exposure, a millisievert is one-one-thousandth of a sievert. A full-body CT scan delivers about 10-30 mSv. A U.S. resident receives an average background radiation dose, exclusive of radon, of about 1 mSv per year. The statistics of Chernobyl irradiations cited here are so low that they must seem intentionally minimized to those who followed the extensive media coverage of the accident and its aftermath. Yet they are the peer-reviewed products of extensive investigation by an international scientific agency of the United Nations. They indicate that **even the worst possible accident at a nuclear power plant — the complete meltdown and burnup of its radioactive fuel — was yet far less destructive than other major industrial accidents across the past century**. To name only two: Bhopal, in India, where at least 3,800 people died immediately and many thousands more were sickened when 40 tons of methyl isocyanate gas leaked from a pesticide plant; and Henan Province, in China, where at least 26,000 people drowned following the failure of a major hydroelectric dam in a typhoon. "Measured as early deaths per electricity units produced by the Chernobyl facility (9 years of operation, total electricity production of 36 GWe-years, 31 early deaths) yields 0.86 death/GWe-year)," concludes Zbigniew Jaworowski, a physician and former UNSCEAR chairman active during the Chernobyl accident. "This rate is lower than the average fatalities from [accidents involving] a majority of other energy sources. For example, **the Chernobyl rate is nine times lower than the death rate from liquefied gas… and 47 times lower than from hydroelectric stations**." **Nuclear waste disposal**, although a continuing political problem, **is no**t any **longer a technological problem.** The accident in Japan at **Fukushima** Daiichi in March **2011 followed a major earthquake and tsunami**. The tsunami flooded out the power supply and cooling systems of three power reactors, causing them to melt down and explode, breaching their confinement. **Although 154,000 Japanese citizens were evacuated from a 12-mile exclusion zone around the power station, radiation exposure beyond the station grounds was limited**. According to the report submitted to the International Atomic Energy Agency in June 2011: "**No harmful health effects were found** in 195,345 residents living in the vicinity of the plant who were

screened by the end of May 2011. All the 1,080 children tested for thyroid gland exposure showed results within safe limits. By December, government health checks of some 1,700 residents who were evacuated from three municipalities showed that two-thirds received an external radiation dose within the normal international limit of 1 mSv/year, 98 percent were below 5 mSv/year, and 10 people were exposed to more than 10 mSv… [There] was **no major public exposure, let alone deaths from radiation**."

Nuclear waste disposal, although a continuing political problem in the U.S., is not any longer a technological problem. Most U.S. spent **fuel**, more than 90 percent of which could be recycled to extend nuclear power production by hundreds of years, **is stored** at present safely **in impenetrable concrete-and-steel dry casks on the grounds of operating reactors, its radiation slowly declining. The U.S. Waste Isolation Pilot Plant** (WIPP) **near Carlsbad, New Mexico currently stores low-level and transuranic military waste and could store commercial nuclear waste in a 2-kilometer thick bed of crystalline salt**, the remains of an ancient sea. The salt formation extends from southern New Mexico all the way northeast to southwestern Kansas. **It could easily accommodate the entire world's nuclear waste for the next thousand years.**

Specifically in the US,

Follett 16 finds (Andrew Follett, energy and science reporter, 16 January 2016, "7 Ways The Grand Solution We're All Looking For Could Actually Be In Nuclear Power", Daily Caller, https://dailycaller.com/2016/01/16/7-ways-the-grand-solution-were-all-looking-for-could-actually-be-in-nuclear-power/#ixzz4HR1Vfeka, DOA 3/27/2025) ESR

2: **American Reactors Are Incredibly Safe** "There is also a common misperception that nuclear is not safe," Evan Bayh, a former Democratic Senator from Indiana and current co-chair of Nuclear Matters, told The Daily Caller News Foundation. "To the contrary, **U.S. nuclear plants are held to exacting standards of safety** – they **are operated by highly skilled and trained workers** and are **designed with multiple layers of redundant back-up safety systems**." **Nuclear power**, even with the two high-profile nuclear accidents, **is statistically the safest way of generating electricity. Coal power in China kills 280,000 people for every trillion kilowatt hours it produces. Rooftop solar kills 440 for the same amount of electricity. Nuclear energy only kills 90**, by this measure, **including deaths from disasters**. Deaths from nuclear power, are very rare relative to deaths from industrial accidents, mining accidents, or pollution. Even before the Chernobyl meltdown in the Soviet Union, US reactors had already implemented safety procedures that would prevent a

similar event from
happening here. Before the Fukushima disaster occurred, American reactors had already implemented safety procedures that would prevent something similar from happening. The reactor at Fukushima could not be cooled without
electrical power, but **American**
reactors elevate a reservoir of water to cool the reactor without back-up power
in an emergency. New nuclear reactor designs are much safer and emit less radiation than the coal plants they replace.

Pref: Butler is abt global mining, our ev is spec to US

2. T: Nuclear energy helps low-income communities of color by reducing energy poverty

Follett 16 (Andrew
Follett, energy and science reporter, 16 January 2016, "7 Ways The Grand Solution We're All Looking For Could Actually Be In Nuclear Power", Daily Caller,
https://dailycaller.com/2016/01/16/7-ways-the-grand-solution-were-all-looking-for-could-actually-be-in-nuclear-power/#ixzz4HR1Vfeka, DOA 3/27/2025) ESR

5: **High**
Energy Costs Disproportionately Hurt The Poor And Ethnic Minorities Electricity from new "green" energy is nearly four times as
expensive as electricity from existing nuclear power plants, according to analysis from the Institute for Energy Research.
The **high costs** of "green" energy **are passed onto ordinary rate-payers, which has triggered complaints that poor households are**
subsidizing the affluent. The **poor and ethnic minorities tend to spend a higher proportion of their incomes on "basic needs" like groceries, power bills, clothing, housing and gasoline. As essential goods like electricity become more expensive, the cost of**
producing goods and services that use electricity increases, effectively raising the price of almost everything. Consumers, not industries, ultimately pay for the increase in costs. Increases in the price of electricity harm ethnic minorities far more
than they harm the average household, according to a study by the Pacific Research Institute. Further **EPA regulation is expected to cause the average annual**
electricity bill to rise from 2.9 percent to 3.8 percent of
annual income for the average household. For the average African-American household, annual spending on electricity will rise from 4.5 percent to 5.8 percent of household
income. **Lower-income**
black communities will bear an even larger burden and could spend up
to 26 percent of their household income on electricity.