

**ENERGY SECURITY
IS
NATIONAL SECURITY**

Energy Security is National Security

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Introduction

Energy security is national security. One cannot exist without the other, and a lack of either can have serious ramifications. For evidence of this, look no further than Europe, where Germany is reeling from the twin blows of ill-conceived domestic energy policies and wholesale energy dependence on its chief geopolitical adversary: Russia.

The German case is but one example of the many pitfalls a nation faces when it fails to secure its energy supply. American policymakers would do well to take this cautionary tale to heart – and soon – as the Biden administration’s plans to force a [complete energy transition](#) away from fossil fuels may lead America down the long and painful road of energy dependency.

Due in large part to [government intervention](#), the United States is becoming progressively more reliant on electric vehicles (EVs) and nonnuclear renewable energy sources for its transportation and energy needs. These technologies rely on a large input of rare earth metals and other mined elements, particularly lithium and cobalt, the supply of which is dominated almost entirely by the People’s Republic of China (PRC). These same minerals are also key inputs in the production of many advanced weapons systems, like fighter jets and ballistic missile defenses, that are critical for a robust national defense.

This, along with the current administration’s [ongoing war](#) against domestic hydrocarbon production, puts America’s energy security, and its national security, in real jeopardy. It is therefore incumbent to unpack just what energy security means, its relationship to national security, what that means for the United States, and the consequences that can occur when leaders attempt to ignore the

fundamental physical realities that create the context in which statecraft resides.

Energy and National Security

Energy security is [defined](#) by the International Energy Agency (IEA) as “the uninterrupted availability of energy sources at an affordable price.” In other words, being able to consistently power your society for a relatively reasonable cost without fear of that power suddenly disappearing. It is difficult to overstate the importance of achieving energy security since energy is one of the fundamental building blocks of all societies.

The reason for this is rather simple and, as such, is routinely taken for granted. At its most essential, energy is the ability to do work. Human beings have mastered the art of converting energy from one form into another and using it to do things. At the biological level, this involves consuming food, converting it to calories, and then burning those calories to complete physical activities. On a social or civilizational scale, it involves anything from burning gas to warm a small home to initiating a nuclear fission that propels a 100,000-ton aircraft carrier across the entire Pacific Ocean. From a certain point of view, the whole development of human civilization can be placed within a framework of discovering new and better ways to use energy sources.

This elemental formulation touches on nearly everything we do as humans, making a steady supply of energy one of the fundamental prerequisites of civilization itself. Nations go to enormous lengths to guarantee this supply – and for good reason – as a lack of reliable and affordable energy can produce severe social unrest and inflame conflict between nations.

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Consider what happened to the United States when its secure supply of energy was interrupted in the late 20th century.

By the 1970s, domestic oil production in the United States was rapidly declining. Existing reserves were running dry, and the precision drilling and hydraulic fracturing technology which would unlock tight oil within shale formations and launch the American shale revolution was still three decades away. Domestic production [peaked in 1970](#), and foreign oil imports rose to make up over [50 percent](#) of all American consumption less than a decade later.

This coincided with the postwar automobile boom, which saw the number of automobiles in the United States [more than double](#) between 1950 and 1970. To put it simply, the United States was consuming more and more foreign oil at a faster and faster rate. Still more significant was the source of much of this oil: the Middle East.

What happened next is well-documented. After Syria and Egypt attacked Israel in 1973, the Nixon administration quickly mobilized to furnish our ally with military aid. In response, a Saudi-led cartel of oil-producing nations – the Organization of Petroleum Exporting Countries (OPEC) – sided with the Arab belligerents and declared an oil embargo on the United States and any other country that supported Israel. Gas prices spiked almost immediately, ballooning [up to 40 percent](#). Shortages followed, as did government rationing and the famous [hours-long wait times](#) at gas stations all around the country.

While the crisis itself receded when OPEC agreed to end the embargo a little more than a year later, its aftereffects would be felt for some time. High energy prices accelerated stagflation, economic growth slowed, and

much of the Western world [fell into a recession](#) from which it would not fully recover until the 1980s.

America's troubles with energy security, however, were far from over.

Dependence on Middle Eastern oil [only grew](#) after the embargo, setting the stage for the 1979 Iranian Revolution to spark the nation's second energy crisis in less than a decade. Soon after, in 1980, the Iran-Iraq War broke out, turning oil production facilities and shipments into military targets and knocking [millions of barrels per day](#) out of production. The Reagan administration responded with a large military deployment to the Persian Gulf to secure supplies and prevent the war from spilling into the rest of the region, initiating a new era of increased military involvement in the Middle East that has profoundly shaped American foreign policy to this day.

When Saddam Hussein invaded and annexed Kuwait in 1990, he both violated the global norm and threatened to [seize control](#) of 20 percent of the world's oil supply. Saudi Arabia, America's chief oil supplier, was now under direct threat of invasion at worst and severe disruptions of its oil exports to the United States at best. President George H.W. Bush, with some prodding by United Kingdom Prime Minister Margaret Thatcher, determined that this could not stand, and launched a massive military intervention that expelled the Iraqis in what became known as the First Gulf War.

The war had a few unintended consequences. It ended with what the United States called "Operation Southern Watch," a no-fly zone imposed over the whole of Iraq which required [thousands of American servicemen](#) to operate out of

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Saudi Arabia. Infuriated by what he believed was a military occupation of Islam's holiest places, Osama bin Laden claimed that Southern Watch was one of his primary motivations for carrying out the 9/11 attacks a decade later. To be clear, it is [almost certain](#) that bin Laden and Al-Qaeda would have attacked the United States regardless of its military footprint in Saudi Arabia.

Of course, not all subsequent American involvement in the Middle East can be pinned on the quest for energy security. By 2010, Canada and Mexico were supplying the United States with [most of its foreign petroleum](#). OPEC's share of the global oil supply has been [dropping](#) year-over-year for decades. American priorities in the region have shifted from energy security to counterterrorism, containing Iran, and stemming refugee flows. Additionally, whatever else one feels about President George W. Bush's rationale for invading Iraq in 2003, [it had little to do with oil](#).

Nevertheless, the painful memories of the 1970s energy crises hang over policymakers like a shadow. Even before the OPEC embargo, the United States was [investing heavily in operations](#) – both overt and covert – that would make sure that the lights stayed on. For good reason: losing access to energy supplies can have devastating consequences for the average person. Small and family-owned businesses go under, jobs are lost, meals are rationed, and, as a result, violent social unrest can spike dramatically. Blame eventually falls on leaders, and the political ramifications can be severe. In some extreme cases, [fuel shortages can help cause total political and economic collapse](#).

In their scramble to avoid such a fate, elites can become deeply vulnerable to the leverage that their fuel suppliers might hold

over them. When particular suppliers are geopolitical rivals or even actively hostile, the situation can quickly spiral out of control. On February 24, 2022, Germany and the rest of Europe learned this lesson the hard way.

The German Problem

When Russia launched its invasion of Ukraine, the European reaction was swift and severe. Germany and its NATO allies quickly closed ranks in support of the Ukrainians, supplying them with [weapons and vast amounts of money](#), on top of [leveling crippling sanctions](#) on Vladimir Putin's regime. However, Germany and the European Union's dependence on Russian oil and natural gas undermined the Western response. Energy geopolitics will play a key role in both the outcome of this particular war and the future of Europe.

By the time of the invasion, Germany was already several years into its aggressive pursuit of a policy called *Energiewende* – translated roughly as “energy turnaround” – which demands a [full transition](#) away from nuclear and hydrocarbon energy sources to an entirely renewable portfolio.

As part of this commitment, Germany had [shut down almost all](#) of its nuclear reactors by early 2022, ironically forcing it to [increase its fossil fuel consumption](#) during the transition. Germany [imported most of those supplies from Russia](#): over half of its natural gas, a third of its oil, and roughly half of its coal by early 2022. As it continued to denuclearize, that dependency only grew.

As one might expect – and, indeed, as [successive American presidents](#) had warned – European, and especially German, dependence on Russian natural gas engendered major risks. Foremost among

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these was Russia's ability to control Europe by controlling its access to natural gas, a tool that it has [employed liberally](#) over the past two decades.

Russia is a revanchist power, and an aggressive one at that. It rejects the international economic, political, and security order that was established by Western Europe and the United States, and has repeatedly used military force to reclaim what it sees as its rightful place among the world's great powers – along with the influence, wealth, and prestige such a position confers. Wars in Chechnya and Georgia, intervention in Syria, and its assault on Ukraine have all been prosecuted with an eye to this wider aim.

Russian expansionism has inevitably come at the expense of Europe's security, yet the reaction to this challenge on the part of European leaders – especially in Germany – has been rather muted. After the fall of the USSR, Germany and others gambled that the best way to manage the post-communist transition was by incorporating former Soviet clients and member states into the West's rules-based liberal international order.

The EU began [supplying its former rivals with aid and expertise](#), liberalizing their economies and plugging them into the network of free trade agreements and international institutions that had come to govern much of the continent. Over the next two decades, this strategy seemed to work. The [EU expanded alongside NATO](#), and former communist states all throughout Eastern Europe [reaped the economic benefits](#) of European integration.

With economic liberalization came political liberalization, and former enemies became close allies. As recently as 1989, East

Germany, Hungary, Poland, and the Czech Republic were all members of the Warsaw Pact and ruled by some of the world's most repressive and strident communist dictatorships. By 2004, all had been [converted into key NATO allies](#).

In the wake of this success, many in Europe had come to assume that the allure of the West was irresistible, and one only needed to broker a free trade agreement to begin the process of democratization and EU membership. So great was their confidence that some even began to plan on how to bring [Russia into NATO](#) once liberalism had sufficiently taken hold.

Russia, however, had a much different experience with the end of the Cold War than did its former client states.

For reasons that are still debated, market liberalization and democratization did not benefit Russia in the same way it had in much of the former Soviet bloc. In fact, outside of Moscow and St. Petersburg, Russia experienced a [demographic collapse](#), especially among jobless males. Deaths of despair became rampant, birth rates plummeted, and [resentment over these failures](#) became widespread. By the time Vladimir Putin had risen to power, the dream of a truly democratic Russia had all but died. Much of Europe, however, refused to accept this reality.

Germany, more so than most, still held out hope that if Europe continued to trade with Russia, then [liberalization would eventually win out](#), and its former rival would finally begin to democratize. It even had a name for this policy: *Waden durch Handel* (change through trade).

Confident in their approach, Germany forged ahead and approved the construction

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of Nord Stream 1, a [controversial natural gas pipeline](#) that physically connects Germany to Russian gas supplies and, crucially, bypasses the old Soviet-built gas lines to Europe that ran under Ukraine. Nord Stream 1's first gas pipeline began operations in late 2011, over a decade into Vladimir Putin's reign.

These gas supplies allowed the Germans to have their cake and eat it too. In 2011, Germany was still getting [a quarter](#) of all its electricity generation from nuclear reactors. Political pressures, combined with the media panic surrounding the 2011 Fukushima reactor meltdown, pressured Chancellor Angela Merkel to unilaterally initiate the transition away from nuclear power and towards renewable energy. However, renewable sources like wind turbines and solar panels simply [cannot account](#) for a large nation's entire energy portfolio, especially during times of peak demand.

By offshoring fossil fuel production to Russia, German politicians were able to claim they were leading the world in the transition to renewable energy.

Yet, even as trade relations continued to deepen, democracy in Russia stubbornly refused to take root. Vladimir Putin and the political-military elites that surrounded him instead [crushed](#) any [internal opposition](#) and doubled-down on their imperial ambitions abroad. Russia invaded Ukraine and annexed the Crimean Peninsula in 2014, intervened in the Syrian Civil War in 2015 (changing the course of the conflict decisively in favor of dictator Bashar al-Assad), carried out a [rash of poisonings](#) against dissidents and opposition figures living in Western Europe, and deployed security forces to [prop up allied regimes](#) in Central Asia.

Germany's dependence on Russian energy ensured that its hands were tied in responding to any of these crises in a material way.

German dependence had consequences beyond its own borders, too: its unwillingness to counter Russian expansion effectively hamstrung the entire continent's ability to respond. While EU member states naturally pursue their own foreign policy goals, they also seek, as much as they can, to function as a united regional bloc. Like in any international organization, larger and more prosperous nations tend to take leadership roles and exercise outsize influence on the decision-making process.

As Germany is by far the largest and, therefore, most influential EU member state, it tends to drive the direction in which the bloc moves. When Russia invaded and annexed Crimea in 2014, German opposition [put a stop](#) to Poland's push for a more muscular response in the form of NATO deployments and tough economic sanctions. That experience no doubt played a role in [helping convince](#) Russian leadership that a full-scale invasion of Ukraine would be met with a similarly lackluster European response.

German dependence on Russian oil and gas severely undermined the West's ability to deter Russian expansionism for well over a decade. Of course, Mr. Putin may have carried out his invasion plans even had the West been more willing to punish Russia for its transgressions; one can never be certain. At the same time, it is telling that Germany's immediate reaction to the invasion [came as a shock](#) to many outside observers.

For their part, Russia quickly moved to leverage its most potent geopolitical weapon against Europe, [substantially cutting](#) natural

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gas flows to Germany and elsewhere. As a result, the continent has been thrown into a [full-blown energy crisis](#), with soaring natural gas prices contributing to a wicked inflationary spiral that has [thrown the European economy into turmoil](#).

While Germany and others are [seeking out](#) alternative hydrocarbon sources, they will be unable to fully make up the shortfall from lost Russian supplies in the near or medium term. Natural gas is a particularly vexing problem, as it can only be transported via one or two ways: pipelines in its original gaseous form or by being liquified and transported overseas as liquified natural gas (LNG). The process of turning natural gas into LNG and utilizing it for electricity production requires substantial infrastructure, [of which Germany has almost none](#). At the same time, alternative oil suppliers (like Canada, the United States, or Saudi Arabia) are operating at close to capacity and simply cannot produce and transport enough to provide for all of Europe's energy demand.

Energy insecurity thus has critically jeopardized Germany's national security by placing it in an impossible situation: either it allows an expansionist, revanchist power to threaten its eastern flank, or it risks economic meltdown as a consequence of opposing Putin's dreams of imperium. Either way, *Energiewende*, by killing reliable domestic energy production, has all-but guaranteed that Germany and Europe will contend with the fallout of this self-inflicted energy crisis for many years to come.

Rare Earths, Renewables, and the Specter of American Dependence

Many in the United States may be tempted to deny that any parallels exist between Germany's predicament and the energy

challenges facing America. After all, American hydrocarbon supplies are relatively secure, despite the Biden administration's determination to wage an [inexplicable crusade](#) against domestic producers. Hydraulic fracturing has once again made the U.S. a [leading exporter](#) of oil and natural gas, and most of the hydrocarbons it still imports come from close allies like Canada and Mexico. Plus, nuclear energy still accounts for a substantial portion of the United States' [electricity generation](#), despite [ongoing shutdowns](#). Even still, energy security in the United States may be compromised by an unexpected Achilles' Heel: critical minerals.

The Biden administration has been [working hard](#) to impose an *Energiewende*-style transition on the United States by subsidizing the market share of renewable energy sources and increasing the regulatory burden on conventional sources. Renewables already comprise about 12% of primary energy consumption and political forces are trying to ensure that they seize a growing share of America's total energy portfolio.

However, renewables need far higher mineral inputs than their hydrocarbon counterparts. An electric vehicle (EV), for example, [requires six times the mineral resources](#) than does a similar gasoline-powered car. While some of this demand can be filled by familiar metals like nickel, copper, and aluminum, less common minerals like lithium and cobalt play a key role, as do many so-called "rare earth" elements. According to the International Energy Agency (IEA), the decarbonization process will cause the [demand for these critical minerals to explode](#).

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Therein lies the danger: the Chinese Communist Party (CCP) controls almost the *entire* global supply chain for all these minerals and other strategic metals. In fact, the United States is [far more dependent](#) on Chinese imports for an increasingly important part of its energy portfolio than it ever was on the Middle East for oil supplies.

Not only is the Peoples' Republic of China (PRC) a [major producer](#) of many of the 35 mineral commodities critical to American national security identified by the United States Department of the Interior, but it also either [directly owns](#) or in some way controls most of the world's mines which produce these minerals. Many of the PRC's [well-documented forays](#) into Sub-Saharan Africa have been in search of cobalt and lithium deposits so it can deepen its control over the global mineral supply chain.

Beyond its upstream control of the mines themselves, a combination of state investment in heavy industry and less stringent environmental restrictions has allowed the PRC to control the lion's share of global [downstream processing capacity](#).

Rare earth elements, for example, are not all that rare in theory, but they can only be found in small concentrations and often bonded to other, more abundant mineral deposits. Once mined, these elements must then be separated by specialized processing plants to be usable, which themselves require substantial capital investment and several years to develop. Right now, China is one of the few [countries in the world](#) that can process these elements on an industrial scale.

What rare earth and strategic metal extraction capacity the United States does possess is limited. Political interests have restricted mineral exploration within the

United States, leaving [potentially vast reserves](#) of strategic metals and rare earths untouched. As of this writing, only one mine in the entire country, California's Mountain Pass mine, can produce rare earth elements. Tightening environmental regulations and deliberate price gouging on the part of Chinese competitors drove the mine into bankruptcy in 2015. While it resumed operations in 2017, any material it does manage to extract *must be sent to China for processing and then sent back*.

In a world where the United States' rivalry with the PRC is intensifying by the day, this situation is untenable. Unfortunately, due to the capital-intensive nature of these processing facilities and the dense thicket of environmental restrictions placed on mineral extraction in the United States and elsewhere in the West, it is unlikely that this dependence on Chinese-owned mines and processing facilities will abate in the near future.

The more that the United States transitions its energy portfolio over to renewables at the expense of other sources – something for which the Biden administration and its environmentalist allies [are outwardly committed to doing](#) – the more dependent it becomes on its primary adversary for its energy supply. Considering the example of Germany, this is cause for serious concern.

To make matters worse, alternative energy is far from the only technology that relies on critical minerals to function. Almost every aspect of the digital economy, from smartphones to computers to internet cables, can only be manufactured with metals largely imported from China. So do a vast array of military weapons systems, including guided missiles, radar arrays, and even night vision goggles.

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Should the CCP restrict or even cut off the flow of rare earths and strategic metals, the United States' ability to project power or even defend itself and its allies would be crippled. More than that, economic activity could grind to a halt, as it becomes near impossible to repair old or produce new digital products. Regions that are key to the American economy, like Silicon Valley and Florida's Space Coast, would virtually cease to function. Energy shortages, too, could become common, especially in those states which have transitioned a substantial part of their energy portfolio over to renewable sources and their automobile fleet to EVs.

Fortunately, we are not quite there yet. Renewables still only comprise a relatively small portion of American energy production and nuclear reactors are still running. Some farsighted policymakers are [throwing their weight](#) behind finding alternative critical mineral suppliers and rebuilding domestic mining and processing capacity. However, progress is slow, and significant political opposition from national environmental groups remains. Things could very well get worse before they get better.

On a related note, the ongoing Western decoupling from Chinese supply chains must accelerate. Critical facets of electricity generation, transportation, and national defense simply cannot rely on the goodwill of the Chinese Communist Party. Continuing to permit this vulnerability may well put American national security at serious risk.

Conclusion

Energy security cannot be divorced from national security. The two are intimately connected. Compromising one inevitably compromises the other. If the United States is to avoid Europe's unfortunate fate, it must

work quickly to reduce its dependency on communist China before the CCP has a chance to exercise its enormous leverage at the American people's expense.

The Biden administration's war on domestic energy producers must come to an end. Not only has targeting the industry with burdensome regulations and rhetorical assaults helped contribute to the current energy crisis, but it may also drive the United States back into dependence on foreign imports. The shale revolution made the United States energy independent, but the federal government must get out of the business of picking winners and losers in energy, must stop retarding investment in oil and natural gas, and must allow market forces to drive production.

Otherwise, domestic producers of natural gas and oil will scale-down their operations, driving up prices even further and potentially compromising American foreign policy goals as the United States is forced to seek out and secure foreign energy supplies.

Despite the critical importance of hydrocarbons, the all-of-the-above energy portfolio the United States needs will inevitably include a growing share of renewable electricity generation and EVs. It should therefore be considered a national security imperative for the United States to wean itself off Chinese strategic metals and rare earths and to develop its own extraction and refining capacity. The government must support new mines, new processors and new refiners, while removing the roadblocks to industrial development and capital investment that created this situation in the first place.

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