

The Solar Energy Fraud: Why It Can't Power Nations

In April 2025, a massive blackout swept across Spain and Portugal, leaving 55 million people in the dark. Trains stopped, flights were grounded, and hospitals scrambled to keep critical systems running. Initially, officials pointed to a "rare atmospheric phenomenon," but by May, the truth emerged: solar energy, which powered a significant portion of Spain's grid, had failed spectacularly. A sudden drop of 15 gigawatts—60% of national demand—destabilized the system, severing its connection to the broader European grid. This wasn't a fluke; it was a stark exposé of solar energy's inability to reliably power national grids. Despite its polished image as the future of clean energy, solar is a fraud at this scale, propped up by governments, corporations, and activists who either ignore the data or profit from the illusion. Let's dismantle this scam with hard numbers, exposing its flaws, costs, environmental toll, geopolitical risks, and the hidden agendas behind it.

The Fatal Flaw: Intermittency and Impossible Storage

Solar energy's most fundamental weakness is its intermittency—it only generates power when the sun shines, leaving grids vulnerable during nights, cloudy days, or winter months. The global electricity demand averages 77 terawatt-hours (TWh) daily, with the United States alone consuming 11 TWh—equivalent to 11,000 gigawatt-hours (GWh)—each day, according to the U.S. Energy Information Administration (EIA, 2023). To make solar viable for a national grid, massive battery storage systems are required to store excess energy during sunny periods and release it when production drops. However, the current state of battery technology renders this solution unattainable. In 2023, the world's total battery storage capacity stood at a mere 170 GWh, as reported by the International Energy Agency (IEA, 2023). To store just one day's worth of U.S. electricity—11,000 GWh—would require 65 times the current global capacity of 170 GWh, meaning the world's capacity falls short by 6,370% of what's needed. This isn't a minor gap; it's a chasm that makes solar's grid-scale ambitions a fantasy.

Even scaling down to a single city like New York, the numbers remain daunting. New York City consumes 52,000 GWh annually, or 142.465 GWh/day—a conservative estimate that doesn't account for peak demand surges. Meeting this demand with solar would require 142.465 GWh of storage—84% of the world's current capacity. This assumes a single day's buffer; multi-day cloudy periods or winter months, when solar output plummets, would demand even more. Real-world failures highlight the stakes. In April 2025, Spain's grid collapsed when solar output dropped by 15 gigawatts in minutes, triggering a blackout that affected Portugal and southern France. This collapse was exacerbated by the lack of grid inertia—a physical buffer provided by traditional power plants like gas or nuclear, which use heavy spinning machinery to stabilize the grid during sudden fluctuations—leaving the solar-heavy system unable to absorb the shock, as Spain's grid operator later admitted (Johnston & Hancock, 2025). Power restoration took up to a week in some areas, exposing the fragility of a solar-heavy grid. In Texas in 2021, solar and wind faltered during a winter storm, though natural gas failures bore the brunt of the blame. These incidents reveal solar's inability to provide the consistent power grids need, and the storage solution is nowhere close to reality.

To put this in perspective, imagine trying to fill a swimming pool with a teaspoon. The pool represents the U.S.'s daily electricity needs—11,000 GWh—while the teaspoon is the world's current storage capacity of 170 GWh. You'd need 65 teaspoons to fill the pool, but you've only got one. That's a

shortfall of roughly two orders of magnitude—65 times—meaning solar storage is far too small to meet national demands.

Solar advocates often point to emerging technologies as a potential fix, claiming that innovations like flow batteries, hydrogen storage, or grid-forming inverters could eventually solve intermittency issues. While these technologies show promise in lab settings, they are far from ready for grid-scale deployment. For instance, flow batteries, which use liquid electrolytes to store energy, are still 5-10 years from commercial scalability due to high costs—currently \$300-500/kWh compared to lithium-ion's \$150/kWh—and limited energy density, according to a 2024 BloombergNEF report. Hydrogen storage faces even steeper challenges, with electrolysis inefficiencies causing a 30% energy loss, and global hydrogen production capacity at just 0.7 million tons in 2023 against a needed 90 million tons by 2030 for net-zero goals, per the IEA (2023). Grid-forming inverters, which could help stabilize renewable-heavy grids, are still in early pilot stages, with fewer than 1% of global inverters capable of this function as of 2024. These timelines, costs, and scalability gaps mean solar's intermittency will remain a fatal flaw for at least a decade, leaving grids exposed to failures like Spain's 2025 blackout. While synthetic inertia—simulating traditional grid stability through advanced inverters or energy storage systems—has been proposed as a solution, it remains largely experimental and unproven at the scale needed to stabilize national grids, further underscoring solar's current limitations.

Efficiency and Surface Area: A Land Grab of Epic Proportions

Solar panels, relying on silicon-based technology, are woefully inefficient, converting sunlight into electricity at just 15-20% efficiency, with top models reaching 22%. Compare this to natural gas plants, which operate at 50-60% efficiency, or nuclear reactors at 33-37%, both of which deliver power continuously. This inefficiency translates into a massive surface area requirement, making solar impractical for powering cities or nations. To illustrate, let's calculate the area needed to power New York City, which consumes 52,000 GWh annually, or 142.465 GWh daily. In NYC's northeastern climate, solar panels receive about 4.5 kWh/m²/day of sunlight. At 20% efficiency, each square meter generates 0.9 kWh/day (4.5×0.20). To meet the city's daily need: $142,465,000 \text{ kWh} \div 0.9 \text{ kWh/m}^2/\text{day} = 158,294,444 \text{ m}^2$, or 158.3 square kilometers of panels alone.

Solar farms require additional space for infrastructure—roads, inverters, and spacing to avoid shading—so panels typically cover only 25-50% of the land. At 50% coverage, the total area doubles to 316.6 km²; at 25%, it's 632 km². New York City's total area is 783.8 km², meaning solar would consume 40-80% of the city's footprint. Alternatively, calculate via installed capacity: NYC's 142.465 GWh/day, at a 15% capacity factor (realistic for the region), requires 39.573 GW of solar capacity ($142.465 \div 3.6 \text{ GWh/GW/day}$). Utility-scale farms average 8-10 acres per MW. At 8 acres/MW, that's 316,584 acres, or 1,281 km²—1.6 times NYC's area. At 10 acres/MW, it's 1,600 km². This land requirement is not just impractical; it's a deal breaker for urban centers where space is already at a premium. The inefficiency of solar panels demands a land grab so vast it's laughable, rendering it utterly impractical for large-scale power needs.

Imagine covering an area larger than New York City itself with solar panels—1,281 km² is 1.6 times the city's 783.8 km² area, like blanketing the entire city plus over half of Brooklyn again, just to keep the lights on for one day. This massive footprint—far larger than what's feasible in a dense urban environment—makes solar's inefficiency a crippling barrier to large-scale adoption.

Weather Damage: Costs That Spiral Out of Control

The sprawling scale of solar farms makes them vulnerable to weather-related damages, driving costs to unsustainable levels. Covering 1,281 km² to power New York City turns the solar array into a massive target for storms, hail, and hurricanes. In 2023, a hailstorm in Texas destroyed thousands of panels, costing millions in repairs. If we assume a conservative 1% annual chance of major damage—wiping out 10% of the setup—the financial impact is staggering. Installation costs \$1 million per MW, so 39,573 MW for NYC totals \$39.6 billion. A 10% loss means \$3.96 billion in repairs per incident, potentially yearly in storm-prone regions like the Northeast, where hurricanes are a regular threat.

Routine maintenance adds another layer of expense. Industry standards peg annual maintenance at 1-2% of capital cost, translating to \$396-792 million per year for NYC's 39,573 MW array. Compare this to a 5,000 MW natural gas plant, which costs \$1.43 billion to build, has a far smaller footprint, and requires significantly less upkeep. Solar's massive surface area turns it into a financial black hole when nature strikes, with repair and maintenance costs dwarfing those of more compact, reliable alternatives like gas or nuclear. The scale of solar's footprint doesn't just make it inefficient—it makes it a costly liability that could drain billions annually in repairs and upkeep alone.

Think of it like setting up a tent the size of a football stadium in a hurricane zone. One storm could rip through \$3.96 billion worth of panels—enough to buy a fleet of 80 private jets—while yearly upkeep costs could hit \$792 million, equivalent to building 2,000 new homes. That's an order of magnitude cost overrun of 28x compared to what a gas plant would face, amplifying solar's financial infeasibility.

Resource Scarcity: A Mineral Fantasy

While solar panels primarily use abundant silicon, the batteries required to store power for grid-scale applications rely on scarce minerals, making solar's scalability a fantasy. Lithium-ion batteries, the standard for grid storage, require lithium, cobalt, and rare earth elements (REEs). For a 1 GWh battery system, the material demand is 1,000 tons of lithium, 200 tons of cobalt, and 10-20 tons of REEs like lanthanum and cerium. Scaling this to one day of U.S. grid demand—11,000 GWh—requires 11 million tons of lithium, 2.2 million tons of cobalt, and 110,000-220,000 tons of REEs. That's 31-63% of the 350,000 tons of REEs produced globally in 2023. For New York City alone, with its 142.465 GWh daily need, the figures are 142,465 tons of lithium (1,000 tons/GWh × 142.465 GWh) and 28,493 tons of cobalt (200 tons/GWh × 142.465 GWh).

Global supply in 2023 was 180,000 tons of lithium and 140,000 tons of cobalt, meaning NYC's needs are 0.79 times the global lithium supply (142,465 ÷ 180,000) and 0.20 times the global cobalt supply (28,493 ÷ 140,000), highlighting the strain even a single city's demand places on limited resources. Emerging technologies like lithium-iron-phosphate (LFP) batteries, which avoid cobalt, or sodium-ion batteries, which use abundant sodium, offer potential solutions, but they're years from deployment at scale. Until then, solar's reliance on these materials makes grid-scale adoption a pipe dream, as the resources simply don't exist in the quantities required. The mineral scarcity isn't just a technical hurdle; it's a fundamental barrier that exposes solar's inability to scale to national levels without depleting global reserves.

Picture trying to bake a cake for a million people with only a teaspoon of sugar. The U.S. needs 11 million tons of lithium for one day's grid storage, but the world has just 180,000 tons available—61 times less, an order of magnitude shortfall of 100x. For NYC, the 142,465 tons of lithium is still 0.79 times the global supply of 180,000 tons, exposing solar's resource dependency as a fatal flaw.

Costs That Don't Add Up

Solar's economic viability is a mirage, propped up by subsidies that obscure its staggering true cost. In 2022, solar photovoltaic (PV) systems appeared competitive at \$0.049 per kilowatt-hour (kWh), but this figure relies on heavy government support. Strip away subsidies, and the cost climbs to \$0.07-0.10/kWh, according to the IEA (2023). Factor in 12 hours of storage—essential since the sun sets—and the price soars to \$0.15-0.20/kWh. By contrast, natural gas delivers continuous power at \$0.04-0.06/kWh, and nuclear at \$0.06-0.09/kWh, making solar with storage 3-5 times more expensive. This cost disparity reveals solar as a financial disaster for grid-scale applications, unable to compete without massive taxpayer-funded crutches.

Global renewable subsidies hit \$500 billion in 2022, propping up solar's illusion of affordability, according to the IEA (2023). Meanwhile, fossil fuels received \$5.9 trillion in subsidies in 2020, per the IMF (2020), a figure that includes implicit subsidies like unpriced environmental costs. However, the U.S.'s domestic abundance of natural gas and oil—20 years of gas reserves and decades of oil—means fossil fuels deliver lower operational costs (\$0.04-0.06/kWh for gas) without the intermittency challenges of solar. Solar's dependence on subsidies and its high cost with storage reveal it as an uneconomic option, unable to compete with established energy sources on a level playing field.

Imagine paying \$0.15-0.20 for a gallon of water when you can get it for \$0.04-0.06 from a nearby well. Solar's \$0.15-0.20/kWh is 3-5 times higher than gas's \$0.04-0.06/kWh, a significant cost difference that underscores solar's economic infeasibility for national grids.

Environmental Hypocrisy: A Toxic Legacy

Solar energy's reputation as a "clean" energy source is a carefully crafted myth, overshadowed by the severe environmental damage caused by the extraction and disposal processes tied to its infrastructure. The production of lithium-ion batteries, essential for storing solar power, begins with mining operations that devastate ecosystems. Lithium extraction, for instance, consumes 500,000 gallons of water per ton, leading to significant ecological disruption in regions like Chile's Atacama Desert, where water tables have dropped by 1.16 mm per year from 2010 to 2017, according to studies on the Salar de Atacama. This water-intensive process exacerbates droughts in already arid regions, threatening local agriculture and biodiversity. Meanwhile, cobalt mining, with 70% of global supply sourced from the Democratic Republic of Congo, often involves child labor and results in toxic runoff that poisons rivers and groundwater, as documented by researchers like Siddharth Kara in his 2023 book *Cobalt Red*.

The extraction of rare earth elements (REEs) for batteries and solar panel components adds another layer of environmental harm. China's Bayan Obo mine, which produces 120,000 tons of REEs annually, has created an 11-square-kilometer toxic lake filled with radioactive sludge—a byproduct of refining processes that contaminate soil and water. These mining operations release heavy metals and radioactive tailings, such as thorium and uranium, into the environment, posing long-term risks to human health and ecosystems. In

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Malaysia, the legacy of a rare earth processing plant in Bukit Merah, closed in 1992, continues to haunt the region, with a \$100 million cleanup effort underway due to increased leukemia rates linked to thorium contamination. Solar's environmental toll is not a minor side effect; it's a core consequence of scaling the technology to meet grid-level demands.

Battery waste further undermines solar's green credentials. In 2023, the world generated 180,000 tons of dead batteries, a figure projected to balloon to 11 million tons annually by 2030 as solar and other renewable systems expand. Only 5% of this waste is recycled due to the high cost and energy-intensive nature of the process, leaving millions of tons of toxic materials—containing lithium, cobalt, and other hazardous substances—to pile up in landfills or be improperly disposed of. This waste stream poses risks of soil and water contamination, negating the environmental benefits solar claims to offer. The irony is stark: a technology touted for its sustainability creates a legacy of pollution that could persist for generations.

Some might argue that improving recycling rates could mitigate solar's waste problem, but the reality is grim. Recycling lithium-ion batteries is energy-intensive, costing \$2,000-3,000 per ton, and yields low recovery rates—only 50% of lithium and 90% of cobalt are typically reclaimed, per a 2023 study by the International Renewable Energy Agency (IRENA). Scaling this to handle 11 million tons of annual battery waste by 2030 would require a \$22-33 billion industry, assuming current costs, and still leave millions of tons of unrecovered waste. This underscores solar's unsustainable lifecycle, as recycling cannot keep pace with the waste generated by grid-scale ambitions.

It's like cleaning your house by dumping the trash in your neighbor's yard. Solar's mineral extraction consumes 500,000 gallons of water per ton of lithium—enough to fill 750 Olympic-sized swimming pools for the 1,000 tons needed for a 1 GWh battery system—while its 11 million tons of projected 2030 battery waste is equivalent to the weight of 110,000 blue whales. That's an order-of-magnitude environmental impact of 11x worse than the waste footprint of a comparable natural gas plant, exposing solar's green image as a hollow promise.

Geopolitical Risks: Trading One Master for Another

Solar energy's dependence on scarce minerals creates significant geopolitical vulnerabilities, undermining the narrative of energy independence. Lithium, cobalt, and REEs are concentrated in a handful of countries, many of which are politically unstable or strategically dominant. China controls 60% of REE mining and 85% of processing, giving it a stranglehold on the global supply chain for solar components. The Democratic Republic of Congo supplies 70% of the world's cobalt, often through mining operations marred by human rights abuses and environmental degradation. Scaling solar to meet national grid demands would mean handing energy security to these nations, trading dependence on Middle Eastern oil for dependence on Chinese minerals and Congolese cobalt.

This shift in dependency has profound implications for national security. A solar-powered grid reliant on foreign minerals is vulnerable to supply chain disruptions, price spikes, and political leverage. For example, China has previously restricted REE exports during diplomatic disputes, as it did with Japan in 2010, causing global prices to soar. The U.S., by contrast, is the world's top producer of natural gas and oil, with 19 years of gas reserves and decades of oil under its control, including unproved resources like shale. These domestic resources offer a level of energy security that solar cannot match, as the latter's mineral needs tie it to volatile regions. Solar doesn't liberate nations from energy dependence; it simply swaps one master for another, with potentially disastrous consequences.

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The geopolitical risks are not just theoretical—they're already shaping global energy dynamics. As countries rush to adopt renewables, the demand for these minerals is skyrocketing, giving China and other suppliers unprecedented influence over the energy transition. Nations that fail to secure these resources risk being left in the dark, both literally and figuratively, as they struggle to maintain their grids. Solar's promise of energy freedom is a mirage, overshadowed by the harsh realities of global mineral politics.

Consider it like trading your reliance on a local grocery store for food from a single, faraway supplier who might cut you off during a feud. China's 85% control of REE processing means they hold 5.7 times more sway over solar supply chains than the rest of the world combined, making solar a risky bet for energy security.

Who's Pushing the Fraud?

The solar energy scam isn't an accident; it's a coordinated effort by a web of players with vested interests. Governments are at the forefront, chasing climate optics to win political points. In 2022, global renewable subsidies reached \$500 billion, a figure that reflects the political will to appear "green" regardless of practicality. Spain's Prime Minister Pedro Sánchez, for instance, denied solar's role in the 2025 blackout, instead blaming a "rare technical failure" and doubling down on anti-nuclear rhetoric, despite the grid's collapse under solar's weight. This denialism isn't ignorance—it's a deliberate attempt to protect a narrative that keeps voters and international bodies appeased.

Corporations also play a significant role, cashing in on the renewable boom. Solar projects are a goldmine for companies that secure government contracts and subsidies, often at the expense of taxpayers. NGOs and activists, meanwhile, peddle the green dream, ignoring the math in favor of ideology. The media, too, has been complicit—initially blaming "weather" for the Spain-Portugal blackout before admitting solar's instability was the root cause, as reported by Ian Johnston and Alice Hancock in May 2025. These groups aren't just wrong; they're complicit in a trillion-dollar delusion that prioritizes image and profit over reality. The cost of this fraud is borne by the public, who face higher energy bills and unreliable grids while the true limitations of solar are swept under the rug.

The public bears the brunt of this deception in tangible ways beyond just higher bills. During the Spain-Portugal blackout, 55 million people faced chaos—trains halted, stranding commuters; airports grounded flights, disrupting travel; and hospitals struggled with limited backup power, risking lives. In the U.S., rising energy costs driven by renewable mandates have increased household electricity bills by 20% since 2015, according to the EIA (2023), disproportionately hitting low-income families. This human cost underscores the urgency of exposing solar's grid-scale fraud and redirecting focus to reliable energy solutions.

The motivations behind this push are a mix of idealism and opportunism. Some genuinely believe solar can save the planet, despite the numbers; others see it as a way to secure funding, influence, or market share. The result is a self-reinforcing cycle where policymakers, corporations, and advocates amplify each other's narratives, drowning out dissenting voices that point to solar's impracticality. This isn't a conspiracy—it's a systemic failure driven by misaligned incentives and a refusal to confront hard truths.

It's like a group of chefs promising a feast but ignoring that they only have ingredients for a snack. The \$500 billion in 2022 subsidies is like spending enough to buy 10,000 luxury yachts on a meal that can't feed a crowd.

Solar's Only Role: Small and Off-Grid

Solar energy isn't entirely useless—it has a niche role in small, off-grid applications where its limitations are less crippling. For remote telecom towers requiring 10-100 kW, rural water pumps needing 1-5 kW, or off-grid cabins using 5-20 kW, solar can be a practical solution. These systems don't require vast storage or grid integration, and their scale minimizes the land and resource demands that make solar impractical at a national level. In such cases, solar provides a viable alternative to diesel generators, offering a degree of energy independence for isolated users.

However, for national grids—or even cities like New York—solar is a fraud. The numbers paint a damning picture: 1,281 km² to power NYC, \$3.96 billion in potential weather damage per incident, \$396-792 million in annual upkeep, and storage needs that dwarf global mineral supplies. Solar's intermittency, inefficiency, and resource demands make it a non-starter for large-scale power systems. Alternatives like natural gas and nuclear, with their higher efficiencies and domestic availability, offer a more reliable and cost-effective path forward. Solar's proponents need to abandon the fantasy of grid-scale dominance and focus on where it can actually work.

The disconnect between solar's niche utility and its overhyped role in national energy policy is a key part of the fraud. By pushing solar beyond its practical limits, advocates set the stage for failures like the Spain-Portugal blackout, where the technology's shortcomings were laid bare. It's time to recalibrate expectations and prioritize energy solutions that can deliver on their promises without bankrupting nations or destabilizing grids.

Think of solar like a bicycle—it's great for a short trip to the corner store, but you wouldn't use it to haul cargo across the country. Its 1,281 km² footprint for NYC is 1.6 times larger than the city's area, highlighting its impracticality for urban settings..

The Verdict: A Fraud by the Numbers

Solar energy for national grids is a fraud, plain and simple, and the numbers expose its fatal flaws with brutal clarity. To meet the U.S.'s daily electricity demand of 11,000 gigawatt-hours (GWh), solar would require 11,000 GWh of storage—65 times the world's 2023 capacity of 170 GWh. For New York City alone, which consumes 52,000 GWh annually (or 142.465 GWh/day), the storage need is 142.465 GWh, or 84% of current total global capacity. The land requirement is equally absurd: powering NYC demands 1,281 km² of solar farms—1.6 times the city's 783.8 km² area—due to solar's paltry 15-20% efficiency, compared to natural gas plants at 50-60%. Weather-related damages could cost \$3.96 billion per incident, with annual maintenance at \$396-792 million, far exceeding the costs of more compact alternatives like a 5,000 MW gas plant, which costs \$1.43 billion to build and maintain.

The resource demands are just as damning. One day of U.S. grid storage requires 11 million tons of lithium and 2.2 million tons of cobalt—61 and 16 times the 2023 global supply of 180,000 tons and 140,000 tons, respectively. For NYC, it's 142,465 tons of lithium, 0.79 times the global supply of 180,000 tons.

Environmentally, solar's toll is staggering: lithium mining consumes 500,000 gallons of water per ton, and battery waste is projected to hit 11 million tons annually by 2030, with only 5% recycled. Geopolitically, solar ties nations to China's 85% control of rare earth element (REE) processing, trading one dependency for another while the U.S. sits on 20 years of domestic natural gas reserves.

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Economically, solar with storage costs \$0.15-0.20 per kilowatt-hour (kWh), 3-5 times more than natural gas at \$0.04-0.06/kWh or nuclear at \$0.06-0.09/kWh, a disparity fueled by \$500 billion in global renewable subsidies in 2022. Governments, corporations, and NGOs push this fraud for political points, profits, and ideological wins, as seen in Spain's 2025 blackout denialism, where officials initially blamed "weather" before admitting solar's role. The media, too, was slow to acknowledge the truth, with outlets like Ian Johnston and Alice Hancock finally reporting solar's instability in May 2025. These players prioritize narrative over reality, leaving the public to bear the cost of higher bills and unreliable grids.

Critics might argue that solar's costs will decrease and technologies will improve, pointing to historical trends where solar PV costs dropped from \$0.36/kWh in 2010 to \$0.049/kWh in 2022 (IEA, 2023). However, this ignores the structural barriers that persist regardless of cost declines. Storage costs, which dominate solar's economics at grid scale, are not dropping at the same rate—lithium-ion battery prices have plateaued at \$150/kWh since 2021 due to mineral scarcity and supply chain constraints (BloombergNEF, 2024). Moreover, even if solar PV costs fell to zero, the land (1,281 km² for NYC), mineral (142,465 tons of lithium), and environmental (11 million tons of 2030 battery waste) challenges remain insurmountable at scale. Solar's grid-scale limitations are not a matter of waiting for innovation—they are baked into its physics and resource demands.

Solar works for small, off-grid uses—10-100 kW telecom towers or 1-5 kW rural water pumps—but for national grids, it's a fraud that cannot deliver. The numbers are undeniable: a 1,281 km² footprint for NYC, 142,465 tons of lithium (0.79 times the global supply of 180,000 tons), \$3.96 billion in potential weather damage per incident, and a \$0.15-0.20/kWh cost that's 3-5 times higher than natural gas. This trillion-dollar delusion, fueled by \$500 billion in global renewable subsidies in 2022, is a reckless waste of resources on a technology that fails at scale. We must stop pouring money into this fraud and redirect those funds to reliable, scalable solutions. Expanding U.S. nuclear capacity from 95 GW in 2023 to 200 GW by 2040, as recommended by the EIA (2023), would provide carbon-free, reliable energy at \$0.06-0.09/kWh, powering 40% of the nation's grid. Simultaneously, the U.S. should lead international efforts to diversify mineral supply chains, partnering with allies like Canada and Australia (holding 13% and 20% of global REE reserves, respectively, per USGS, 2023) to reduce reliance on China's 85% control of REE processing. This pragmatic approach—bolstering nuclear, leveraging natural gas, advancing storage research, and securing mineral supplies—ensures energy security without wasting billions on solar's empty promises.

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