

We negate, Resolved: The United States should increase its use of nuclear energy for commercial energy production.

Our sole point of contention is that nuclear power would prevent a sustainable future.

Nuclear power is rooted in failure. [In the early 70s](#), America was projected to save millions through nuclear power. One decade later, this same boom was abandoned as the largest managerial disaster in history with billions wasted. Today, this same failure is repeating itself. [Ahmed Abdulla at The Center for Energy Research](#) writes in 2018: Nuclear power appears on the verge of collapse in the US...Across the country, they face grave threats to their profitability and...their continued operation

Nuclear power is always a temporary solution because of its inevitable collapse. [Diane Cardwell of The New York Times](#) in 2017 writes: [past] withdrawal from nuclear construction shows how daunting building plants can be, even *with* generous government subsidies like loan guarantees and tax credits.

Ultimately, Lisa [Zyga](#) of the IIEE concludes in 2011 that due to the cost, complexity and resource requirements of nuclear power, it'll never sustain energy needs on a large scale, and our investment dollars would be more wisely placed in alternate sectors

However, nuclear power's failures are making room for an energy revolution. [Eric Gimon of Forbes Magazine](#) this past December wrote: States are increasingly adopting renewable energy while wind and solar prices keep tumbling. [For example, Renewable technologies accounted for [64%](#) of all new electricity generating capacity constructed in the U.S.]

Overall, [The Freedonia Group](#) projects in 2019: US renewable energy consumption [is going to] increase 4.0% yearly... due to government incentives [and] expected declines in costs...will make it more competitive. [[Renewables](#) are on track to entirely supplant fossil fuels worldwide within two decades.]

Without disruption, America will be powered by green technology in the future. However, increasing nuclear power will disrupt this crucial shift in two ways.

The first is through government lobbying.

Nuclear and clean energy lobbyists oppose each other in the government. Indeed, Dawn [Stover of the Bulletin](#) writes in 2014 "[The Nuclear and the Renewable Energy Lobbies in Congress] compete with each other for government funding."

For example, [Kari Lyderson of Energy News Network](#) continues in 2015: nuclear energy lobbyists have been targeting renewable companies at all levels. These lobbyists go against tax incentives for renewables and have secured changes in regional capacity markets that would harm renewables.

Historically, this tradeoff causes disaster for green technology in America. [Stephanie Cook for The New York Times](#) in 2009 reported: [While] Obama made clean energy a top priority...the Energy Department [was] too weighed down by the nuclear energy program [to achieve any goals].

The second is by crowding out investment.

While government funding for renewable energy has been slashed, it has become self-sustaining through private investment. An analysis by [Bioenergy International](#) explains in 2018: massive flows of finance are needed to accelerate renewable energy investments as private sources provide up to 90% of investment in the sector.

However, - a government-supported nuclear program would divert investment. Mary [Hall of Investopedia](#) explains: government support for an industry incentivizes more private capital to be spent in that industry, causing other competitive industries to have to work harder to gain access to capital.

As a result, nuclear energy directly trades off with investment in green technology. [Rachel Cleetus, director of the Union of Concerned Scientists](#) explains in 2019: when we rely on nuclear energy, the capital investment needed for renewable energy development is funneled off to build more nuclear power plants.

The impact is a sustainable solution to climate change.

In countries that increased nuclear power in comparison to green technology, they saw devastation because of unsustainability. For example in China, [Mark Jacobson of Stanford University](#) quantifies: investment in nuclear plants over renewables resulted in [carbon] emissions increasing 1.3 percent.

On the other hand, green technology will create a sustainable path forward. A [2009](#) UCS report projects: Just 25 percent renewable electricity would lower CO2 emissions 277 million tons annually..., and increased deployment could reduce electricity emissions by 81 percent.

All in all, addressing climate change is crucial. Oliver [Milman](#) of the Guardian explains in 2016 that 295,000 deaths could be prevented if we cut greenhouse gas emissions.

Because we believe that the best solution is the permanent solution, we are proud to negate.

Frontlines

A2 Nuclear Better

<https://www.leonardodicaprio.org/the-7-reasons-why-nuclear-energy-is-not-the-answer-to-solve-climate-change/>

- Nuclear takes 5 to 17 years longer between planning and operation and produces on average 23 times the emissions per unit electricity generated.

a2 green tech investment high

1. Wang '19 renewable investment decreased by 39% as Chinese subsidies have stopped leading to decreased investor confidence.

<https://therising.co/2019/07/17/investors-lose-confidence-in-renewable-energy-as-china-halts-subsidies/>

Over two months ago, the Chinese National Energy Administration (NEA) announced it would stop providing subsidies for onshore renewable energy projects. The announcement seems to have shaken investor confidence. In the first half of 2019, renewable energy investment in China dropped by 39%. Since China accounts for around 24% of global investments in renewables, it led the charge in a global slowdown of investments in renewables. Overall renewable investment dropped around 14% with U.S. investment dropping 6% and European investment dropping 4%. Will China Bounce Back? Still, China's future looks fairly green. Despite a decrease in investment, China is still providing incentives and power-purchase agreements for solar companies. Furthermore, China's goal is grid parity (making solar energy reach the price of coal power). China's not known for its laissez-faire economics, so the country will probably support the solar industry more in the future. Chinese renewables will also likely perform much better in the second half of 2019. Twenty-one gigawatts of new renewable energy projects were announced in late May, so investments in them should rise significantly. Global Renewable Energy Investment Outlook Even if China bounces back, global renewable investment does seem to be on the downturn. While the U.S. and Europe only experienced small decreases in investments, the world needs to significantly increase renewable capacity to stop climate change.

a2 natural gas always cheaper

Compared with the same period a year earlier, the United States saw a 93% increase in the amount of storage deployed in the third quarter of 2019. By 2024, that number is expected to top 5.4 gigawatts, according to a forecast by market research firm Wood Mackenzie Power & Renewables. The market value is forecast to increase from \$720 million today to \$5.1 billion in 2024. Driving such growth is an increased focus on adding renewable energy sources to the nation's grid.

Only in the past decade has the widespread adoption of renewable energy sources become an economic possibility, said Paul Denholm, a principal energy analyst at the National Renewable Energy Laboratory (NREL). He joined NREL 15 years ago and, at the time, he and

other analysts were busy plotting a path to 20% of the nation's energy supply coming from renewable sources. Now, they're aiming much higher.

"The declining cost of wind and solar and now batteries makes it conceivable to consider 100% renewables," he said.

1.

Justin Mikulka, 6-3-2019, "It's Time to Stop Calling Natural Gas a 'Bridge Fuel' to a Safe Climate, Says New Report," DeSmog,
<https://www.desmogblog.com/2019/06/03/oil-change-international-natural-gas-not-bridge-fuel>

That was a different time. The low cost of renewable energy has helped end the future of the coal industry and is now poised to do the same to natural gas. The concept of natural gas as a "bridge fuel" was based on the idea that the world needed a reliable and economical energy source to cover the transition until renewables plus storage were a viable alternative. That time is now. And this is happening as the world is awash in very cheap natural gas. In America, the price of natural gas [has gone negative](#) in places like the Permian Basin in Texas. In North Dakota, oil and gas producers are currently [flaring 20 percent of the gas](#) they produce because it isn't worth capturing. Natural gas prices can't go lower and [can only go up from here](#). Meanwhile, the costs of renewables continue to fall, and energy analysts predict that the costs of [battery storage](#) will continue dropping rapidly. The economics of renewables plus storage are competitive with natural gas now and appear poised to widen the gap in the near future.

a2 batteries expensive

A new Stanford study has crunched the numbers and come to a simple conclusion: In the slightly longer term, at least, the answer is no. The research found that the cost of revamping the world's economy to run entirely on renewable energy would be huge, but it would also pay for itself in just seven years once we got everything up and running. Bloomberg reports:

It would cost \$73 trillion to revamp power grids, transportation, manufacturing and other systems to run on wind, solar and hydro power, including enough storage capacity to keep the lights on overnight, Mark Jacobson said in a study published Friday in the journal *One Earth*. But that would be offset by annual savings of almost \$11 trillion, the report found.

"There's really no downside to making this transition," said Jacobson, who wrote the study with several other researchers. "Most people are afraid it will be too expensive. Hopefully this will allay some of those fears."

a2 intermittance

The precipitous price decline of lithium-ion batteries has made solar viable in a growing number of areas. Moreover, solar-plus-storage is allowing solar companies to access off-grid markets that had been previously cut off. The off-grid markets are expected to experience a CAGR of 12.5% in the coming years. Given the benefits of having battery technology paired up with solar, many major solar companies have jumped into the battery market.

<https://seekingalpha.com/article/4320859-solar-plus-storage-push-solar-to-new-heights>

disclosed

contention 1 : renewable

Nuke power gets nuked (coronavirus is coming for uuuuu)

Abdulla, Ahmed, et al. "US Nuclear Power Is on the Verge of Collapse – and There Are No Solutions on the Horizon." *Energy Post*, 16 Aug. 2018, energypost.eu/us-nuclear-power-is-on-the-verge-of-collapse-and-there-are-no-solutions-on-the-horizon/.

Nuclear power appears... in the U.S

no money still the same problems.

Cardwell, Diane. "The Murky Future of Nuclear Power in the United States." *The New York Times*, The New York Times, 18 Feb. 2017, www.nytimes.com/2017/02/18/business/energy-environment/nuclear-power-westinghouse-toshiba.html.

This was supposed ... an uphill battle.

SUUUUSStain(ability) is good for the future.

Zyga, Lisa. "Why Nuclear Power Will Never Supply the World's Energy Needs." *Phys.org*, Phys.org, 11 May 2011, phys.org/news/2011-05-nuclear-power-world-energy.html.

The 440 commercial ... future energy infrastructure.

GT going up

Energy Innovation [Forbes], 12-2-2019, How We Need To Evolve America's Power Grid To Enable A Clean Energy Future, <https://www.forbes.com/sites/energyinnovation/2019/12/02/overcoming-barriers-to-100-clean-energy-part-two-the-bulk-electricity-system/#53380ea4dc36>

For decades, two..entire energy economy

It's going UPPPPPPP (2.0)

Freedonia Group [PR Newswire], 12-18-2019, US Renewable Energy Consumption to Increase 4.0% Yearly in Volume Terms to 2024, <https://www.prnewswire.com/news-releases/us-renewable-energy-consumption-to-increase-4-0-yearly-in-volume-terms-to-2024--300976366.html>

US consumption of... for further study

There is a love and hate relationship.

Stover, Dawn. "Nuclear vs. Renewables: Divided They Fall." *Bulletin of the Atomic Scientists*, 28 June 2018, thebulletin.org/2014/01/nuclear-vs-renewables-divided-they-fall/.

[Stover of the Bulletin](#) People who agree... to agree on.

Look at my Fire ass example.

Lydersen, Kari. "Why the Nuclear Industry Targets Renewables Instead of Gas." *Energy News Network*, 9 Feb. 2015,

energynews.us/2015/02/06/midwest/why-the-nuclear-industry-targets-renewables-instead-of-gas/.

Cheap natural gas... straight-face test."

THis is all On OBAMA bro.

Cooke, Stephanie. "A Nuclear Waste." *The New York Times*, The New York Times, 18 Mar. 2009, www.nytimes.com/2009/03/18/opinion/18cooke.html.

impacts of climate change....nuclear weapons establishment.

off trade investment

Hall, Mary. "How Governments Influence Markets." *Investopedia*, Investopedia, 29 Jan. 2020, www.investopedia.com/articles/economics/11/how-governments-influence-markets.asp.

In the 1920s...taken into consideration.

off trade green (WHERE IS BUILTA CANYON?????) - evi shows how there is a tradeoff and gives the warrant

Jeff Johnson [C&EN], 9-23-2019, Can nuclear power help save us from climate change?,

<https://cen.acs.org/energy/nuclear-power/nuclear-power-help-save-us/97/i37>

Globally, nuclear power... impacts of climate change.

Mpk : Solution

In countries that increased nuclear power in comparison to green technology, they saw devastation because of unsustainability. :D:D:D:D:D xD

Jacobson, Mark Z., et al. "The 7 Reasons Why Nuclear Energy Is Not the Answer to Solve Climate Change." *The Leonardo DiCaprio Foundation*, 20 June 2019,

www.leonardodicaprio.org/the-7-reasons-why-nuclear-energy-is-not-the-answer-to-solve-climate-change/.

In fact, China's... prior and since

Example proves

Mark Z. Jacobson [Leonardo DiCaprio Foundation], no date, The 7 reasons why nuclear energy is not the answer to solve climate change,

<https://www.leonardodicaprio.org/the-7-reasons-why-nuclear-energy-is-not-the-answer-to-solve-climate-change/>

There is a ... nuclear with renewables.

Gtech is ON GOD SO FIRE

"Benefits of Renewable Energy Use." *Union of Concerned Scientists*, 20 Dec. 2017, www.ucsusa.org/resources/benefits-renewable-energy-use.

Union of Concerned Scientists [07-14-2008], Benefits of Renewable Energy Use,

<https://www.ucsusa.org/resources/benefits-renewable-energy-use>

Wind turbines and ... resilient, clean technologies

Watch out for CC

Oliver Milman [Guardian], 2-22-2016, 295,000 US deaths may be prevented by 2030 with cuts to greenhouse gas,

<https://www.theguardian.com/environment/2016/feb/22/us-deaths-greenhouse-gas-295000-emission-cuts-climate-change>

America's international climate...of air pollution.