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

## Our sole contention is combating climate change.

Commercial nuclear power has been long ignored. Ahmed Abdulla at The Center for Energy Research writes in 2018: "Nuclear power appears on the verge of collapse in the US, fac[ing] grave threats to their profitability... Efforts to build new nuclear reactors in this country have been either canceled or beset by ... delays and cost overruns."

Due to this decline, America's climate crisis is projected to reach alarming levels. Brad Plumer at Vox News reports in 2014: if more...[nuclear plants] close in the years ahead, it will be...difficult for the US to [cut].....emissions and address climate change. In years ahead, US emissions could rise an additional 4 percent.

However, by increasing nuclear power, America would combat climate change in two ways.

## The first way is by creating a sustainable future.

American green tech is powered through dirty and unsustainable energy. Ed Ireland of the Energy Education Council in <a href="BSEEC">BSEEC</a> finds that "fossil fuels are required to manufacture..., transport and construct..., and provide backup electricity [to renewables]."

Without reform, limiting emissions will become infeasible. <u>Lorne Stockman</u> of Oil Change International explains in 2019 that "the myth of gas as a "bridge" to a stable climate does not stand up to scrutiny... the greenhouse gas emissions from burning the gas itself are enough to overshoot climate goals"

Nuclear power would solve this problem by providing a sustainable, clean backup energy. The <u>IEA</u> writes in 2019: "nuclear power will be needed for clean energy transitions...the key to making energy systems clean is to turn the electricity sector from the largest producer of CO2 emissions into a low-carbon source that reduces fossil fuel emissions"

And if given the opportunity, companies would prefer nuclear energy to save costs. <u>Corey Bradshaw, in his 2015 edition of Applied Energy</u> writes: "the transition to low-carbon energy...would be <u>50</u>% more expensive if nuclear power were not an option."

For example, Anthony of GreenBiz finds that <u>New York</u> is ... making nuclear power the real bridge fuel; one that is cleaner... than natural gas. <u>Bennett of the International Energy Agency</u> continues: "Countries that implemented nuclear programs....such as Belgium, France, and Sweden — improved...their energy strategies by reducing their [carbon] emission by about one or more megatonnes per year"

The result of making renewable energy clean and reliable is decreasing emissions. A <u>2009</u> UCS reports projects: "Just 25 percent renewable electricity would lower emissions 277 million tons annually..., and increased deployment could reduce electricity emissions by 81 percent."

As we decrease emissions, lives are saved. Oliver <u>Milman</u> of the Guardian explains in 2016 that "295,000 premature deaths could be prevented in the country by 2030 if deep cuts to greenhouse gas emissions are achieved."

## The second is by preventing fossil fuel fill in.

Nuclear power is always replaced by fossil fuels as it declines. Rebecca Beitsch of The Hill in 2019 explains: "[America's] aging nuclear...plants...mean many of the plants are set to fall out of use before renewables... are able to fill in the gaps...[leading] to reliance on fossil fuels."

For example, <u>The Rhodium Group in 2016</u> projects that: "about 75 percent of lost [nuclear] power will likely be replaced by natural gas, and greenhouse-gas emissions will be higher than they otherwise would be. [This is because] In many regions, wind and solar haven't been able to scale up fast enough to replace that much lost electricity at once."

Historically, we have seen the negative impacts in other countries. <u>Stephen Jarvis at The National Bureau for Economic Research</u> in 2019 found: "the shutdown of nuclear production...in Germany...was replaced by coal-fired production." <u>Wired</u> 20 finds that this led to "the release of an additional 36 million tons of carbon dioxide per year, or about a 5 percent increase in emissions."

Comparatively, nuclear power decreases emissions. <u>Sanglim Lee of The Korean Economic Institute</u> in 2017 quantifies: "a…1% increase in nuclear power led to a 0.32% decrease in CO2 emissions. [Every year, nuclear power prevents <u>528</u> million metric tons of carbon dioxide emissions that would otherwise come from fossil fuels.]"

Overall, the process of cutting emissions through nuclear power is crucial. <u>James Hansen of Columbia</u> <u>University</u> writes in 2013: "[Losing nuclear power] would lead...[up to] 7 million deaths [per year] and 240 gigatonnes of...emissions globally."

Thus, we affirm.

## Sweden example

By 1986, half of the electrical output of the country came from nuclear power plants, and total CO2 emissions per capita (from all sources) had been slashed by 75% from the peak level of 1970.

http://environmentalprogress.org/big-news/2016/5/16/clean-energy-in-crisis- nuke power decline wipe out 43 pecent decline in emissionsT