Testimony of Heather Reams, Executive Director,

Citizens for Responsible Energy Solutions (CRES)

To the U.S. House of Representatives, Select Committee on Climate Crisis hearing

"Making the Case for Climate Action: Creating New Jobs and Catalyzing Economic Growth"

April 20, 2021 Noon EDT

Chairwoman Castor, Ranking Member Graves, and Members of the Committee, thank you for the opportunity to testify today about how climate policy can create jobs and grow the economy.

My name is Heather Reams, and I am the Executive Director of Citizens for Responsible Energy Solutions, also known as CRES. We are a non-profit organization that engages policymakers and the public about responsible, conservative solutions to address climate change while increasing America's competitive edge. This hearing is of significant importance to CRES because we believe that climate action does not come at the expense of American job growth or economic expansion.

We all agree that the science says climate change needs to be addressed. Where there is disagreement, though, is the math. Adding unnecessary cost burdens, multiplying an already "too big to fail" bureaucracy, subtracting perfectly viable energy options and American jobs, and dividing up our children's future will not equal net zero. It is time for Congress to act on reason and common sense rather than the rigidness of the activist fringe.

A sure bet is an investment in American innovators, probably the most powerful source for good the world has ever known. We must empower and protect them. Give them access to resources like our world-class federal laboratories and abundant private sector capital. Give them strong intellectual property protection, especially from overseas threats. Finally, make government a partner in the work, not a barrier, so that they can build facilities and a specialized workforce here in the U.S. to scale up manufacturing and gain access to global markets. If we follow this model, the United States will enjoy continued economic strength, robust job creation, and lead the world in providing energy solutions that will result in reducing not just emissions at home, but global emissions.

My recommendations are simple: 1. Reduce energy prices, not energy choices. 2. Export American innovation, not American jobs; and 3. Shrink our emissions, not our economy.

1. Reduce energy prices - *not energy choices.*

Low energy costs lead to more manufacturing and jobs domestically. Today's energy choices keep energy costs affordable so that we can continue to work toward cleaner technologies. All the above does not necessarily mean a future dominated by fossil fuels. Instead, it is a realistic outlook about the transition to reliable low-emissions energy sources at an affordable price.

2. Export American innovation - *not American jobs.*

Investment in innovation is key to maintaining the downward trend in emissions in the power sector, as well as to lower emissions in hard-to-decarbonize sectors such as transportation and industry, which are now the second and third sources of emissions in the United States. Cutting red tape and safeguarding American intellectual property from global competitors will foster an environment in which our nation's innovators have the resources they need to help us

get to a low-carbon economy, while providing jobs for hard-working Americans. Scaling new clean energy technologies will also reduce their cost and make them more accessible for developing economies whose carbon footprint is growing.

3. Shrink our emissions – *not our economy.*

It is clear at this point that clean energy is not at odds with economic growth. Providing incentives that will allow the most innovative technologies to flourish and be produced at scale will help position the American clean energy industry globally. To ensure America's global leadership in technological innovation for clean energy, however, we must be very cognizant of the global supply chains related to these technologies. We must take great care to reduce our reliance on foreign competitors for the critical minerals and components that are used in elements such as wind turbines and EV batteries.

At a basic level, investing in innovation is an investment in America's future. Federal support for R&D, and an unfettered private sector to deploy and commercialize clean energy technologies will reduce costs and increase options to address climate change. Competition in a free and fair market will help drive the domestic economy as America's next generation of clean energy solutions are deployed around the world. We've seen this work in other industries and technologies, and if done correctly will work for climate mitigation, too.

Since this week the President is hosting the Leaders Summit on Climate, I would like to address the 2050 net zero target that the Biden administration has embraced and how it relates to innovation and job growth. While more countries appear to be adopting this mid-century goal, here in the U.S. we have not answered the all-important questions: is it realistic? And what is needed to achieve it?

It's undoubtedly a huge challenge. We currently lack the technology required to tackle it in a way that is commercially viable. These are not one or two technologies to solve a problem in one or two sectors here in America – we need a suite of breakthroughs covering multiple sources and sectors that can be scaled to deploy around the world. These technologies need to be affordable and reliable, and more importantly, globally cost competitive with today's conventional energy.

Global deployment will be needed

We have to think big – in a different way. We no longer live in the U.S.-centric 1990s, when we produced a quarter of global emissions and the rest of the OECD produced another 25 percent. Back then we could pursue unilateral policy – perhaps in coordination with a few other economies – and make a major dent in global emissions. That is no longer the case.

Today, 85 percent of all greenhouse gas (GHG) emissions occur outside U.S. borders—a share that will increase to about 90 percent by the end of the next decade. Global emissions are increasing, as global energy demand is rising, primarily due to increased living standards and energy use in the developing world. As a group, China and developing economies are estimated to account for over 100 percent of the anticipated increase in global emissions through 2050. This means that U.S. climate and energy policy must foster innovations and commercialization pathways that work for America as well as India, Nigeria, and Indonesia. Simply focusing on achieving net zero by 2050 here in the United States is unlikely to produce what it takes for poor countries to do the same.

We need to be clear-headed about what poor countries can and will do. Here in the United States, there's a lot of talk about transitioning away from fossil fuels – that conversation

does not exist in the developing world. While there is strong support for renewables and low-carbon technologies in those countries, they all support traditional fossil fuel energy as well.

The green premium that wealthy countries take on is unrealistic in poorer countries focused on poverty eradication and energy access. Instead of exporting high regulatory costs, we would be far more effective and equitable driving down the cost of low-carbon technologies to make them competitive and viable for developing economies.

We cannot solve climate change by focusing on domestic policies that ignore basic facts like China's emissions, and what poor countries will and will not do. And if we do not change the current global emissions trajectory, we might as well focus on adaptation and resiliency.

But let's assume that we're successful. That we are able to produce affordable and reliable low-carbon technologies that poor countries will buy without any mandates, subsidies or U.S. financial assistance. Will we benefit commercially? Will there be replacement jobs for workers from formerly carbon-intensive industries? Will a low-carbon economic transformation generate substantial national wealth that all will share in, as has been so often promised?

If we rethink our policies related to regulation, trade, and intellectual property protection, maybe. If we continue doing what we have been doing, absolutely not.

Never ending subsidies and mandates skew markets in a way that stifles the American innovation necessary to address global emissions and harms entrepreneurs. In comparing the effect of Chinese subsidies on the solar module market, the Information Technology and Innovation Foundation found that as American manufacturers struggled to compete against rivals heavily funded by the Chinese government, they invested less in the very innovation that created the market in the first place. When the United States fails to enforce its trade rules on China, it's

no surprise that companies scale back their investment in innovation: why invest the time, energy and money in something that will be stolen without consequence?

Solar is a cautionary tale for how wrong this can go. It was invented in the United States and then stolen by China, which through predatory trade practices nearly destroyed our homegrown manufacturing. In 2006 the United States produced 8 percent of global solar panels compared to China's 15 percent. In just over ten years, China's share had grown to over 70 percent while America's was negligible. But we continue to pay for it, in 2017 the U.S. imported 88 percent of its demand for solar cells and modules.

We must not repeat this mistake again. Well-meaning but misguided policies that incentivize thousands of new factory jobs in China on the U.S. taxpayer's dime is not a clean energy jobs program for America.

One very important principle that climate policy almost always gets wrong is: Policy should cut energy prices, not energy choices. Competitive markets are the most efficient path to the best solution at the lowest cost.

Here in America, there is a strong push to reduce GHG emissions by blocking fossil fuel infrastructure, including pipelines and terminals that would ultimately result in exporting that energy overseas. In my opinion, this is misguided and harms our efforts to reduce global emissions. While it is important to encourage other countries to deploy low-carbon technologies and systems, we must recognize that countries, even those in the European Union, will continue to use fossil fuels for the foreseeable future. At least until the global community commercializes low-carbon technologies that can compete with conventional energy.

It's important to understand that the GHG life-cycle emissions of fossil fuels vary by supplier — often significantly. According to the Department of Energy's National Energy Technology Laboratory, Russian-produced natural gas shipped by pipeline to Europe has approximately 41 percent higher life-cycle emissions (CO2 equivalent) than U.S. liquefied natural gas (LNG) shipped to the same destination. Russian-produced natural gas shipped by pipeline to China has 47 percent higher life-cycle emissions than U.S. LNG exported to China. Heavy oil produced in Venezuela has 50 percent higher life-cycle emissions than light oil produced in Wyoming.

When the world switches from foreign to U.S. fossil fuels, the emissions reductions are enormous. If the European Union produced electricity with U.S. natural gas instead of Russian, the associated global emissions would fall approximately 72 million metric tons annually. For comparison, the EU estimates that it needs to reduce its emissions by 78 million metric tons each year to reach its 2030 targets under the Paris Agreement. If China imported U.S. LNG instead of Russian gas via a recently completed pipeline, associated global emissions would be approximately 65 million metric tons lower. The emissions impact will increase significantly as China is projected to lead the world in the growth of natural gas consumption.

A similar story of misplaced demonization exists with nuclear power. We know that nuclear generates some of the cleanest, most reliable power in the world. Producing zero greenhouse gas emissions, and with new, advanced safety designs coming online, nuclear should be a growing piece of our energy portfolio if we want to reach net zero carbon emissions. But instead of learning we've allowed ourselves to be frightened off by accidents like Chernobyl, which was caused by bad design and human incompetence, and Fukushima, which was caused by a natural disaster and resulted in one death linked to radiation exposure. Instead of

opportunities to build better, safer facilities, we've shuttered our most efficient zero-carbon power facilities or worse, turned them into coal plants.

Do better with critical minerals

Critical minerals are materials essential to the economic and national security of the country, but whose supply may be at risk due to geological scarcity or geopolitical issues. A May 2020 report by the International Energy Agency (IEA)[1] concluded that the transition to a low-carbon economy will require a reliable supply of critical and strategic minerals. Cobalt, lithium, and nickel, for example, are key for battery performance and charging capability. Copper is essential for anything involving electrification, given its exceptional conductivity. Many U.S. businesses are voluntarily committing to sourcing power from renewables like wind power or transitioning completely to electric vehicles (e.g., General Motors). Fulfilling this demand will strain the already limited availability of these minerals. According to the IEA report, an electric vehicle requires five times the amount of critical minerals than a fossil fuel vehicle does, and a wind turbine plant demands eight times as much as a gas-powered plant with a similar capacity.

The Democratic Republic of Congo (DRC) produces around 70 percent of the world's cobalt, and China is responsible for refining the same percentage of cobalt globally. Between 2015 and 2018, the U.S. obtained around 80 percent of rare earth imports from China.[2] China is the largest global consumer of cobalt, with 80 percent being used to manufacture rechargeable

[1] International Energy Agency, "Clean energy progress after the Covid-19 crisis will need reliable supplies of critical minerals," 6 May 2020, https://www.iea.org/articles/clean-energy-progress-after-the-covid-19-crisis-will-need-reliable-supplies-of-critical-minerals.
[2] United States Geological Survey, "Rare Earths Data Sheet," *Mineral Commodity Summaries 2020*, https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-rare-earths.pdf.

batteries,[3] and has the largest lithium-ion battery market in the world. In 2019, the top three U.S. suppliers of lithium-ion batteries for EVs were South Korea, Japan and China.[4]

The COVID-19 pandemic has evidenced the risks of relying on foreign countries for a regular supply of goods and minerals that are key for the daily operations of many industries. These risks are accentuated when this dependence is concentrated in commercial and geopolitical adversaries such as China. Additionally, accusations of hypocrisy ring true when the world's greatest democracy relies so heavily on regimes known for child labor and human rights abuses.

Transitioning to a clean energy economy should not come at the expense of a clean conscious. Building a secure supply chain for our low-carbon technologies with our allies, including the mining and processing of the necessary critical minerals to produce them should be a key priority for America.

Thank you for the opportunity to share my organization's views with you today. Making sure that America's climate policy supports our workers and our economy as well as our environment is our best hope for curbing the impact of global emissions.

[3] United States Geological Survey, "Cobalt Data Sheet," *Mineral Commodity Summaries 2020*, https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-cobalt.pdf.
[4] Jeff Horowitz, David Coffin, and Brennan Taylor, *Supply Chain for EV Batteries: 2020 Trade and Value-added Update*, Office of Industries Working Paper ID-072, U.S. International Trade Commission (USITC), January 2021, https://www.usitc.gov/publications/332/working_papers/supply_chain_for_ev_batteries_2020_trade_and_value-added_010721-compliant.pdf.