

## **Alex Epstein submitted testimony for June 30, 2021**

Thank you for the honor of testifying before this committee. What I will say today may shock many of you. My views on energy are indeed unconventional, but I hope you will hear me out with an open mind since we share the same goal: a prosperous and flourishing Puerto Rico.

I want to make the case that the one thing that will most help the people of Puerto Rico lift themselves out of crushing poverty is the thing many of you believe should be eliminated: low-cost, reliable, fossil fuel energy.

For just a brief moment, I'd like to ask all of you to close your eyes. I'd like you to imagine an ambitious young Puerto Rican woman -- I'll call her "Mia." Mia studied hard at the Emilio Delgado High School in Corozal.

Mia's passion is Artificial Intelligence and she dreams of working at a high tech startup. Sadly, opportunities are sparse because many companies have fled Puerto Rico--and many more avoid it--due to high-cost and unreliable energy.

Mia applies for a remote job at a Silicon Valley tech incubator, but during her interview, the electricity suddenly cuts out. The screen goes blank. She hopes it comes back quickly, but hours go by with no Internet as she waits in the sweltering heat with no AC.

Think of Mia's despair in those moments. Think of how much low-cost, reliable energy could have helped her when she needed it most.

I know that every member of this committee shares the same goal I do: a healthy, prosperous and flourishing Puerto Rico. In order to help millions of talented and passionate people like Mia, we must look carefully at the full context of facts about Puerto Rico's energy options.

Here are three crucial facts that I almost never hear discussed about Puerto Rico. First, the percentage of Puerto Ricans currently living in poverty is 43%. It's 10% in the 50 states. Second, the cost of energy in Puerto Rico vs. the states is up to 3 times higher. Third, the per capita income in Puerto Rico is \$13,000.<sup>1</sup>

Honorable members, does it strike you as fair that someone earning \$13,000 per year should be paying 3 times what you and I pay for the energy that powers our homes? I don't think that's fair. And I'm sure you don't either. So what's the solution?

While we are told that solar and wind can provide low-cost, reliable energy, nothing could be further from the truth. Because solar and wind are unreliable, they don't replace reliable power plants — they add to the cost of reliable power plants.

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<sup>1</sup> [U.S. Census Bureau Quick Facts Puerto Rico](#)  
[U.S. Census Bureau Quick Facts United States](#)

The more wind and solar that grids use, the higher their electricity prices. German households have seen prices double in 20 years due to wasteful, unreliable solar and wind infrastructure. Their electricity prices are 3 times ours — which are already too high due to solar and wind.<sup>2</sup>

The only way for Puerto Rico to get low-cost, reliable electricity anytime soon is using low-cost, reliable fossil fuel energy sources like natural gas and coal--along with some massive regulatory reforms I discuss in my written testimony, such as scrapping the Jones Act.

We owe it to the people of Puerto Rico to give them the full context--the benefits and drawbacks of all their options. This includes recognizing any real coal ash problems, but also recognizing that there are many solutions to coal ash that don't require shutting down power plants.

Giving the people of Puerto Rico the full context also includes recognizing that fossil fuels' CO2 emissions do impact climate. But it also includes being precise, not hysterical, about that impact.

As I explain in my written testimony, there is climate change, but not a climate crisis--and certainly not one that justifies condemning generations of Puerto Ricans to endless poverty by denying them low-cost, reliable fossil fuel energy.

The stakes could not be higher. I think about Eladia Dávila, who was breathing with the help of a mechanical ventilator. During prolonged blackouts, her ventilator shut down and, tragically, she died. Her autopsy noted plainly that a ventilator “does not work without power.”<sup>3</sup>

Ladies and gentlemen, nothing works without power. Not ventilators. Not incubators. Not farms. Not schools. Not the millions of brave and passionate people who want to provide for their families and live lives of dignity and opportunity.

You have it in your power today to help Puerto Ricans gain the power--the low-cost, reliable power--they need to escape crushing poverty.

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<sup>2</sup> Public generation of electricity was over 488 terawatt-hours in Germany for 2020, solar and wind combined generated over 37%. In 2002 they generated just over 3%.

[Fraunhofer ISE energycharts.de](https://www.ise.fraunhofer.de/en/energycharts)

German household electricity prices have more than doubled to over 0.3€ per kWh (\$0.35 per kWh depending on current exchange rate) since 2000 when the modern renewable energy law started to massively incentivize solar and wind capacity on the German grid.

[BDEW Strompreisanalyse Jan 2021 p. 7](#)

The average US household price in 2019 was \$0.1301 per kWh.

[U.S. Energy Information Administration Electric Power Annual table 5a](#)

<sup>3</sup> [Quartz, Puerto Rico's Center for Investigative Journalism, and the Associated Press The Victims of Hurricane Maria database](#)

I hope that any of you who are interested in this mission will join me on a fact-finding trip to Puerto Rico in the coming weeks. We will have an honest, open discussion with Puerto Rican energy experts--who are too often left out of important policy discussions like this one.

I would be honored to work with all of your offices -- Democrat and Republican -- to help the people of Puerto Rico flourish. I look forward to your questions. And thank you again for the opportunity to share my perspective with you.

To expand on my explanation of why Puerto Rico needs more low-cost, reliable, fossil fuel energy, I want to explain 4 points in detail:

1. The true state of fossil fuels vs. alternatives in Puerto Rico and around the world
2. The climate impacts of fossil fuels
3. How to empower Puerto Rico
4. The consequences of pursuing fossil fuel elimination policies.

### **The true state of fossil fuels vs. alternatives in Puerto Rico and around the world**

There is one and only one proven formula for low-cost, reliable electricity. You need to build reliable, resilient power plants and ensure a reliable fuel supply. Most of the time this means fossil fuels--natural gas, coal, or oil--sometimes it means hydro or nuclear.

What will definitely not provide low-cost, reliable electricity is what many members of this committee support pursuing--a so-called 100% renewable grid based on sunlight, wind, and batteries.

While we are told that solar and wind can provide low-cost, reliable energy just as well as fossil fuels, nothing could be further from the truth. Because solar and wind are unreliable, they don't replace reliable power plants — they add to the cost of reliable power plants.

The more wind and solar that grids use, the higher their electricity prices. German households have seen prices double in 20 years due to wasteful, unreliable solar and wind infrastructure. Their electricity prices are 3 times ours — which are already too high due to solar and wind.<sup>4</sup>

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But wait, what about the claim by Elon Musk and others that with enough batteries, unreliable wind/solar will work? Using Musk's best prices, the batteries necessary to store just 3 days of the world's energy would cost *400 trillion dollars* — that's 4.5 times global GDP!<sup>5</sup>

The fossil fuel industry is the only industry that can produce low-cost, reliable energy for 8 billion people in the next several decades. That's why globally, fossil fuel use is 4 times all other energy use combined — and why oil, gas, and coal use is exploding in the developing world.<sup>6</sup>

The only moral and practical way to lower global CO2 emissions long-term is to develop low-carbon sources that are cheaper than fossil fuels. China, for one, will not stop using fossil fuels until it is cost-effective to do so.

China has a clear strategy of running its economy on fossil fuels, while encouraging others to run on inferior, unreliable solar and wind — that is made using Chinese fossil fuels, which produce 85% of Chinese energy.<sup>7</sup> In 2020 China added 38 GW of coal plants and has 247 GW (enough to power 3 Texas) in development.<sup>8</sup> All designed to last 40+ years.<sup>9</sup>

I believe the most promising thing American can do to lower emissions long-term is to decriminalize nuclear energy. Nuclear is actually the safest source of energy and the only way to provide reliable non-carbon electricity anywhere in the world. Yet the government is overregulating it to death. And by insisting on “renewable” solar and wind, governments are further harming nuclear.

## The climate impacts of fossil fuels

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The average US household price in 2019 was \$0.1301 per kWh.

[U.S. Energy Information Administration Electric Power Annual table 5a](#)

<sup>5</sup> “The battery pack portion of it is less than \$200/kWh. Power electronics and servicing over 15 to 20 years take the price up to roughly \$300/kWh.”

[Cleantechica- Tesla Megapack, Powerpack, & Powerwall Battery Storage Prices Per kWh](#)

World energy consumption is 583.9 Exajoule annually or 4.8 EJ per 3 days  $\approx$  1,330 TWh (1 EJ  $\approx$  278 TWh).

$1,330 \text{ TWh} * \$300/\text{kWh} = \$399 \text{ trillion.}$

[BP Statistical Review of World Energy 2020](#)

Global annual GDP is about \$87 trillion.

[World Bank Data](#)

<sup>6</sup> [BP - Statistical Review of World Energy 2020](#)

<sup>7</sup> China's primary energy consumption from coal, oil, and natural gas was over 85% of the total in 2019.

[BP - Statistical Review of World Energy 2020](#)

<sup>8</sup> [WSJ - How to Add Gas to U.S.-China Climate Cooperation](#)

<sup>9</sup> [David Wojcik - CHINA LOVES COAL FAR MORE THAN WIND](#)

What about the CO2 emissions from fossil fuels? Am I denying their impacts on climate? No. I am acknowledging that they do impact climate, but recognizing that the benefits of fossil fuels far, far outweigh any negative impacts.<sup>10</sup>

Contrary to what some expect, I did not become a champion of fossil fuels because the fossil fuel industry paid me to; I came to all my views before I knew anyone from that industry. My conclusion came from my background as a philosopher.

As a philosopher, I believe passionately in objective thinking methods. One crucial thinking method is "considering the full context." That means carefully weighing the benefits and side-effects of everything, whether we're talking about vaccines or antibiotics or fossil fuels.

When I became interested in energy 14 years ago, I was disturbed that most media and politicians didn't look at the enormous, life-or-death benefits of fossil fuels--just the side effects. When I looked at them for myself, I found that the benefits far, far outweigh the side-effects--including CO2.

CO2 emissions from fossil fuels do impact climate. Climate change is real. But "climate crisis" is a fiction that comes from wildly exaggerating fossil fuels' negative climate-related impacts and ignoring fossil fuels' massive positive climate-related impacts.

Fossil fuels' CO2 emissions have contributed to the warming of the last 170 years, but that warming has been mild and manageable — 1 degree Celsius, mostly in the colder parts of the world. And life on Earth thrived when CO2 levels were at least 5 times higher than today's.<sup>11</sup>

When you hear scary claims about a "climate crisis," keep in mind that climate catastrophists have been claiming climate crisis for 40 years. For example, President Obama's science advisor John Holdren predicted in the 1980s that we could have up to 1 billion climate deaths today.<sup>12</sup>

After 40 years of "climate crisis" predictions by climate catastrophists, human beings are safer than ever from climate. In fact, the rate of climate disaster deaths—deaths from extreme

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<sup>10</sup> [Alex Epstein- Talking Points on the SoCalled Climate Crisis](#)

<sup>11</sup> The decadal smoothed data from the UK Met Office HadCRUT4 dataset shows an increase of 0.974°C between 1850 and 2019.

[UK Met Office HadCRUT4 dataset](#)

"The best estimate of CO2 concentration in the global atmosphere 540 million years ago is 7,000 ppm, with a wide margin of error."

[Patrick Moore - THE POSITIVE IMPACT OF HUMAN CO2 EMISSIONS ON THE SURVIVAL OF LIFE ON EARTH](#)

<sup>12</sup> "As University of California physicist John Holdren has said, it is possible that carbodioxide climate-induced famines could kill as many as a billion people before the year 2020."

Paul Ehrlich, *The Machinery of Nature* (New York: Simon & Schuster, 1986), 274

temperatures, droughts, wildfires, storms, and floods—has decreased by \*98%\* over the last century.<sup>13</sup>

Fossil fuels were supposed to make climate far more dangerous in the last 40 years but they have actually made it far safer by providing low-cost energy for the amazing machines that protect us against storms, protect us against extreme temperatures, and alleviate drought.<sup>14</sup>

## How to empower Puerto Rico

The fossil fuel industry makes the world a far better place to live—and is needed by billions more. We don't have a moral obligation to shrink this industry, we have an obligation to liberate and expand it. And that includes liberating fossil fuels in Puerto Rico.

To provide low-cost, reliable electricity in Puerto Rico, fossil fuels are also crucial--along with massive regulatory reform that enables low-cost natural gas and/or coal to replace the very expensive oil-based power plants that dominate Puerto Rico today.

Oil is a far more expensive fuel than natural gas or coal, and is best used for transportation--where its unique "energy density" makes it unrivaled. But because of myriad bad policies, oil provides almost half of PR's electricity; with just under 30% natural gas and just under 20% coal.<sup>15</sup>

But instead of pursuing reforms that would enable Puerto Rico to benefit from low-cost, reliable natural gas and/or coal electricity, the government of Puerto Rico is trying to outlaw these vital sources--and many on this committee are telling them to do it faster.

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<sup>13</sup> For every million people on earth, annual deaths from climate-related causes (extreme temperature, drought, flood, storms, wildfires) declined 98%—from an average of 247 per year during the 1920s to 2.5 per year during the 2010s.

Data on disaster deaths come from EM-DAT, CRED / UCLouvain, Brussels, Belgium [www.emdat.be](http://www.emdat.be) (D. GuhaSapir).

Population estimates for the 1920s from the [Maddison Database 2010](#) come from the Groningen Growth and Development Centre, Faculty of Economics and Business at University of Groningen. For years not shown, the population is assumed to have grown at a steady rate.

Latest population estimates from [World Bank Data](#).

<sup>14</sup> Using the average world population in the 1980s (4.8 billion) and the 2010s (7.3 billion) and the average deaths per year from all meteorological, hydrological, and climatological disasters for both decades (66,697 and 18,342 respectively), the annual deaths rates per one million people from climate-related disasters has declined by over 80% from 13.8 to 2.5.

Disaster deaths from EM-DAT, CRED / UCLouvain, Brussels, Belgium [www.emdat.be](http://www.emdat.be) (D. GuhaSapir).

Population estimates from [World Bank Data](#).

<sup>15</sup> [U.S. Energy Information Administration- Puerto Rico Territory Profile and Energy Estimates](#)

The Puerto Rico Energy Public Policy Act (PREPA) requires 40% of electricity to be obtained from renewables by 2025, and 100% by 2050. These targets will absolutely not be met, just as such targets are failing around the world--but pursuing them at all makes electricity even more expensive and less reliable.<sup>16</sup>

We should be telling Puerto Ricans to abandon this suicide pact. But many on this committee are telling them to almost immediately shut down their most reliable, resilient source of electricity--a coal plant, which survived Hurricane Maria and last year's earthquakes, that provides 1/5 of Puerto Rican electricity.<sup>17</sup>

Puerto Rico is already desperately short of generating capacity, with a recent earthquake destroying some significant amounts of natural gas generation. To function at all without the coal plant, the grid will turn to its already overtaxed oil-based power plants, guaranteeing even higher prices and even more blackouts.<sup>18</sup>

The alleged justification for the rapid shutdown of this vital plant is issues with coal ash. But many places around the world deal with coal ash just fine. If a real, unbiased scientific study demonstrates a real problem, fix the problem--don't further destroy Puerto Rico's terrible grid.

While Puerto Rico needs to completely reject all fossil fuel elimination policies, it also needs radical regulatory reform to rid itself of the many destructive regulations that are holding it back. One reform it should push for is exemption from the Jones Act, which makes natural gas, coal, and oil, artificially and unnecessarily expensive in Puerto Rico.<sup>19</sup>

As PREPA has testified:

While Puerto Rico would like to buy American liquefied natural gas, no LNG carriers that qualify under the Jones Act exist to move LNG in bulk quantities from the U.S. mainland to Puerto Rico. Unless Puerto Rico receives a Jones Act waiver until a sufficient number of qualifying LNG carriers become available to transport LNG from the U.S. mainland to the island, Puerto Rico will lose hundreds of millions of dollars in savings from low-priced U.S. LNG supply sources, and U.S. LNG suppliers will also lose the opportunity to enter the Puerto Rico market."<sup>20</sup>

There are myriad other irrational controls on Puerto Rican energy that need to be removed. This would be a great project for Congress to take up, and I am happy to assist in whatever way I can.

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<sup>16</sup> [Puerto Rico Energy Public Policy Act of 2019](#)

<sup>17</sup> [U.S. Energy Information Administration- Puerto Rico Territory Profile and Energy Estimates](#)

<sup>18</sup> [U.S. Energy Information Administration- Puerto Rico Territory Energy Profile](#)

<sup>19</sup> [Competitive Enterprise Institute - America Last, The Grim Reality of the Jones Act](#)

<sup>20</sup> [Written Statement of José F. Ortiz Vázquez- House Committee on Natural Resources Hearing on the Rebuilding and Privatization of the Puerto Rico Electric Power Authority, April 9, 2019](#)

To give just one more example of irrational controls, an energy executive who works in Puerto Rico wrote to me about the following phenomenon: "A bunch of pharma manufacturers in Puerto Rico wanted to use back up diesel for their facilities since the grid there sucks. However, PR is in the same EPA region as New York, who refused to allow it for an obscure regulatory reason." The result? "Many of these manufacturers are now leaving the area because they can't get access to reliable power." He concluded: "Rich, progressive states like California and New York should not be allowed to determine policies of less rich ones. Yet that's exactly what happens."

### **The consequences of pursuing fossil fuel elimination policies around the world**

The poverty-perpetuating attack on low-cost, reliable, fossil fuel energy in Puerto Rico is an immoral phenomenon that unfortunately many in the US and Europe are perpetrating around the world.

For example, our Secretary of State, John Kerry, is pressuring poor and developing countries around the world to stop using fossil fuels--a death sentence to development.

As Indian energy researcher Vijay Jayaraj wrote to Kerry in an open letter: "you have asked India to reduce its dependency on these life-saving fossil fuels! But your policy recommendations...threaten the energy security and livelihood of my people."<sup>21</sup>

Greenpeace has also gone after Indian fossil fuels, promoting a "micro-grid" of solar panels and batteries as "the first village in India where all aspects of life are powered by solar." But the solar was too weak to power the center of villagers' lives, the cookstoves, so they still used wood and dung.

When a state official came to what was intended to be a celebration of this solar-battery microgrid, he was greeted by protesters demanding "real electricity" and not "fake electricity."<sup>22</sup>

It is absolutely shameful that we in the US are promoting fake electricity and fake energy around the world. We are using the world's poorest people as pawns in crackpot energy experiments that we ourselves will not take part in. Our efforts to eliminate fossil fuel use where it is needed most are literally killing people.

I want to end with a story that permanently affected how I thought about energy. It's a story from The Gambia, a very poor Africa country, about the lack of something that we in the US take for granted: reliable electricity for incubators.

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<sup>21</sup> [Vijay Jayaraj- An Open Letter to John Kerry from People Living in Energy Poverty](#)

<sup>22</sup> [Greenpeace- Renewable Energy for All: How an Indian Village Was Electrified](#)  
[Scientific American- Coal Trumps Solar in India](#)

"A full-term infant was born weighing only 3.5 pounds. In the US, the solution would have been obvious and effective: incubation. But without reliable electricity, the hospital did not even contemplate owning an incubator." "This...newborn girl...perished needlessly."<sup>23</sup>

How many newborn girls will perish needlessly, and how many young, ambitious people's dreams will perish needlessly, because we are depriving the world of low-cost, reliable energy? I understand that many of you have taken positions that are hard to backtrack on. But we elect you to do hard things.

Please reconsider your hostility toward fossil fuels and your obsession with mandating unreliable solar and wind energy. Please join me in supporting a rapid increase in the availability of low-cost, reliable energy, including fossil fuels, so that everyone, from Puerto Rico to The Gambia to India, has the opportunity to flourish.

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<sup>23</sup>[Alex Epstein - The Moral Case for Fossil Fuels](#)