President Trump announced his plans to pull out of the Paris climate agreement today in a jazz-accompanied spectacle at the Rose Garden. He justified the decision by arguing that the terms of the accord “could cost Americans as much as 2.7 million lost jobs by 2025.” Of those, he claimed 440,000 would be manufacturing jobs. “Believe me,” the president said. “This is not what we need.”

But experts say that there are some problems with the way Trump presented those numbers. “It’s not something you can cite in a presidential speech with a straight face,” says Yale economist Kenneth Gillingham. “It’s being used as a talking point taken out of context.”

"2.7 million lost jobs are probably an extreme, and unlikely, worst-case scenario"

The source for President Trump’s numbers is a report by the consulting firm National Economics Research Associates (NERA). The report was commissioned by the American Council for Capital Formation and the US Chamber of Commerce, two organizations that the Natural Resources Defense Council has described as "unabashed apologists for America’s biggest climate polluters."

NERA modeled what might happen to the economy if the US were to reduce greenhouse gas emissions as promised in the Paris climate agreements. It reported that total “economy-wide employment losses amount to about 2.7 million in 2025” and that “the manufacturing sector alone could potentially lose 440,000 job-equivalents.” (NERA did not respond immediately to an emailed request for comment.)

But the model NERA used to come up with those numbers is unrealistically rigid, says Gary Yohe, a professor of economics and environmental studies at Wesleyan University. It assumes that businesses wouldn’t innovate to keep costs down in the face of new regulations — which isn’t how industry works. “None of the outfits that are modeled in this model would stay in business in the real economy for more than 10 or 15 years,” he says. That’s why even massive oil producers like Exxon and Conoco support the Paris climate agreement — they’re adapting to a changing economy.

"If you assume that there are no benefits ... then of course things look bad."

As a result, 2.7 million lost jobs are probably an extreme, and unlikely, worst-case scenario. After all, the number of jobs in solar grew by 25 percent in 2016, and by 32 percent in wind. In fact, while 1.1 million people work in coal, oil, and gas, there are another 800,000 people whose jobs lie with low-carbon-emitting technologies like renewables, natural gas, and nuclear power, according to the Department of Energy. “Put simply, they’re not accounting for the jobs in the clean energy economy that are created,” Gillingham says.

The other problem the study itself acknowledges: “It does not take into account potential benefits from avoided emissions. The study results are not a benefit-cost analysis of climate change.” That means that these dire numbers aren’t being balanced by another model estimating the potential gains to the US economy by preventing climate change. “If you assume that there are no benefits and the costs are there, then of course things look bad,” Gillingham says. Trump asked us to believe him, but he’ll have to have to stop cherry picking stats first.
Donald Trump's energy plan based on 'debunked' study funded by coal industry, environmentalists claim

Donald Trump's plan to ditch Barack Obama's flagship policy on climate change is based on a flawed study paid for by the coal industry, a leading environmental think tank has claimed.

The President is expected to issue an ‘Energy Independence’ executive order which could significantly undermine measures introduced by the Obama administration to reduce carbon emissions. The announcement is also expected to include a review of the Obama-era Clean Power Plan.

The current administration hopes the changes will enable the US to become self-sufficient in energy, create jobs in the coal industry and mean cheaper energy costs for consumers.

However the latter claim is controversial.

But it also added: "Energy sector expenditure increases range from $220 to $292bn64bn to $79bn on a present value basis over the same time period.”

However the WRI has previously examined the Nera report’s figures as part of a review of studies into the effects of the Environmental Protection Agency’s Clean Power Plan (CPP).

**Trump is ‘He Who Must Not Be Named’ at UN climate change meeting**

“"The EPA study found that bills would initially increase, then fall. The other two studies, both funded by groups that support action to reduce greenhouse gas emissions, found electricity bills would unequivocally fall on account of the CPP.”

“"The Trump administration is failing a test of leadership to protect American’s health, the environment and economy,” he said.

"It’s been shown time and again that sustained economic growth and national security are intertwined with good environmental stewardship.

"It’s already helping to shift markets toward clean energy, which is good for the economy and American competitiveness.

"Make no mistake, this Executive Order will undermine people’s health and the US economy. It hands moral authority and global leadership over to others, leaving America behind.”

However Myron Ebell, director of the Competitive Enterprise Institute’s Centre for Energy and Environment and a key Trump adviser, welcomed the prospect of the executive order.

""It takes the necessary first steps in undoing President Obama’s energy-rationing agenda," he told Bloomberg.

"Of course, there is more work to be done down the road, most importantly withdrawing from the Paris climate treaty and reopening the endangerment finding.”

Shortly after Mr Trump took office, Mr Ebell, who led the Republican transition team in charge of the Environmental Protection Agency, visited 10 Downing Street. It was unclear who he met while there.
Donald Trump seems to have based his argument for withdrawing from the Paris climate change agreement on a misinterpretation of job and economy statistics.

In claiming that the agreement would lose America 2.7 million jobs by 2025 and reduce GDP by nearly $3 trillion by 2040, the US President appears to have cherry picked statistics and failed to take any account of the potential economic benefits of reduced emissions.

In explaining why he withdrew from the agreement, Mr Trump said: “Compliance with the terms of the Paris Accord … could cost America as much as 2.7 million lost jobs by 2025 according to the National Economic Research Associates (NERA).

“This includes 440,000 fewer manufacturing jobs … By 2040, compliance with the commitments put into place by the previous administration would cut production for the following sectors: paper down 12 per cent; cement down 23 per cent; iron and steel down 38 per cent; coal - and I happen to love the coal miners - down 86 per cent; natural gas down 31 per cent.

“The cost to the economy at this time would be close to $3 trillion in lost GDP and 6.5 million industrial jobs, while households would have $7,000 less income and, in many cases, much worse than that.”

All these statistics come from a “Key Findings” table in NERA’s March 2017 report Impacts of Greenhouse Gas Regulations on the Industrial Sector.

And they all come with a series of massive caveats, contained within a footnote to the Key Findings table that stated the NERA report: “Does not take into account potential benefits from avoided emissions.

“The study results are not a benefit-cost analysis of climate change.

“The long run, year 2040, impacts which are representative of the Obama Administration’s long term emissions goal of an 80 per cent reduction by 2050 are subject to a great deal of uncertainties about the future.

“The model does not take into consideration yet to be developed technologies that might influence the long term cost.”

These caveats, and Mr Trump's apparent failure to address them, seem to make his use of the NERA’s statistics at best highly debatable in at least three respects.

On Job losses:

Given that the study did not take into account potential benefits from avoided emissions, a benefit-cost analysis of climate change, or the influence of yet to be developed technologies, it seems that Mr Trump has failed to consider jobs being created in the emerging renewable energy sector.
This apparent failure to balance talk about 2.7 million job losses against the scope for job creation in renewable energy appears to be a very significant omission.

The potential for the development of jobs in emerging solar and wind technologies is indicated by the US Department of Energy’s January assessment that the solar workforce increased by 25 per cent in 2016, while the numbers employed in wind energy went up by 32 per cent.

Economists have now warned that leaving the Paris agreement may have a knock-on effect on US clean energy investment, which may result in jobs in the manufacture of solar panels or wind turbines being lost to other countries, including China - perhaps ironically given Mr Trump's past claim that climate change was a "hoax perpetrated by China" to gain an economic advantage over the US.

The Department of Energy also reported that the solar industry now employs many more Americans than coal: 373,807 to 160,119. A further 101,738 Americans are employed in wind energy.

The solar sector also already accounts for the largest share of workers in American electric power generation, accounting for 43 per cent of the workforce, compared to 22 per cent for fossil fuel electricity generation.

When electricity generation was combined with the fuels sector, 1.1 million Americans were employed in traditional coal, oil and gas, but almost 800,000 people are already working in low carbon emission generation.

**On the economic benefits of stopping global warming**

The NERA’s caveats explicitly acknowledged that its study was “not a benefit-cost analysis of climate change”.

And Mr Trump does not appear to have set his claims of massive GDP loss against any assessment of how preventing climate change might help the economy.

This may seem strange, given his fondness for property investment and in particular his “Winter White House” Mar-a-Lago resort in Florida.

In June 2014 a group of analysts led by former New York mayor Michael Bloomberg produced Risky Business, a report into the economic costs of climate change in the US.

This stated: “In Florida, because of the porous limestone on which the major southern cities are built, even modest sea level rise comes at a significant economic cost.

"Under current projections, between $15 billion and $23 billion of existing property will likely be underwater by 2050, a number that grows to between $53 billion and $208 billion by the end of the century."

Looking at the impact of global warming on the agriculture and food sectors that account for more than $750 billion of American GDP, the US Environmental Protection Agency (EPA) stated last year: “Overall, climate change could make it more difficult to grow crops, raise animals and catch fish in the same ways and same places as we have done in the past.”

“For example,” the EPA added, “High night-time temperatures affected corn yields across the US Corn Belt, and
premature budding due to a warm winter caused $220 million in losses of Michigan cherries in 2012."

The EPA assessment added that weeds, crop pests and livestock parasites tended to thrive in warmer temperatures, while drought threatened pasture and feed supplies.

"Heat waves," the EPA said, "Which are projected to increase under climate change, could directly threaten livestock. In 2011, exposure to high temperature events caused over $1 billion in heat-related losses to agricultural producers."

Such potential losses do not appear to have been accounted for in Mr Trump’s explanation of why he has withdrawn from the Paris agreement.

**On how businesses might adapt to a low carbon economy**

The NERA report accepted that its model "does not take into consideration yet to be developed technologies that might influence the long term cost."

It also admitted that its long term predictions were “subject to a great deal of uncertainties about the future”.

Economists have now argued that the NERA report – and therefore Mr Trump – made insufficient allowance for how businesses might innovate to deal with climate regulations.

Criticising the NERA model as unrealistically rigid, Gary Yohe, professor of economics and environmental studies at Wesleyan University, told the Verge website: “None of the outfits that are modelled in this model would stay in business in the real economy for more than 10 or 15 years.”

An example of how businesses are innovating in the real world was provided by Darren Woods, who became chief executive of oil producer Exxon after Rex Tillerson vacated the post to become Mr Trump’s Secretary of State.

In his first blog since taking over from Mr Tillerson, Mr Woods wrote that Exxon has spent $7 billion on low-emission energy research and projects in the last 15 years.

Exxon and fellow oil giant ConocoPhillips have both reiterated their support for the Paris agreement.

They weren’t the only major business players to disagree with Mr Trump’s abandonment of the climate agreement.
Trump’s argument for withdrawing from Paris agreement contains multi-trillion dollar math error

In a cost-benefit analysis, you’re supposed to analyze the costs and the benefits.

President Donald Trump announced Thursday that the United States would abandon the Paris climate agreement, but his justification for withdrawing was rooted in a false economic claim.

Trump claimed that U.S. commitments under the Paris accord would cost the country’s GDP $3 trillion, but the report he took that estimate from “does not take into account potential benefits from avoided emissions.”

In other words: The study did not account for any benefits of participating in a global plan to avoid the worst effects of climate change. It is a report on climate mitigation that ignores climate change. The report also does not consider the economic benefits to renewable energy industries, nor does it consider the health costs that are associated with fossil fuel pollution.

Frankly, this analysis is line with Trump’s previously articulated positions on climate change and the economy. He does not believe that climate change exists (he has famously called it a hoax perpetuated by China), and he believes that rolling back environmental regulations will help the economy.
These positions fly in the face of established science and history. For starters, climate change is happening. It is happening right now. It is happening because of the rise in greenhouse gas emissions from human activity. In addition, history has shown time and time again that protecting the environment is good for the economy—and for people, who drink water and breathe and also live in houses by the ocean.

The report Trump cited, released by NERA Consulting, is extreme. Even the conservative Heritage Foundation estimated less cost from the Paris agreement than the NERA report.

Meanwhile, non-partisan reports offer dire warnings for not addressing climate change. Earlier this year, researchers at the University of California Berkeley found that “unmitigated, climate change could reduce global GDP by over 20 percent by 2100.”

A 2015 report from Cambridge University’s Judge Business School found that the “present value of the damage caused by human-caused climate change from a moderate warming scenario is an astonishing $400 trillion.”

The same year, a report from Citibank found that not addressing climate change will cost $44 trillion by 2060, while investing in low-carbon energy would save $1.8 trillion through 2040, as compared to a business-as-usual scenario.
Trump cites alternative facts about Clean Power Plan from NERA Economic Consulting

A White House fact-sheet on President Trump’s executive order targeting key U.S. climate change policies cited a controversial report by NERA Economic Consulting that was sponsored by the American Coalition for Clean Coal Electricity.

The fact-sheet circulated by the White House cited NERA’s 2015 report attacking the Environmental Protection Agency’s Clean Power Plan:

**PRESIDENT TRUMP’S ENERGY INDEPENDENCE POLICY**

“...and allow this wealth to pour into our communities.” – Donald J. Trump

**MUCH NEEDED REFORM:** The past Administration burdened Americans with costly regulations that harmed American jobs and energy production.

- The previous Administration’s Clean Power Plan could cost up to $39 billion a year and increase electricity prices in 41 States by at least ten percent, according to NERA Economic Consulting.

The Washington Examiner recently reported that the draft text for Trump’s executive order also referenced the NERA report:

> The draft order states that the power plan would cost $39 billion a year, based on a previous industry-funded study by NERA Consulting that the draft order cites to justify ending the Obama administration’s version of the plan, which requires that states cut greenhouse gas emissions a third by 2030. The study said the plan would result in double-digit increases in electricity prices in 41 states for “meaningless environmental impacts,” according to the order.

Some of those same statistics were cited by the White House during a press briefing held the night before Trump signed his executive order aimed at rescinding the Clean Power Plan, as first reported by ClimateWire.

NERA Economic Consulting’s report on the Clean Power Plan was previously fact-checked by experts at the National Resource Defense Council, Union of Concerned Scientists, and World Resource Institute, among others.

NERA’s misleading analysis relied on alternative facts, such as the claim that investments in energy efficiency result in net costs. Reviews of real world energy efficiency programs confirm that they actually generate net savings for consumers. Academic analysis has found that the Clean Power Plan could save Americans billions of dollars on electricity bills, including in states like George that voted for Trump.

In fact, the Trump Organization has taken advantage of energy efficiency programs to save money on electricity bills and reduce carbon dioxide emissions at some of the buildings it has managed.

This wasn’t NERA’s first bite at the apple. A 2014 NERA report sponsored by the American Coalition for Clean Coal Electricity (ACCCE) and American Fuel and Petrochemical Manufacturers (among others) similarly claimed that the EPA's draft Clean Power Plan proposal would result in a double digit increase in electricity prices. The Washington Post Fact Checker dubbed that claim to be “misleading.”

ACCCE, which sponsored both of NERA’s misleading Clean Power Plan reports, has a dubious track record on
climate change. The coal industry group is probably best known for its ties to a consulting firm that sent forged letters to members of Congress opposing a 2009 climate bill. A number of electric utilities have severed ties with ACCCE in recent years, though others like American Electric Power and Southern Company remain members.

The Trump administration routinely favors fossil fuel fiction over clean energy facts, and President Trump’s executive order targeting U.S. climate policies is just another reminder of that.