

## All ACES



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## Could Greenhouse Gas Emissions Be Added To COVID-19's Casualty List?

As the world rebounds from the first wave of coronavirus, total economic stimulus will be in the trillions. This begs the question: should the US earmark stimulus funds to flatten the climate curve? By targeting investments that modernize the automobile, not only could we add greenhouse gas emissions to the long list of coronavirus's casualties, but we could also create thousands of new jobs. With unemployment slated to reach 15% in 2020, this sounds like a two-for-one deal the American public could get behind.

The world now knows what can be achieved by closing vast swaths of the economy and stopping a great many people from traveling: a record drop in greenhouse gas emissions. In the first week of April, daily emissions worldwide were 17% below what they were last year. [The International Energy Agency](#) expects global industrial greenhouse gas emissions to be about 8% lower in 2020 than they were in 2019, the largest drop since the second world war.

But this noteworthy reduction reveals a crucial truth about the climate crisis. It is much too large to be solved by the abandonment of planes, trains, and automobiles. This sad experiment has shown that to get on track with the Paris Agreement's most ambitious goal – of a climate only 1.5C warmer than it was before the industrial revolution – the world would still have to reduce GHG emissions by 90%.

Some see this moment as an opportunity, however. According to a recent [Economist](#) article, Dr. Fatih Birol, the Executive Director of the International Energy Agency, reminds us that government decisions guide about 70% of the spending on energy. "In a very short period," Birol says, "governments will make enormously consequential decisions." Total stimulus spending will be in the trillions. If a decent fraction of that is earmarked for climate action, it could be world-changing.

Pleas to channel stimulus funds toward climate action were also made a decade ago, when policymakers were trying to dig themselves out of the 2007-09 financial crisis, the *Economist* continued. Roughly an eighth of the stimulus money disbursed by the American Recovery and Reinvestment Act (ARRA) – some 90 Billion dollars – went into clean-energy loans and investments.

And while critics are quick to point to the infamous \$535 million loan to Solyndra, a company devoted to cylindrical solar cells, which went bust soon after, the vast majority of loans were repaid. Of note was the ARRA loan that helped to finance Tesla's first car factory. Fast forward to 2019, when Tesla released its first-ever [environmental impact report](#), the electric car manufacturer produced 550,000 zero-emissions vehicles since it started production of its first electric car. And since then, Tesla's fleet of vehicles has driven over 10 billion miles, helping prevent over 4 million tons of CO2 from polluting the environment.

Investing in transportation to fight climate change makes a lot of sense. Transportation accounts for [almost 30%](#) of all greenhouse gas (GHG) emissions in the United States, more than any other sector, including agriculture, industry, and yes, even electricity

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generation. And while cars, trucks, commercial aircraft, and railroads all contribute to transportation sector emissions, light-duty passenger cars and trucks – basically your typical commuter car and pick-up truck – [account for 60%](#) of all transportation greenhouse gas emissions.

And just as renewables like wind and solar have been steadily decarbonizing the power sector, we've known for years that electric, connected and automated vehicles show tremendous promise when it comes to mitigating transportation sourced greenhouse gas emissions.

For instance, the US Energy Information Administration [released a report back in 2017](#), concluding that by 2050 connected and autonomous vehicles could lead to a 44% reduction in fuel consumption. That same year, the Institute for Transportation and Development Policy also [released a report](#), along with a plan of action for vehicle electrification, automation, and ride-sharing in urban areas, where they estimate the potential ceiling for reducing carbon emissions from automobiles at an astonishing 80%.

If 60% of transportation sourced CO2 emissions come from automobiles, achieving an 80% drop would lead to a 48% reduction in total transportation emissions. That's a hell of a kickback in the fight against CO2.

And here's the kicker: [according to research](#) from Boston Consulting Group and Detroit Mobility Lab, self-driving and electric cars will help create more than 100,000 US mobility industry jobs in the coming decade, including up to 30,000 jobs for engineers with degrees in computer-related subjects. But the demand could be as much as six times the expected number of such graduates, exacerbating the industry's already significant talent shortage. With the current unemployment rate, dealing with talent shortages, rather than job shortages, sounds like a breath of fresh air.

Coronavirus and climate change are two crises that don't just resemble one another; they interact. Except the harm from climate change will be slower, more massive, and longer-lasting. And simply dampening climate change without solving it is like turning down the temperature on a pressure cooker without switching it off: the food inside will eventually burn and rot.

The fact of the matter is we won't have many more chances in our lifetime to make sweeping changes to how we live and move around our communities – at least not with the size and scale of the stimulus on deck.

Which is a good reminder: never let a crisis go wasted.

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