Adapting to our warming world is expensive. It costs a lot to build sea walls, cure disease outbreaks, and rebuild after floods. It takes money to invent better batteries, turn farms into carbon sinks, and replace polluting power plants with clean energy.

Instead of maybe taxing carbon emissions to pay for all this, the United States is giving tax breaks to the giant corporations profiting from fossil fuels. Several of the biggest of them paid no taxes last year, according to a new report from the Institute on Taxation and Economic Policy, or ITEP, a nonpartisan think tank. It's the first look at the effect of the 2017 Trump tax cuts, which slashed the corporate tax rate from 35 percent to 21 percent. Companies are still finding ways to avoid paying anything.

Last year, for instance, Chevron made $4.5 billion in profits. If it had paid the (newly reduced) corporate tax rate of 21 percent, it would have coughed up $955 million in taxes. That's enough money to triple funding for ARPA-E, the U.S. energy research and development program that pays for moonshot inventions like wind-turbines on kites. Instead, Uncle Sam handed Chevron $181 million at tax time.

Power utilities and oil and gas companies account for 22 of the 60 biggest companies that paid no taxes last year, according to ITEP's study. Some of the well-known names on the list include Kinder Morgan, Occidental Petroleum, and Halliburton. The think tank
didn’t crunch the most recent numbers for every company, just the biggest ones, but if you go back a few years, ITEP calculated that oil and gas companies avoided paying $27 billion in taxes from 2008 through 2015, while power utilities evaded $86 billion.

To be sure, there’s often a good reason for a tax break. Politicians use them to help get new industries — like the renewable energy industry — up on their feet. Duke Energy, for instance, got a tax credit of $129 million for renewable energy production in 2018. Economists call such credits and exemptions “tax expenditures.” It’s like the government is spending money because these tax breaks leave a hole in the federal budget.

The problem is that many of these subsidies outlive their usefulness.

“Unlike ARPA-E, which has to rationalize its existence and budget every year, these tax expenditures — and they are expenditures — just stay there even if they are no longer relevant,” said Matt Gardner, senior fellow at ITEP. “Are these tax breaks still useful? We want to be in a position where lawmakers are asking if they still make sense every year.”

And about ARPA-E’s budget. In the ten years of its existence, the program has yielded 1,500 inventions (of things like high-energy iron slurry batteries and clothes that automatically warm you up when it gets cold) and over 50 new companies. Nonpartisan groups say ARPA-E provides a good return on investment, and Republicans and Democrats come together to pay for it every year. But the Trump administration wants to cut its budget to zero.