The decision at the Glasgow climate conference to phase down fossil fuels is an important step forward — and not just because of climate change. We think of fossil fuels as a source of climate change, but that's only a one part of the problem. From their extraction to their combustion, everything about them is destructive to the environment and human health

Our system of environmental regulation divides up regulation of a single substance based on each of its environmental impacts. Thus, the regulatory system sees the "trees," not the "forest." That muddies the waters when we are talking about regulatory priorities, strategies, and long-term goals. It can also lead to framing issues in ways that may weaken environmentalist arguments, since the various harms of a substance or activity get fragmented into different silos.

Fossil fuels are a case in point. Consider coal. There are different regulations and often different regulators for impacts from coal mining on public lands, private lands, carbon dioxide emissions from combustion, methane emissions from mines, particular emissions, sulfur dioxide emissions, etc. When the a law is focused on one impact of coal, attempts to take into account other harms can get mired in controversies about considering "co-benefits" and direct versus indirect or cumulative impacts.

The fact is that fossil fuels, especially coal and oil, have great disadvantages, which society has tolerated largely because there were no viable alternatives. The extraction phase can involve destruction of lands, risks to endangered species, water pollution from oil spills or leaching from mines, and serious dangers to workers. We have a series of laws governing these harms: OSHA for the risks to workers; the Clean Water Act and the Oil Spill Act for water pollution; the Surface Mining Control and Reclamation Act for strip mining; and special legislation dealing with public lands, coastal areas, and offshore drilling. The existence of these laws is a testament to the environmental harms of the activity.

Combustion of fuels is an even bigger problem. More than half of US emissions, amounting to over three billion tons of CO2, come from transportation and electricity generation with fossil fuels. At the current government estimate of the social cost of carbon, that comes to $150 billion in long-term damage each year. A good chunk of the remaining emissions, which come from industry, commercial, and residential sources, are also from burning coal, oil, or natural gas. These numbers don't even count gas leakage from wells and pipelines, given that methane is such a potent greenhouse gas.

The health damage from using fossil fuels is also immense. A new study involving Harvard researchers concludes that fossil fuels cause eight million deaths a year on a global basis, including 350,000 within the US. That's about ten times as many deaths as car accidents cause.

In short fossil fuels — and coal and oil in particular — impose tremendous costs on society. So long as we had no good alternatives, these costs may have been outweighed by our need for the energy. But this excuse is wearing thin as clean technologies have advanced. It would be foolish to continue using these fuels when we have the chance to switch to superior substitutes.

According to a recent report, three-quarters of all proposed coal power projects have been canceled since 2015. That's a good start to cleaning up our energy system.