

# How the U.S. can speed the transition away from coal to meet key climate goals

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Credit: AI-generated image ([disclaimer](#))

Coal is in decline as an energy source. In recent decades, coal combustion has fallen from 50% of electricity generation to 20% of electricity generation in the United States, as natural gas and renewables like wind and solar have become increasingly cost-competitive.

But after generations of investment in [coal](#)-fired power plants, transitioning away from enduring coal sources may prove more difficult: Under some current forecasts, more than 10% of our energy could still come from coal in 2050—which means several more decades of planet-warming carbon emissions if we do not implement significant policy changes. Meeting key climate goals will depend in part on a speedier transition.

Mark N. Templeton is a clinical professor at the University of Chicago Law School, where he also directs the Abrams Environmental Law Clinic. As a research affiliate of the Energy Policy Institute at UChicago (EPIC), he recently authored a chapter in the new handbook, [The U.S. Energy and Climate Roadmap](#), featuring policy recommendations [about smoothing the coal transition](#).

In the following Q&A, Templeton explains why it's important to leverage the social cost of carbon as a tool for making key government decisions about coal mining and cleanup while remaining mindful of environmental justice and coal communities as we transition to other sources of electricity.

## **As the energy landscape in the U.S. changes, how can we ensure a transition for coal mining communities that is fair and just?**

An important question. Though the absolute number of employees at coal mines in the U.S. is relatively small compared to many other industries, an economic restructuring like this one can have a significant impact on families and communities—especially given that the closing of a single mine can have a disproportionate impact in a smaller community where the mine was a major source of wages. We have an obligation to work with coal communities and help them through this

transition.

One thing I've suggested is that there might be opportunities to leverage the geography of coal: Abandoned mines, which have associated cleanup and reclamation needs, are often located close to where the workers are already, so former miners could potentially be employed in making sure that those sites are dealt with safely and responsibly. Cleaning up abandoned mines also helps to ensure that those communities have clean water in the future. Finally, the Biden administration should also explore options like job training for other fields.

## **Many people don't know about the scale of the federal government's role in coal mining and the transition away from coal. Why is it so substantial?**

There are at least three big reasons. First, in recent years, approximately 40% of the coal mined in the U.S. is [mined on federal land](#). That's a large percentage for which the government, as the owner, is making determinations about whether to lease the coal, which in turn has an impact on the price and availability of coal in the market.

Second, the federal government also has regulatory authority on the combustion side. It can set emissions limits for carbon dioxide emissions that cause global warming, criteria pollutants like sulfur dioxide that cause acid rain, and toxic substances like mercury that poison our environment.

Third, the government can play a role in smoothing the energy transition and in making sure it is as environmentally and socially responsible as possible. That means cleaning up abandoned coal mines and coal ash pits that have the potential to contaminate groundwater. It might also mean mitigating the environmental risks associated with coal bankruptcies and

providing job training and resources for people who have relied upon coal for their livelihoods.

**What are some of your recommendations for how the federal government should approach coal leasing and regulation?**

The recommendations I make for the coal sector build on the work of my colleague, Prof. Michael Greenstone, who is the director of EPIC and has recommended that the federal government set and use an appropriate social cost for carbon and other greenhouse gas emissions. The [social cost of carbon](#) helps agencies incorporate the social and environmental damage inherent in mining and burning coal over the long term. Once the social cost is adopted, it can be factored into environmental cost-benefit analyses, which have important implications.

For example, if the federal Bureau of Land Management is deciding whether to lease a tract of land in Montana or Wyoming for coal mining, they might make new estimates factoring in the social cost of carbon and find billions of dollars of social impact, potentially prompting them to reconsider.

President Joe Biden's Environmental Protection Agency also has an opportunity under the Clean Air Act to set new regulations on coal-fired power plant emissions and to write stricter rules for how coal ash should be handled. Finally, the EPA can do a more proactive job of overseeing state regulatory activity. It matters a lot whether the EPA actually fulfills its function as a watchdog.

Many of these things can be accomplished without action by Congress. That said, new legislation or funding administered through legislation—including the \$16 billion that the Biden administration has put into the new infrastructure bill for reclaiming abandoned mines—could also be very helpful.

## **Once the social cost of carbon is set, what else needs to happen?**

The social cost of carbon is key for decision-making moving forward. But we also have to deal with the past: Coal mining has already had an enormous impact on the landscape. Some of these problems can be solved with better funding, while others may require changes to laws.

The [Abandoned Mine Reclamation Fund](#), which the Office of Surface Mining Reclamation and Control administers, currently does not have enough money to deal with the most severe environmental damages that can occur from [coal mining](#). We also need to make sure that coal companies who are at risk of bankruptcy are required to secure financial assurance from independent entities outside of the industry for their environmental liabilities so that if the coal companies go bankrupt, funds will still be available to pay for cleanup costs. My Law School colleague Josh Macey has [written thoughtfully](#) about the challenges of coal bankruptcies.

## **As a country, how can we change the narrative not only around coal but around the relationship between our energy system and the environment more broadly?**

Over the past few decades, we've developed a much better understanding of the impact that our activities have on the natural world on a system-wide basis. Climate change is really leading to a reckoning, on a global scale, about these environmental impacts. But now, the question is, "Do we have the collective will—and are we willing to pay the price—to address it?"

Fortunately, technological innovation and economics are working together to drive the price of cleaner energy systems down to be more competitive than fossil fuels. So we're trending in the right direction, both in terms of our social awareness and our development of better technology.

But if we don't act even more quickly, we'll be faced with even more dire consequences. So, to paraphrase Dr. Martin Luther King Jr.: The moral "arc"—in this case, of environmental and climate justice—is bending. Are we willing to implement better policy to help it bend more quickly?

Provided by University of Chicago

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