WASHINGTON — President Trump often talks about “clean coal” in his speeches, but it is not always clear what he means by the term. Consider his comments at a rally in Phoenix on Tuesday night.

“We’ve ended the war on beautiful, clean coal,” Mr. Trump said. “And it’s just been announced that a second brand-new coal mine where they’re going to take out clean coal — meaning they’re taking out coal, they’re going to clean it — is opening in the state of Pennsylvania.”

That’s a little confusing, to say the least.

The term “clean coal” was popularized in 2008 by coal industry groups, at a time when Congress was contemplating climate change legislation. While the term is deliberately vague, it is often understood to mean coal plants that capture the carbon dioxide emitted from smokestacks and bury it underground as a way of limiting global warming.
This technology, known as carbon capture and storage, is still in its infancy. Only one coal plant in the United States, the Petra Nova project in Texas, actually captures CO$_2$ in this fashion, having come online in January with the help of $190$ million from the Obama administration. The carbon dioxide is pumped underground into nearby oil fields to help extract hard-to-reach crude.

The technology is costly and complex. The Southern Company had to abandon a more ambitious coal carbon capture project in Kemper, Miss., in June after it ran $4$ billion over budget. No other coal plants of this sort are currently being constructed in the United States.

While experts say that carbon capture could prove useful for tackling climate change emissions — not just from coal plants, but from steel and cement plants as well — they also note that companies have little incentive to install the necessary scrubbers and pipelines in the absence of stricter climate regulations or a price on carbon, two policies Mr. Trump has fiercely opposed.

Mr. Trump’s budget for 2018 also proposed cutting by 85 percent funding for the Office of Fossil Energy, the federal agency that is currently researching techniques to reduce pollution from coal.
Confusingly, administration officials have sometimes used “clean coal” to refer to highly efficient coal plants that don’t use carbon capture, but emit somewhat less carbon dioxide into the atmosphere than older coal plants. There is one such highly efficient coal plant currently in operation in Arkansas, but given their high upfront costs, it is unlikely that more will be built soon in the United States.

Coal companies can also take steps to reduce the pollutants generated by burning coal in traditional plants — by, for instance, washing coal that comes out of mines to reduce its ash content. Mr. Trump seemed to be referring to this latter practice in his Phoenix speech as “clean coal.”

Critics note that “clean coal” is a misleading term for any of these techniques. Even a coal power plant that emits fewer pollutants is still a far dirtier way to produce electricity than a natural gas, nuclear, wind or solar plant. In 2014, the Clean Air Task Force estimated that particle pollution from power plants, mainly coal, led to 7,500 premature deaths each year, although that number has been going down over time because of environmental regulations and the retirement of older coal plants in the face of cheap natural gas.

And regardless of plant technology, mining for coal remains a highly polluting practice, often damaging streams and waterways. On Monday, the Trump administration announced that it was canceling a National Academies of Sciences, Engineering and Medicine study into the health impacts from mountaintop removal mining, in which companies in Appalachia blast open the tops of mountains and dump the rubble into nearby valleys.

**Correction: Aug. 24, 2017**

An earlier version of this article referred incorrectly to the agency conducting a study of mountaintop removal mining that was canceled by the Trump Administration. It is the National Academies of Sciences, Engineering and Medicine, not the National Academies of Science.

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