Is natural gas good, or just less bad?

Natural gas is billed by its supporters, including President Barack Obama, as a clean fuel that could play a big role in a low – carbon future. But others are questioning the environmental credentials of an energy source that, while easier on the atmosphere than coal and oil, is still a fossil fuel that causes sizable emissions of climate – warming gases.

Its backers say it emits only half as much carbon as coal when burned, and some environmentalists agree that is could bridge the gap until cleaner sources slowly come into use.

But opponents see the push for natural gas as a distraction from more pressing priorities, like improving efficiency and generating renewable power.

“We really have to be quite careful about the language we use to frame things,” said Kevin Anderson, a professor at the Tyndall Center for Climates Change Research at the University of Manchester in England. “If we call things green, we start to feel positive about it.” Natural gas, he said, “is not a positive thing, it’s just less negative.”

In fact, he called it “a very bad fuel,” with “very high emissions indeed.”

“They’re not as high as some other fossil fuels, but given where we need to be, to compare it with the worst that’s out there is very dangerous,” he added.

Others are less critical. The Natural Resources Defense Council, an influential environmental group based in New York, wants to see U.S. coal plants converted to natural gas, said Kate Sinding, a senior attorney with the council.

Reducing energy demand and promoting renewable come first, she said, “but we do see that as we get there, there is inevitably going to be a role for natural gas to play.”

In addition to the carbon dioxide savings, natural gas also emits far lower levels of pollutants like nitrogen and sulfur oxides, mercury and particulate matter. Eventually, Ms. Sinding said, natural gas plants could be paired with solar and wind farms, which generate intermittent supply and need backup.

Still, even if gas burns more cleanly than coal and oil, its production is often so dirty that it undermines the environmental gains, she said. U.S. and state regulators must tighten rules that have failed to reduce the serious problem of methane leaks and protect the quality of air and drinking water, Ms. Sinding said.

Natural gas is composed largely of methane, which, if leaked unburned, is a powerful greenhouse gas. Also, poorly built gas wells can contaminate nearby aquifers.

“In theory it can be reasonable, but we’re just falling far short of what we need to be doing for it to realize its promise,” she said.

Much of the enthusiasm in the United States and Europe for natural gas comes from its relative abundance, and its location in places friendly to the West. The United States in particular has plentiful supplies, now that extraction from shale rock has boomed into a big industry.

“Gas is much better distributed around the world than oil,” said Michael Webber, associate director of the Center for International Energy and Environmental Policy at the University to Texas at Austin. “We keep finding it.”

Many environmentalists are not convinced, noting that a growing number of new finds are in hard – to – reach areas or require unconventional forms of extraction, making exploitation riskier, more expensive and more energy – intensive.

Still, Mr. Webber said, “If we can really produce gas in a safe, clean way and it’s as abundant as people say, it doesn’t take us all the way to a zero – car – bon future, but it’s clearly a big step in the right direction.”

The advantages of gas, which include the low capital cost and short turnaround time for building new plants, make it essential for reducing carbon emissions quickly, said Beate Raabe, director of European Union affairs at the International Association of Oil and Gas Producers, a trade group based in Brussels.

In the longer term, she said, carbon – capture technology could make gas plants part of a green future.

Mr. Obama appeared to share such optimism when he mentioned natural gas in his State of the Union speech last month, surprising environmentalists by listing it along with solar, wind, nuclear and so – called clean coal power as key parts of a national clean – energy strategy.

But some remain skeptical of the idea that natural gas can serve as a bridge to a cleaner renewable energy future.

“How long and how wide is this bridge?” asked Ms. Sinding, of the Natural Resources Defense Council. “The more we put into natural gas, the greater the concern that we lock ourselves into burning natural gas and not substituting for it.”

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