

## THE WEEK IN ENERGY: CAPTURING CARBON\*

In addressing the threat of global warming, capturing and storing the carbon dioxide emissions from fossil fuel power plants is widely seen as a necessity. Back in 2009, John Ashton, then the UK foreign secretary's special representative for climate change, argued: "There is no credible climate strategy that doesn't include a strategy to get very quickly to the point where carbon capture and storage becomes the universal standard for all new coal and indeed all new gas-fired power generation."

Nine years on, the plunging costs of renewable energy and battery storage have changed the debate somewhat. Those such as Mark Jacobson of Stanford University who argue that a 100 percent renewable energy system is realistic are still in a minority, however, and there is still widespread support for the idea that if the world is serious about cutting greenhouse gas emissions sharply, carbon capture will have to be part of the solution. A group of 21 energy academics who last year published a critique of Mr Jacobson's analysis suggested that ruling out non-renewable technologies including carbon capture and nuclear power "could make climate mitigation more difficult and more expensive than it needs to be".

Despite the persistence of the case for carbon capture, Mr Ashton's goal does not seem much closer. There are 18 large-scale carbon capture projects in operation, two at power plants: Boundary Dam in Saskatchewan and Petra Nova in Texas. Other plans for developing carbon capture and related technologies, including the Kemper integrated gasification combined cycle coal power plant in Mississippi (pictured above), have ended in failure. The idea that carbon capture could soon be established as the standard for all new coal-fired and gas-fired power plants seems wildly unrealistic.

The article also said the UK wanted to "lead the carbon capture challenge", and the British government backed that ambition with a modest commitment of £20m to support the technology. That looks like a diminished ambition compared to the mid-2000s, when the Labour government announced plans to support carbon capture and there was talk that it could back a pilot project with a budget of up to £1bn. The UK's first carbon capture project, Acorn, is expected to be operational by the mid-2020s, about a decade later than the Labour government had hoped it might have its pilot plant in service. Acorn, which is described as a minimum viable full chain carbon capture, transport and offshore storage project that will use "the unique combination of legacy circumstances in northeast Scotland".

That said, the attendance of the chief executives of BP, Royal Dutch Shell and Peabody Energy at the summit showed there is still great interest in the fossil fuel industries in the potential of carbon capture. The Oil and Gas Climate Initiative, the group of companies working on ways to reduce greenhouse gas emissions, has been active in promoting and supporting ideas for carbon capture. The technology has also been one of the few areas in which the Trump administration has shown any interest in addressing the issue of climate change. The lesson of the past decade, however, is that carbon capture will need a lot more momentum behind it.

\*"The Week in Energy: Capturing Carbon", Financial Times