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UK Power Market Reforms—A Retreat from Markets?

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“Carbon pricing is needed but not enough on its own,” Jonathan Brearley, former UK Director of Electricity Market Reform, said on Monday, September 23, in drawing out the lessons learned from the UK’s energy policy experience since privatization of the electricity sector around 1990.

In a talk which some audience members called “fascinating but depressing,” Brearley traced the evolution of British energy policy as it tried to simultaneously satisfy the imperatives of security of supply, affordability, and climate change. British policymakers in the early 2000s tried to set up a framework to accomplish this through market mechanisms—a competitive electricity market, combined with the EU’s emissions credit trading program (ETS), which effectively established a price on carbon emissions.

For a time, government officials were hopeful that they had found a market-based policy that would produce a secure supply of affordable electricity with reduced carbon emissions. However, by 2012, serious concerns arose, based primarily on projections that suggested that a risk of a shortage of electric capacity loomed in the near future, as old coal and nuclear plants closed and new investment (especially in renewable energy) failed to fill the gap.

Increasing the sense of urgency, rising natural gas prices in the UK (in contrast to falling prices in the US) were pushing electricity prices higher.

By 2012, government officials feared failure on all fronts: security of supply, affordability, and carbon policy. For government ministers, Brearley noted, security of supply is a “red line issue”—if you fail in this area, you have to resign. The projections of electricity scarcity, therefore, were taken seriously.

Why didn’t the carbon-pricing approach work? In part, Brearley said, this was due to well-known factors such as the fact that the EU carbon price ended up being much lower than had been anticipated, failing to properly incentivize low-carbon energy investment. The absence of a capacity market (widely used in the United States to encourage investment in new electricity generation facilities) may also have been a factor in depressing overall investment in electricity generation.

More surprising, and perhaps more difficult to address was the problem of establishing credibility with investors—potential green investors were slow to invest based on the existing ETS, not only because of low carbon prices, but also because they did not have certainty that the ETS price would be robust enough in the long term to allow them to make the necessary upfront capital investment in low carbon plant today. Furthermore, in the absence of a capacity market, investors in general may have doubted whether government officials would really allow electricity prices to rise enough to warrant new investment in electricity generation capacity of any kind.

Accordingly, the British government recently re-vamped its energy policy. Key to the revamp was the development of long-term contracts for the purchase of low-carbon electricity, “contracts for differences,” through which the government commits to purchasing low-carbon energy at a ‘top up’ on current market rates to an agreed long term



price for a fixed period of time period of time. However, investors would, in effect pay back revenue if the market price ever rose to be above the long term price agreed in the contracts. By embedding this renewable energy incentive in contracts, and offering greater price certainty, the government believes it has significantly increased industry's confidence that it can rely on this as a long-term incentive. A capacity market and minimum emissions performance standards were also introduced.

The hope, Brearley said, is that over time, actions could be used to establish the right amount of additional incentives for different types of renewable energy. For now, however, the government finds itself once more in the center of the electricity market, establishing prices for renewable energy and managing capacity auctions.

The Energy Policy Seminar Series is jointly organized by the Energy Technology Innovation Policy research group of the Belfer Center on Science and International Affairs and the Consortium for Energy Policy Research of the Mossavar-Rahmani Center on Business and Government.