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The Clean Air Act as US Climate Policy

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Climate policy in the U.S. is taking shape under the Clean Air Act. This approach departs from the ideal policy design that has been the focus of academic research. What can one say about the outcome and the costs in practice? Fossil fuel CO₂ reductions in the US economy by 2020 already match those that would have been expected under the Waxman-Markey proposal. Current attention is focused on the most important category of existing power plants. The challenge issued in President Obama's directive to the EPA is to develop an approach that achieves substantial emissions reductions using to the maximum extent possible flexible, market-based approaches. This paper examines the relationship between flexibility and stringency. The metric to compare the stringency of policies is ambiguous. The relevant section of the act is traditionally technology based, suggesting an emissions rate focus. However, a specific emissions rate improvement implemented in a flexible way, averaged over a larger set of generators, reduces the actual emissions change. A marginal abatement cost criterion to compare policy designs suggests cost-effectiveness across sources. This criterion can quadruple the emissions reductions that are achieved, with net social benefits exceeding \$25 billion in 2020, with a 1.3 percent electricity price increase. Under the act, multiple stringency criteria are relevant. We argue EPA should evaluate state implementation plans according to a portfolio of attributes, including effectiveness and cost. Ongoing research highlights the program design issues that will determine whether this can occur.