Harvard Kennedy School Energy Policy Seminar Series, Fall 2014
EPA's Proposed Clean Power Plan: Implications for States and the Electricity Industry

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Judy Chang of the Brattle Group presented an overview of the EPA's "Clean Power Plan" proposal for applying the provisions of the Clean Air Act to reduce carbon emissions from existing sources in the power sector in Monday's energy policy seminar at the Harvard Kennedy School. Chang examined the EPA's proposal for bringing emissions from the electricity sector to 30% below 2005 levels by 2030, focusing on a number of distinctive aspects of the proposed regulation, and particularly on the tension between the state-level targets established and the potential efficiencies that might be achieved through regional cooperation.

Under the EPA's proposed rule, Chang explained, each of the fifty states has its own individual target for emissions reductions—with a wide range of variation in how aggressive the targets are for different states.

Why this difference among states? Chang's presentation showed how the EPA's state standards can be traced back to EPA calculations of a "Best System of Emissions Reductions," based on the EPA's estimates of states' potential to increase the efficiency of existing fossil fuel plants, to use more gas and less coal generation capacity, to build more low and zero carbon generation (such as nuclear and renewables), and to increase energy efficiency. Thus, states received different targets, affected by things like how much gas generation is installed in a particular state (more gas generation may mean more potential for fuel switching from coal to gas), and how much potential is assumed for expansion of renewables capacity, or increasing levels of energy efficiency.

These state-by-state targets, Chang noted, though they might be required for regulation within the framework of the Clean Air Act, represent a special challenge for an electricity system whose dispatch areas do not coincide with state boundaries and frequently encompass multiple states.

"Economic theory suggests," Chang explained, that states can save money by cooperating on reaching EPA targets, an approach that EPA encourages. For example, some states might choose to meet their zero-emissions energy requirement by paying for surplus renewable energy produced in other states. Such coordination is "tricky," however, and there are some obstacles may stand in the way of achieving these theoretical efficiencies. For example, a state with a large reduction requirement might prefer to spend its reduction money in-state (perhaps creating additional in-state investments and employment) than to send money out of state, even if an out of state approach reduced total costs. In addition, states that wish to cooperate have their work cut out for them figuring out how to set up a "trading" mechanism" or "carbon pricing approach." Without such market mechanisms, it is not clear how one state would pay another state? Or does one utility pay another utility? And no matter what approach is adopted, some states are likely to bear more of the costs than others—successful cooperation may depend on states' willingness to work together to reduce overall costs, without necessarily equalizing costs nationally.

Chang spoke as part of the Kennedy School's Energy Policy Seminar Series, which is jointly sponsored by the Energy Technology Innovation Policy research group of the Belfer Center and by the Consortium for Energy Policy Research of the Mossavar-Rahmani Center on Business and Government.