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The coal sector is under pressure on a number of fronts. In my April 2014 newsletter, I discussed the Dan River coal-ash spill, an event that would yield a new North Carolina law requiring the closure of all the state’s unlined coal-ash ponds over 15 years. Recently, at the federal level, the U.S. Environmental Protection Agency (EPA) proposed the nation’s first rule aimed at reducing carbon dioxide emissions from the electricity sector, where coal remains a key fuel. Taken together, the new state law and proposed federal rule may result in the closure of additional coal-fired power plants in North Carolina, changing our state’s energy generation footprint.

The EPA’s carbon rule followed two enabling actions at the federal level. First, the U.S. Supreme Court ruled in Massachusetts vs. EPA that the Clean Air Act permitted the EPA to regulate carbon dioxide under the broad definition of “air pollutant.” Thereafter, the EPA issued an “endangerment finding” outlining the public health risks of carbon pollution that provided the groundwork for the Agency’s subsequent action. The EPA then proposed a new standard requiring that carbon dioxide emissions from existing coal-fired power plants be cut nationally by 30 percent by 2030 from 2005 levels. Aging power plants represent the nation’s largest single source of carbon dioxide emissions and aging coal plants are much less efficient than those newly constructed. Duke Energy

Featured Map
Check out this map that summarizes each state’s actions to limit greenhouse gas emissions and the EPA's proposed goal to reduce carbon pollution.

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Featured Article
How will clean power affect different states? The EPA recently put together
has already shut down seven aging coal-fired plants in North Carolina.

The EPA’s proposed carbon rule is the most significant change in the electricity sector in decades. The rule assigns states different targets for reduction of carbon pollution and requires states to devise individual compliance plans. Reduction targets can be met a variety of ways. Interstate cooperation and emissions allowance trading is one option, which California has begun under the Regional Greenhouse Gas Initiative (RGGI). Other options include replacing coal with natural gas, expanding production of renewable energy sources, or investing in energy-efficiency equipment technology.

So what could EPA’s new proposed rule mean for North Carolina?

- North Carolina has 67 coal-fired power plants at 25 locations, the majority owned by Duke Energy. In 2012, North Carolina’s power-plant CO2 emissions totaled 53 million metric tons. Forty-three percent of this total resulted from fossil fuel-fired power plants, primarily coal and natural gas.
- Under the new EPA standards, these emissions totals are converted into a rate expressed as “pounds per megawatt hours,” a measure of the rate of carbon dioxide production as electricity is generated. Based on calculations for North Carolina, the EPA will require that NC’s power plants cut their carbon dioxide emissions by 40 percent by 2030 to meet a proposed emission goal rate of 992 lb/MWh.

Currently, North Carolina derives almost half its electric power from coal. Virginia, to pick one neighboring state, relies on coal for just 20 percent of its electricity. North Carolina’s relatively heavy reliance on coal means we have a bigger carbon pollution challenge when responding to the EPA’s proposed new standard.

Yet unknown is how much the EPA rule might cost North Carolina ratepayers if Duke Power, Dominion Power, the electric cooperatives, and the ElectriCities are all obliged to take steps to meet the carbon reduction standard. Fuel switching to natural gas is an obvious option; the electric sector has already shown reductions in carbon emissions by moving to natural gas, which is now plentiful and cheap as a result of
the national fracking boom. The state’s energy providers might also seek to increase renewable energy generation, particularly if facilitated by tax credits.

EPA currently is conducting a 120-day public comment period about the carbon rule. In the meantime, a dozen states have asked the D.C. Circuit Court of Appeals to toss out the new standard, arguing that the proposed carbon rule is unwarranted because power plants are already regulated under the hazardous air provisions of the Clean Air Act. The suit, led by West Virginia, a major coal producer, also includes Alabama, Indiana, Kansas, Kentucky, Louisiana, Nebraska, Ohio, Oklahoma, South Carolina, South Dakota, and Wyoming as plaintiffs.

The NC Department of Environment and Natural Resources hasn’t formally joined the suit. In a letter to the EPA dated August 14, 2014, however, North Carolina has asked for an extension in the public comment period because an “extension of 90 days would allow stakeholders and interested parties to develop comments that guide EPA’s efforts to craft a rule that is legally defensible and with lower risks and costs.”

So right now we are in a wait-and-see mode. Will the EPA’s proposed carbon rule hold up in court? If it does, will consumers pay more for electricity? No matter what happens, it seems very likely that our energy future will depend less on coal to power the North Carolina economy.

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What interests you about the natural and built environments in our state? Let us know, and it could
be a topic for a future IEI Environments newsletter.