A recent GAO report pulls together a lot of information about electricity generators, which shows how much of our air pollution problems are due to aging plants:

Older electricity generating units—those that began operating in or before 1978—provided 45 percent of electricity from fossil fuel units in 2010 but produced a disproportionate share of emissions, both in aggregate and per unit of electricity generated. Overall, in 2010 older units contributed 75 percent of sulfur dioxide emissions, 64 percent of nitrogen oxides emissions, and 54 percent of carbon dioxide emissions from fossil fuel units. For each unit of electricity generated, older units collectively emitted about 3.6 times as much sulfur dioxide, 2.1 times as much nitrogen oxides, and 1.3 times as much carbon dioxide as newer units.

Why are the older plants so much worse? Here's GAO's answer:

- "First, 93 percent of the electricity produced by older fossil fuel units in 2010 was generated by coal-fired units. Compared with natural gas units, coal-fired units produced over 90 times as much sulfur dioxide, twice as much carbon dioxide and over five times as much nitrogen oxides per unit of electricity, largely because coal contains more sulfur and carbon than natural gas."
- "Second, fewer older units have installed emissions controls, which reduce emissions by limiting their formation or capturing them after they are formed. Among coal-fired units—which produce nearly all sulfur dioxide emissions from electric power generation—approximately 26 percent of older units used controls for sulfur dioxide, compared with 63 percent of newer units. . . . "
- "Third, lower emissions among newer units may be attributable in part to improvements in the efficiency with which newer units convert fuel into electricity."

The survival of these obsolete plants is partly due to grandfathering provisions in the Clean Air Act, which make it easier to maintain old plants than build new ones. But it's really past time for utilities to stop operating these dinosaurs.