



Proposed Carbon Pollution Standard For New Power Plants

**Presented by Kevin Culligan
Office of Air Quality Planning And Standards
Office of Air and Radiation
United States Environmental Protection Agency**



Summary of Today's Action

- On March 27 EPA proposed a carbon pollution standard for new fossil-fuel fired power plants
- Currently there are no national limits on the amount of carbon pollution new power plants can emit
- The proposed standard would ensure that new power plants use modern technology to limit this harmful pollution
- EPA's proposed standard is flexible, achievable and can be met by a variety of facilities using different fossil fuels, such as natural gas and coal
- The proposed carbon pollution standard for new power plants is posted at: <http://www.epa.gov/carbonpollutionstandard>
- The comment period will be open for 60 days after publication of the rule in the Federal Register, and EPA will hold public hearings

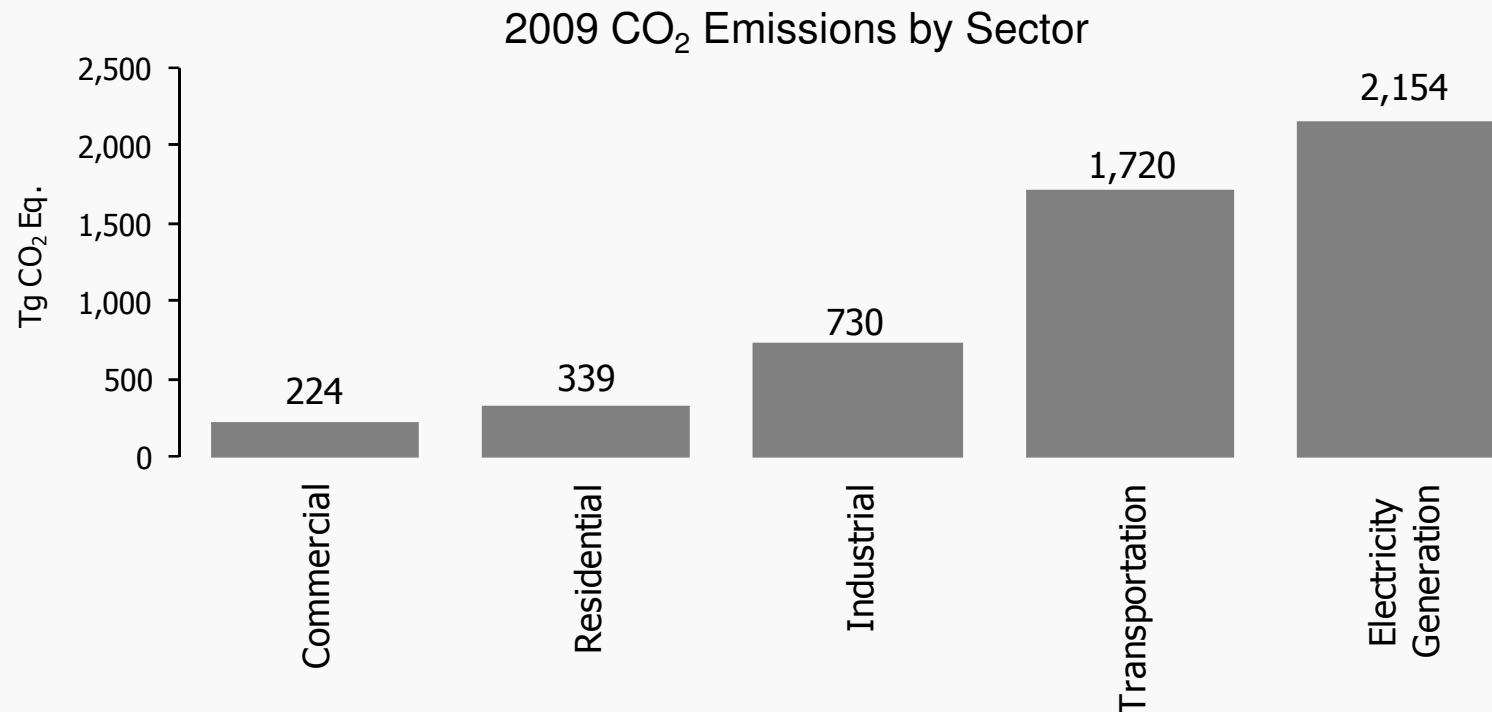


Statutory Authority

- Clean Air Act (CAA) section 111(b) requires EPA to regulate new sources
 - **Section 111(b) – Federal Program for New Sources**
 - The Administrator shall “establish federal standards of performance” for “new sources within [the] source category”
 - **“Standard of Performance”**
 - “A standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction, which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated”



Electricity Generation Is the Largest Source of CO₂ Emissions





Proposed Carbon Pollution Standard for New Sources

- Proposes output-based emission standard of 1,000 pounds of CO₂ per megawatt-hour (lb CO₂ /MWh gross)
- Applies to new
 - Fossil fuel-fired boilers,
 - Integrated Gasification Combined Cycle (IGCC) units, and
 - Natural Gas Combined Cycle (NGCC) units
- New combined cycle natural gas power plants could meet the standard without add-on controls
- New coal or petroleum coke power plants would need to incorporate carbon capture and storage technology (CCS)
 - The proposal includes an alternative 30-year compliance period to allow these new plants to incorporate CCS at a later date to reach compliance



Flexibilities for New Coal-fired Power Plants

- New power plants that use Carbon Capture and Storage (CCS) would have the option to use a 30-year average of CO₂ emissions to meet proposed standard, rather than meeting annual standard each year
- Provides flexibility for new power plants to phase in CCS technology
 - Plants that install and operate CCS right away would have flexibility to emit more CO₂ in the early years as they learn how to best optimize the controls
 - Plants could wait to install or operate CCS for up to 10 years to take advantage of lessons learned from other early installations
- For example, a new power plant could emit more CO₂ for the first 10 years and then emit less for the next 20 years, as long as average of those emissions met standard
 - Because CO₂ is long-lived in atmosphere, 30-year averaging period is not expected to have a different impact on climate compared to a continuous emission rate limit or an annual emissions limit
- This would also allow for CCS to become even more widely available, which should lead to lower costs and improved performance over time



Transitional Sources

- EPA is proposing that sources with necessary construction permits already completed will not be covered by this standard, provided they begin construction within 1 year of proposal's publication
- EPA is also proposing that sources looking to renew permits and that are part of a Department of Energy (DOE) demonstration project would also not be required to comply with this standard, provided that they begin construction within 1 year of the proposal's publication



Modifications and Reconstructions

- EPA is not proposing a standard for “modified” power plants
- EPA’s current regulations define a “modification” under NSPS as a physical or operational change that increases the source’s maximum achievable hourly rate of emissions
- Pollution control projects are specifically exempted from NSPS modification definition
- Most projects that EPA anticipates might increase the hourly rate of CO₂ emissions are pollution control projects
- We don’t have enough information about projects besides pollution control projects that would likely constitute “modifications” under our current regulations, so we do not have adequate information on which to base a proposed standard of performance
- EPA is not proposing a standard for reconstructions, also due to lack of information



Public Process for Proposed Rule

- In 2011, EPA held several listening sessions
 - EPA obtained important information and feedback from key stakeholders and public
 - Each listening session included a round table discussion and public comments
- EPA also solicited written comments
- EPA considered all this information when drafting this proposal



Next Steps – Public Comment

- The proposed rule published in Federal Register on April 13, 2012
- The 60-day public comment period is open until June 12, 2012
- EPA also plans to hold public hearings on this proposal; the dates, times, and locations of the public hearings will be available soon
 - They will be published in the Federal Register and also listed on <http://www.epa.gov/carbonpollutionstandard>