

OSMRE

Colowyo Mine

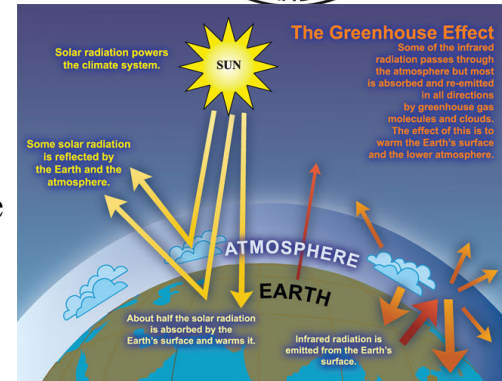
South Taylor/Lower Wilson EA

Climate Change and Coal Combustion



Background

- Earth's climate varies naturally over time due to changes in solar energy, reflectivity of the earth's surface, volcanic eruptions, and changes in the greenhouse effect.
- About half the sun's energy is absorbed by the earth and some radiated back into the atmosphere as infrared radiation.
- Some atmospheric gases, mainly water vapor, absorb infrared radiation and act to retain heat/energy that works to keep the earth warm by a mechanism called the "greenhouse effect."
- Greenhouse gases (GHGs) that are regulated include: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluorides.
- Both natural processes and human activities generate GHGs.



GHG Regulatory Setting

- Secretary of the Interior Order 3289 requires agencies to consider and analyze potential climate change impacts for major decisions regarding potential uses of resources.
- GHGs were determined to be a regulated Clean Air Act air pollutant through court decisions and Environmental Protection Agency findings.
- Large stationary sources of GHGs are required under the Prevention of Significant Deterioration (PSD) Permit program to obtain permits for construction or operation of their facilities effective January 2, 2011, if criteria pollutant emissions exceed the PSD major source threshold.
- GHG emissions are estimated as CO_{2e} (Carbon Dioxide Equivalent) for comparison.

Potential Direct Project GHG Sources and Emission Types

- Drilling of coal and overburden (combustion of diesel fuel in drill rigs).
- Blasting (combustion of diesel fuel that is mixed with explosive material).
- Vehicle fleet (combustion of diesel fuel).
- Preliminary calculations indicate the project will not be a "major source" of GHGs.

Coal Combustion Indirect Impacts

- Emissions for coal combustion are regulated through the air quality permit process for the combustion source (e.g. a coal fired power plant) and not for the mining.
- This EA will discuss and disclose emissions from combustion of mined coal.
- Emissions from coal combustion vary depending on the coal quality, site specific regulatory requirements (e.g. emissions controls), and size of the facility.
- Colowyo coal is generally cleaner burning, producing lower GHG emissions than other surface mined coals in the West due to a higher average heating value (10,400 btu/lb).
- Emissions, deposition, visibility and related impacts that result from coal combustion will be disclosed as part of the EA.