Natural Gas and the Environment

With a small land footprint, low levels of combustion emissions and comparatively low water use across its full life cycle, natural gas is a key component in developing a sustainable energy mix for the United States. Responsible production of this valuable resource requires practices that carefully manage and minimize any impact on the environment and the people that live near our operations.

**Protecting the Air With a Cleaner-Burning Fuel**

- Burning natural gas results in very low emissions of nitrogen oxides and sulfur dioxide—reducing acid rain and smog—and virtually no emissions of mercury, particulates (soot) or other solid wastes.

- A July 2011 report by the Baker Institute for Public Policy said increasing use of shale gas has “significant implications for global environmental objectives since lower-cost natural gas can displace fuels associated with higher air pollution and greater carbon intensity, such as coal and oil.”

**A Potential Shortcut to Lowering CO₂ Emissions**

- From fuel production through conversion, efficient natural gas-fired power plants produce half the carbon dioxide emissions of coal-fired power plants. A June 2011 MIT study found “substitution through increased utilization of existing combined cycle natural gas power plants provides a relatively low-cost, short-term opportunity to reduce U.S. power sector CO₂ emissions by up to 20 percent, while also reducing emissions of criteria pollutants and mercury.”

- The U.S. Department of Energy’s National Energy Technology Laboratory found that average life cycle greenhouse gas emissions were 54 percent lower for a power plant using shale gas than those from an average coal-fired power plant.

**Smaller Impact on Land and Water**

- Completion of a typical shale gas well requires a one-time use of between 2 million and 5 million gallons of water. This is the equivalent amount of water consumed by 24 households in one year.

- Natural gas-fired power plants use about 60 percent less water than coal-fired power plants and 75 percent less water than nuclear power plants for the same amount of electricity production.

- Natural gas-fired power plants require the least amount of land per megawatt of capacity versus other new power generation options. Compared to natural gas, it takes 20 times more land to power the same number of homes using wind or solar power.

- Use of horizontal drilling techniques allows for fewer well locations, or well pads, and a smaller land footprint as multiple wells can be drilled from a single location.

For more information: www.powerincooperation.com

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