



## COGA | Climate Change

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The Colorado Oil and Gas Association (COGA) shares the concerns of both governments and citizens about climate change and climate change risks.

Oil and natural gas are the primary source of energy for the global economy, supplying roughly 80 percent of total global energy demand. The U.S. government's Energy Information Administration (EIA) projects a slight drop to 76 percent of domestic energy supply in 2040, with a significant drop in coal being offset by rising usage of natural gas, wind, and solar energy. The environmental benefits are, and will continue to be profound, as natural gas as an energy source has a low carbon dioxide emissions profile.

### **CURRENT STATUS AND CHALLENGES**

The shale revolution in the United States has led to major new discoveries of natural gas reserves that can be developed efficiently at low cost. The production and use of natural gas, particularly in the electric production sector as a result of the shale gas revolution, is a key element in achieving these lower CO<sub>2</sub> levels which, in turn, benefit the efforts to combat climate change. That market phenomenon is encouraging electric utilities across the country to displace coal generation with natural gas generation. As a result, in 2016, the United States emitted the lowest rate of CO<sub>2</sub> in the past 20 years. When analyzed on a per person basis, CO<sub>2</sub> emissions in 2016 were lower than recorded levels over the past 50 years. Additional technology developments at the wellhead have aided in reduced methane emissions from the production of natural gas, as well.

In the United States, total energy consumption, along with total fossil fuel consumption, have been nearly flat for the last decade and, notwithstanding projected total population increases, are projected to continue this nearly flat rate of total energy consumption in the coming decades, largely due to increased energy efficiency. The EIA reports that energy intensity in the United States has been declining steadily since the early 1970s, and projects that declines in energy intensity will continue. That data is made more impressive by the fact that adjusted for inflation, the nation's economy in 2015 was 15 percent larger than it was in 2005, but both energy intensity and carbon intensity decreased over the same period. Thus, according to the EIA, the United States used 15 percent less energy per unit of GDP and produced 23 percent fewer energy-related carbon dioxide emissions per unit of GDP than in 2005.

Though the EIA also reports that worldwide energy intensity "decreased by nearly one-third between 1990 and 2015," lower-income developing countries are seeing rapid growth in total energy consumption, contributing to increasing global CO<sub>2</sub> emission rates. Rising energy consumption is enabling higher living standards and improved life expectancy rates. Importantly, use of oil and natural gas has helped the ambitious Millennium Development Goals to be met early. These goals set a target to halve the proportion of people who earn less than \$1.25 per day between 1990 and 2015.

The past 100 years have seen more people lifted out of poverty than ever before in human history and life expectancy for the average human has roughly doubled. While the tremendous improvement of the human condition has much to celebrate, there remain over one billion people still living in dire poverty with no access to electricity, and a remarkable 38 percent of the global population lacks basic cooking facilities. There are another billion people with only intermittent access to electricity. One of the world's central challenges is bringing reliable, affordable energy to these less fortunate billions. Balancing the need to energize the lives of those in developing nations, while simultaneously addressing climate change, is a significant challenge for humanity.

## **THE WAY FORWARD**

Ideas for the future should always be informed by the past. Humans began to meaningfully impact the environment roughly 10,000 years ago with the advent of agriculture. Just as improvements in agricultural methods have dramatically increased the productivity of each acre farmed, we are also making tremendous progress in both the efficiency of energy consumption and in reducing the carbon intensity of each unit of energy produced. Nevertheless, population growth and an increasing number of people in the developing world having access to electricity and energy, thus increasing per capita energy consumption, far outstrip the reductions in CO2 emissions in the developed world, therefore creating a challenging imbalance.

COGA is in favor of continued progress toward cleaner production of oil and natural gas. Clean, affordable energy is the backbone of America and the world's future, and we believe oil and natural gas have an important role to play in that future. COGA acknowledges that while uncertainties remain, climate change is a global issue warranting deliberations by governments, businesses, and the general public. For the conversation going forward COGA urges that the following principles guide action:

- Governmental actions should rely upon market-based mechanisms;
- Governmental policies should emphasize long-term certainty for investment decisions;
- Federal and state policies should encourage private and public investment in energy research, development, and technology commercialization;
- Policies should acknowledge that energy investment across all economic sectors continues to yield social and economic dividends;
- Governmental policies must avoid undue harm to the economy and should encourage job development; and
- Private and public decision making on energy policies should consider the disproportionate impact of higher energy costs on those living on fixed-incomes and the poor.

## **CONCLUSION**

While we recognize uncertainties remain, we share the concerns of governments, businesses, and citizens about climate change risks. We are committed to doing our part to encourage industry efforts that will reduce emissions by implementing efficiency measures, developing innovative technologies, and participating constructively in the conversation on how our state and country can best address this challenge. We believe solutions must balance the need to energize the lives of those struggling to access affordable energy, while simultaneously responding to climate change and powering a broader economy. Bountiful supplies of natural gas will be a critical part of the solution to this global issue, and COGA is committed to being an engaged stakeholder in that discussion.