

Climate Change and the Oil and Gas Industry; The Path to Cooperation

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Abstract

Fossil fuels have led to a profound increase in world living standards but emission of CO₂ and methane into the atmosphere from their use is a primary factor in climate change. The accelerating pace of climate change makes it imperative that the oil and gas industry actively join the global transition to a lower carbon economy. The effect of the Covid-19 Pandemic on the global economy and energy use has increased the challenge to oil and gas industry due to reduced energy use especially for oil. This has resulted in lower commodity prices and an accelerated change in energy use patterns away from fossil fuels. The first step for the oil and gas industry is acceptance of the climate change process. Many of the tools developed in the search for oil and gas including plate tectonics, sequence stratigraphy facies analysis, geochemistry and paleontology have been utilized to document climate change in the past. To be part of the solution (as opposed to being perceived as part to the problem) the oil and gas industry should:

- Support a global carbon tax: It is the most effective commercial mechanism to reduce CO₂ emissions and far more sensible than “quotas” or “cap and trade”. There is self-interest, also, as it moves fossil fuel use away from coal.
- Take a leading role in the development of Carbon Capture and Sequestration (CCS): This is the most effective process in dealing with CO₂ as it not only reduces emissions but takes CO₂ from the atmosphere. The industry expertise in drilling and identifying suitable subsurface reservoirs makes this a natural step. A carbon tax will accelerate its commerciality and use. It is a path to achieving “net zero” emission without abandoning oil and gas production.
- Support natural gas as a transition fuel while renewable use is gradually built up. In addition to natural gas being the lowest in GHG emission and cleanest fossil fuel, it can readily replace coal in power generation. However, unless major

efforts are made to reduce methane emissions associated with natural gas production and transportation, justification for use of natural gas falls apart from a GHG emissions standpoint. The industry has expertise that may be applied to low carbon technology and initiatives. For example, many of the best areas for wind power generation are offshore, where the industry has expertise in platform and offshore operations. Hydrogen as a power source can utilize existing gas pipeline grids for distribution. Charging stations for electric vehicles could utilize gas station networks. Recycling of plastics could play a greater role in the petrochemical industry.