USEA Reports

June 14, 2019

BP: Annual Statistical Review

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Chief Economist of BP, Spencer Dale hosted the 2018 British Petroleum statistical review based on the research and calculations gathered by Dale and his team of economists. The headline numbers were that global primary energy grew by 2.9%, which was the fastest growth since 2010. With this rapid growth in primary energy, carbon emissions also increase by 2%, which was also the fastest growth in years. Increases in both of these statistics indicate large increases in global energy demand. It was initially unclear what the product of this drastic increase in energy demand was, however, through different methods and research Dale was able to find a model that matched almost perfectly with the growth of energy.

United States energy growth was the answer to almost every question regarding global growth in 2018. U.S. energy consumption grew by 3%, which was our largest increase in 30 years. Dale hypothesized that increases in both energy and carbon emissions are directly related to climate change in the U.S., and throughout the globe. Increases in hot days and cold days have caused energy consumers to exhaust more energy than in previous years. The combined number of hot and cold days was the largest amount since 1950. Households and buildings must use more energy when heating or cooling their house or building due to the increases in extreme hot and cold days in 2018. Dale also noted that the weather in 2018 might have been a random series of extreme seasons, and may have no correlation for the future.

Oil demand grew by an average of 1.4 million barrels a day. China and India consumed two-thirds of this increase in consumption, which was expected. The United States showed tremendous growth as well, surprising Dale and his staff. Oil production increase by more than double its production average, largely due to increases in the U.S. This was almost entirely from tight oil and natural gas liquids. The increase in U.S. production was the largest annual increase by any country, which has led to a drastic structure transformation of our economy and global oil market. Natural gas production grew by over 5%, which was the fastest rate in 30 years. The main hector in this growth was the U.S., accounting for 40% of growth in production and 45% of growth in consumption. U.S. increases were largely driven by shale growth.

Chinese gas consumption grew by 18% last year, which stemmed from policies that encourage coal-to-gas switches in industry and in buildings in efforts to clean and restore their air quality and environment. 2018 saw a bounce back in coal, which increased in production by 4.3% and consumption by 1.3%. These increases were largely a result of the increases in power demand in China and India. Coal being a cheap form of energy is being utilized by both these countries at increasing rates to meet the demand of their people. Despite intense increases in renewables in India and China, these power demands have created a large market for coal, which has caused much frustration to those looking to decarbonize the global energy industry. Nuclear energy has seen growth by 2.3%. The Chinese are growing their nuclear fleet and are continuing to find safer, cleaner, more efficient ways to produce nuclear energy, which could take over the coal industry completely.

Throughout his presentation Spencer Dale focused most of his gatherings on decreasing carbon emissions in the power sector, which is the single largest source of carbon. Dale mentioned there is a clear focus on producing electric cars in today's society. While he believes this is great for the environment, and does have an impact in reducing carbon, it is not our most efficient way of reducing these emissions. Dale believes that if we can find alternatives to coal production that would have a much greater impact on carbon emissions.

Spencer Dale along with the BP team have concluded that at a time where society and our environment demands a low carbon energy system, the data for 2018 paint a worrisome picture for demand of energy and our energy's carbon emissions. It seems as if our climate continues on the same course, based off the statistical analysis provided by Dale, it will be imperative to find new ways to produce cleaner energy.

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