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November 18, 2016

The International Energy Agency (IEA) released its 2016 World Energy Outlook on November 18. This report outlines current world energy usage trends and projections through 2040. In addition to the publication, Dr. Fatih Birol, Executive Director for the IEA, gave a presentation on the potential impacts the Paris Climate Agreement could have on the world's energy outlook over the next 25 years.

Current world energy predictions from the IEA show that natural gas consumption is expected to increase by 50 percent by 2040, eventually overtaking coal as the leading energy source worldwide. In addition, the IEA report attributes the 37 percent increase in global energy production to the renewable energy sector, largely due to China's rapid adoption of renewable energy technologies. For example, in 2015 China installed 32.5 gigawatts of wind power and 18.3 gigawatts of solar power infrastructure nationwide. Conversely, the report projects that global oil consumption will decline in the vehicle sector, while continuing to make gains in the maritime, aviation, petrochemical, and freight industries.

During his presentation, Dr. Birol stated that reaching the Paris Agreement's goal of restricting world temperature increases to fewer than 2 degrees Celsius would require global greenhouse gas emissions to peak in 2020, and for the world to reach net zero emissions by 2100. The more ambitious goal set by the Paris Agreement to keep temperature increases below 1.5 degrees Celsius would require even more regulation. In order to achieve this, Dr. Birol stated that all global power systems would have to produce zero emissions, and all transportation systems would have to run on electric energy, by 2040.

Dr. Birol expressed that while the Paris Agreement is an important move toward a cleaner global energy portfolio, it does not contain any legally binding incentives to carry out its specified actions. Dr. Birol stated that the next steps for the global energy sector "depend entirely on the coming policy actions."

Sources: Center for Strategic and International Studies, Institute for Energy Economics and Financial Analysis, International Energy Agency