

Short-Term Energy Outlook

Release Date: February 10, 2015 | **Next Release Date:** March 10, 2015

Renewables and CO₂ Emissions

Electricity and Heat Generation from Renewables

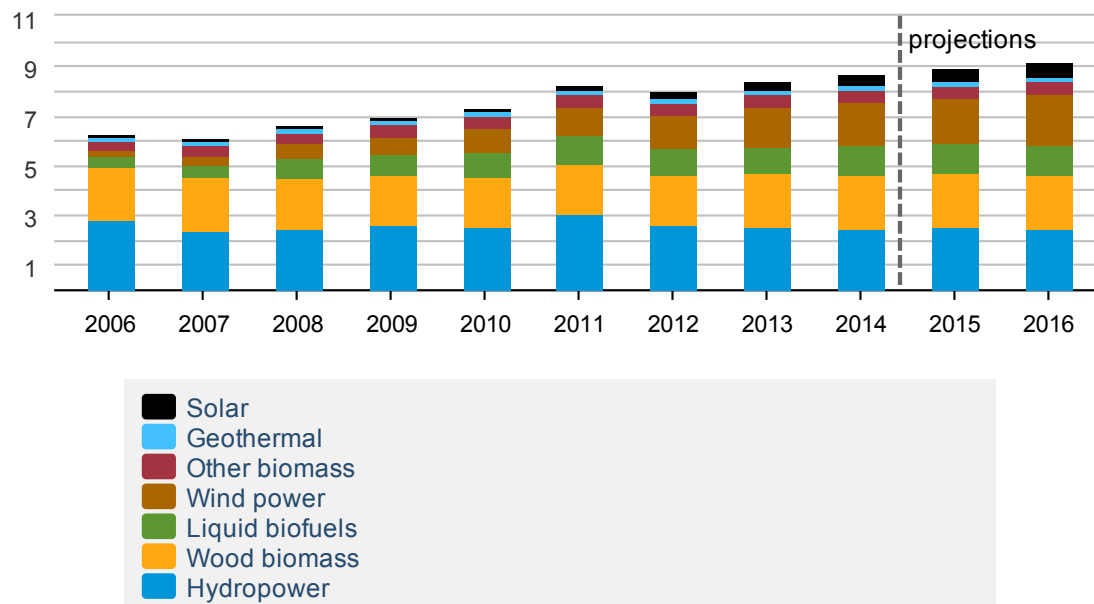
EIA projects that total renewables used for electricity and heat generation will grow by 3.8% in 2015. Conventional hydropower generation increases by 5.7%, while nonhydropower renewables generation increases by 2.9%. In 2016, total renewables consumption for electric power and heat generation increases by 2.9% as a result of a 3.2% decline in hydropower and a 6.0% increase in nonhydropower renewables.

In 2013, the electricity generation shares were 6.6% and 6.2% from hydropower and nonhydropower renewables, respectively. In 2014, 6.3% of generation came from hydropower and 6.9% from nonhydropower renewables. This trend is expected to continue, with the electricity generation share from nonhydropower renewables rising to 7.9% by 2016, and the hydropower share remaining near 6.5%. Wind is the largest source of nonhydropower renewable generation, and it is projected to contribute 5.2% of total electricity generation in 2016.

EIA expects continued growth in utility-scale solar power generation, which is projected to average almost 80 gigawatthours (GWh) per day in 2016. Despite this growth, solar power averages only 0.7% of total U.S. electricity generation in 2016. Although solar growth has historically been concentrated in customer-sited distributed generation installations, EIA expects that utility-scale solar capacity will increase by more than 60% between the end of 2014 and the end of 2016, with about half of this new capacity being built in California. [Wind capacity](#), which grew by 7.7% in 2014, is forecast to increase by 16.1% in 2015 and by another 6.5% in 2016. Because wind is starting from a much larger base than solar, even though the growth rate is lower, the absolute amount of the increase in capacity is more than twice that of solar: 15 GW of wind versus 6 GW of utility-scale solar between 2014 and 2016.

U.S. Renewable Energy Supply

(quadrillion Btu)



Source: Short-Term Energy Outlook, February 2015

Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel.

Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Liquid Biofuels

After reaching a record monthly average of 978,000 bbl/d in December 2014, ethanol production in January 2015 is estimated to be 969,000 bbl/d. Ethanol production averaged 933,000 bbl/d in 2014, and EIA expects it to average 938,000 bbl/d in 2015 and 936,000 bbl/d in 2016. Biodiesel production averaged an estimated 80,000 bbl/d in 2014 and is forecast to average 84,000 bbl/d in both 2015 and 2016.

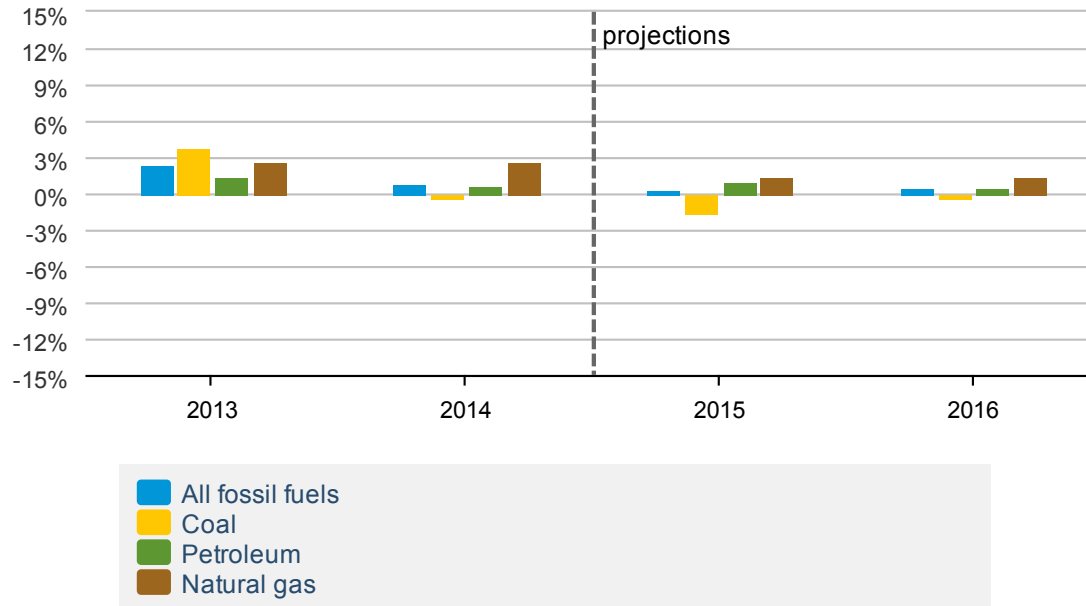
Energy-Related Carbon Dioxide Emissions

EIA estimates that emissions grew 0.9% in 2014. Emissions are forecast to increase by 0.3% in 2015 and 0.5% in 2016. These forecasts are sensitive to both weather and economic assumptions.

U.S. Energy-Related Carbon Dioxide Emissions Growth



(percent)



Source: Short-Term Energy Outlook, February 2015