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Energy Information Administration

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Short-Term Energy Outlook

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Highlights

- The current global economic slowdown is now projected to be more severe and longer than in last month's *Outlook*, leading to further reductions of global energy demand and additional declines in crude oil and other energy prices.

- The monthly average price of West Texas Intermediate (WTI) crude oil has fallen by more than half between July and November, reflecting the fallout from the rapid decline in world petroleum demand. The annual average WTI price is now projected to be $100 per barrel in 2008 and $51 in 2009.

- The average U.S. prices for regular-grade gasoline and diesel fuel, at $1.70 and $2.52 per gallon respectively on December 8, were both more than $2 per gallon below their highs in mid-July. With the assumption of a fragile economy throughout 2009, along with lower projected crude oil prices, annual average retail gasoline and diesel fuel prices in 2009 are projected to be $2.03 and $2.47 per gallon, respectively.

- Residential heating oil prices during this current heating season (October though March) are projected to average $2.53 per gallon, a reduction of 24 percent from the 2007-2008 heating season. Residential propane prices are projected to average $2.10 this winter, a decrease of 14 percent from last winter. Residential natural gas prices are projected to average $12.56 per thousand cubic feet (Mcf), a decrease of 1.3 percent from last winter.

- The U.S. economic recession is also contributing to lower natural gas wellhead prices. The Henry Hub natural gas spot price is projected to decline from an average of $9.17 per Mcf in 2008 to $6.25 per Mcf in 2009.

Global Petroleum

Overview

The increasing likelihood of a prolonged global economic downturn continues to dominate market perceptions, putting downward pressure on oil prices. World real gross domestic product (GDP) growth is projected to slow from about 4 percent in 2006 and 2007 to about 2.7 percent this year and 0.5 percent in 2009. Last month's *Outlook* assumed world GDP would increase by 1.8 percent in 2009. The condition of the global economy and production decisions by members of the Organization of Petroleum Exporting Countries (OPEC) are expected to remain the crucial factors driving world oil prices.

Consumption. The status of the global economy has become the most important driver of oil consumption growth and EIA's oil consumption projections continue to be revised downward in response to lower forecasts for global economic growth. As a result, global oil consumption is expected to decline by 50,000 bbl/d in 2008 and by 450,000 bbl/d in 2009, which would mark the first time in 3 decades that world consumption would decline in 2 consecutive years. In both years, growth is concentrated in countries outside of the Organization for Economic Cooperation and Development (OECD), especially China, the Middle East, and Latin America. However, projected sharp declines in oil consumption in OECD countries more than offset any non-OECD oil consumption growth (World Oil Consumption). If the world economy recovers sooner or is stronger than EIA now anticipates, oil consumption could decline at a slower rate or potentially increase instead, putting upward pressure on oil prices.

Non-OPEC Supply. Non-OPEC supply is expected to decline by 310,000 bbl/d in 2008, reflecting a combination of factors that include large supply disruptions in Central Asia and the Gulf of Mexico and project delays. Although declines in many non-OPEC basins, especially Mexico, the North Sea and Russia, are expected to continue in 2009, EIA projects that total non-OPEC supply will grow by 410,000 bbl/d in 2009, with the largest sources of growth coming from Azerbaijan, Brazil and the United States.

The global economic slowdown and falling oil prices bring additional risk to the usual uncertainties (unexpected disruptions, project delays, underestimation of decline rates) concerning non-OPEC supply growth. Lower oil prices bring into doubt the viability of some high-cost non-OPEC projects, especially those utilizing nonconventional technology or those seeking to exploit frontier oil basins. The credit crunch associated with the global economic crisis can also make it difficult for oil companies to acquire financing for new projects. If problems in global financial markets lead to delayed investment in existing and new oil fields, then even a short-lived economic downturn could have longer-term ramifications for world oil supply. This would heighten the risk of a return to a tight supply situation once the world economy and oil demand growth recover.

OPEC Supply. OPEC is scheduled to meet on December 17 to evaluate the effectiveness of its earlier decisions to cut production targets by 1.5 million bbl/d and to weigh the need for additional production cuts. Although the extent of OPEC members' compliance with the last production cut is still uncertain, EIA believes that the continued weak market conditions will prompt higher-than-usual compliance among OPEC members. It remains unclear whether production cuts so far are enough to avoid a counter-seasonal inventory build in the fourth quarter of 2008, a build that would add to downward price pressure over the winter. The position of some OPEC members at the upcoming meeting may be influenced by a desire to avoid excessive production cuts that might further tighten the market and trigger a sharp price rebound that could hurt the world economy.

EIA projects that OPEC crude production will fall from 32.6 million bbl/d in the third quarter of 2008 to 30.6 million bbl/d in the first quarter of 2009. OPEC crude production is expected to average 30.6 million bbl/d in 2009, about 1.6 million bbl/d below 2008 levels. The combination of lower demand for OPEC oil and capacity expansions expected in several OPEC countries would lead to a rise of surplus production capacity to an average of 4 million bbl/d in 2009 (OPEC Surplus Oil Production Capacity). In addition, EIA expects that OPEC production of non-crude liquids will rise substantially next year, growing by 770,000 bbl/d in 2009. Our price forecast for 2009 reflects both of these factors.

Inventories. Revised data indicate that OECD commercial inventories rose by 568,000 bbl/d in the third quarter of 2008, somewhat higher than historic rates for inventory builds during this time of year. OECD commercial inventories stood at 2.65 billion barrels at the end of the third quarter, equivalent to 57 days of forward consumption cover. On the basis of days of forward cover, OECD commercial inventories are well above historic levels, and EIA projects that they will remain there through the end of 2009 (Days of Supply of OECD Commercial Stocks).

U.S. Petroleum

Consumption. Buffeted by the increase in prices to record levels and the weakening economy, total petroleum products consumption in 2008 is projected to fall by 1.2 million bbl/d, or 5.8 percent, from the 2007 average (U.S. Petroleum Products

Consumption Growth). Motor gasoline consumption is projected to decline by 320,000 bbl/d, or 3.4 percent, in 2008 with the year-over-year decline narrowing to 50,000 bbl/d in 2009. Despite the recent cold weather that gripped much of the Nation, distillate fuel consumption is projected to decline by 240,000 bbl/d, or 5.7 percent, in 2008, and by an additional 70,000 bbl/d in 2009. In 2009, total petroleum products consumption is projected to fall by 200,000 bbl/d, or 1 percent.

Production. In 2008, domestic crude oil production is projected to average 4.9 million bbl/d, a decline of 130,000 bbl/d from last year (U.S. Crude Oil Production). However, domestic production is projected to increase in 2009 by 320,000 bbl/d to an average of 5.25 million bbl/d. This would be the first production increase since 1991. Contributing to the increase in output are the Gulf of Mexico Thunder Horse platform, which is coming on stream now, and the Tahiti platform, expected to come on stream late in 2009.

Prices. Having fallen from record highs to below $50 per barrel, WTI prices are projected to average around $100 per barrel in 2008. Under current economic assumptions and assuming no major crude oil supply disruptions, WTI prices are expected to average $51 per barrel in 2009 (Crude Oil Prices), down from the $63.50 projected in last month's *Outlook*.

Regular-grade gasoline prices averaged $1.70 per gallon on December 8, down substantially from their July 14 peak of $4.11 per gallon. They are projected to average $2.03 per gallon in 2009, down from the $2.37 per gallon projected in the previous *Outlook*. Because of continued weakness in motor gasoline consumption, the difference between the price of gasoline and the cost of crude oil is expected to remain low throughout the forecast.

Residential heating oil retail prices this winter are projected to average $2.53 per gallon, a decrease of 78 cents from last winter's average. On-highway diesel fuel retail prices are projected to average $2.47 per gallon in 2009, down $1.33 from the 2008 average, compared with a $1.16-per-gallon decline in the price of WTI crude oil. The projected continuation of the decline in the consumption of diesel fuel in the United States as well as a slowing of the growth in distillate fuel usage outside the United States are expected to result in a weakening of refining margins.

Spot propane prices are strongly influenced by both crude oil and natural gas prices. Residential retail propane prices are projected to average $2.10 per gallon this winter, a decrease of 14 percent from the last winter heating season. However, with current low inventories, propane markets are likely to remain relatively tight this winter, with the potential for upward pressure on residential propane prices if the recent colder-than-normal weather persists.

Natural Gas

Consumption. Total natural gas consumption, which is more weather-driven than oil consumption, is expected to increase by 0.5 percent in 2008 and remain flat in 2009 (Total U.S. Natural Gas Consumption Growth). Consumption is projected to be higher in every sector in 2008, except for electric power, primarily due to the projected 5.3-percent increase in heating degree-days compared with last year. In 2009, consumption in the residential, commercial, and electric power sectors is expected to grow, albeit slightly. However, poor economic conditions both domestically and worldwide are expected to hamper U.S. industrial production activities through the forecast period. As a result, natural gas consumption in the industrial sector is expected to decline by 2.4 percent in 2009.

Production and Imports. Total U.S. marketed natural gas production is expected to increase by 5.4 percent in 2008 and by 0.9 percent in 2009. Domestic natural gas production continues to surge behind strong growth in the Lower-48 onshore, where annual average production is expected to increase by 9.1 percent this year. However, a dip in recent drilling activity, reflecting lower average prices and poor economic conditions, is expected to limit onshore production growth to 0.8 percent in 2009. Production outages in the Federal Gulf of Mexico (GOM) caused by Hurricanes Gustav and Ike led to a decline in offshore production of 14.5 percent in 2008. Production in the Federal GOM is expected to increase by 1.8 percent in 2009. U.S. imports of liquefied natural gas (LNG) are expected to total about 360 billion cubic feet (Bcf) in 2008 and slightly over 400 Bcf in 2009, remaining well below the 2007 level.

Inventories. On November 28, 2008, working natural gas in storage was 3,358 Bcf (U.S. Working Natural Gas in Storage). Current inventories are now 69 Bcf above the 5-year average (2003–2007) and 107 Bcf below the level during the corresponding week last year.

Prices. The Henry Hub spot price averaged $6.87 per Mcf in November. Natural gas prices, which have declined from a monthly average of $13.06 per Mcf in June, reflect the impact of increased domestic production, the weak economy, and lower oil prices. While these factors are expected to lead to lower natural gas prices throughout the forecast period, the pass-through of higher natural gas prices paid earlier in the year for supplies that will be called upon to meet winter demand is expected to contribute to a small increase in heating expenditures this winter for households that use gas as their primary heating fuel. On an annual basis, the Henry Hub spot price is expected to average $9.17 per Mcf in 2008 and $6.25 per Mcf in 2009, compared with $7.17 per Mcf in 2007.

Electricity

Consumption. Total electricity consumption during 2008 is projected to be flat at about 2007 levels, as slight growth in the commercial and industrial sectors is balanced by decline in the residential sector, primarily as a result of milder summer temperatures (U.S. Total Electricity Consumption). Total electricity consumption is expected to decline in 2009 due to the slow growth in new housing construction and reduced demand in the industrial sector.

Prices. Spot prices for power generation fuels continue to decline from their peak summer levels. Residential electricity prices are expected to rise by 6 percent this year and by 5 percent in 2009 (U.S. Residential Electricity Prices).

Coal

Consumption. Electric-power-sector coal consumption for the first half of 2008 grew by 1.3 percent, but a decline in summer (third quarter) electricity consumption is expected to limit annual electric-power-sector coal consumption growth to only 0.3 percent in 2008. An expected decline in electricity consumption in 2009, combined with projected increases from other generation sources (nuclear, natural gas, petroleum, and wind), will contribute to a projected 0.2-percent decline in electric-power-sector coal consumption. Consumption in the coke plant sector is expected to fall by 4.1 percent in 2008 and an additional 6.4 percent in 2009 (U.S. Coal Consumption Growth).

Production. A significant increase in coal exports in 2008 contributed to a 2.8-percent increase in coal production. Production is expected to fall by 2.6 percent in 2009 as lower total domestic coal consumption is combined with declines in exports and a small increase in imports. (U.S. Annual Coal Production).

Exports. Strong global demand for coal, combined with supply disruptions in several key coal-exporting countries (Australia, South Africa, and China), spurred an increase in U.S. coal exports. Although the supply disruptions have ended, worldwide demand for coal is projected to lead to a nearly 40-percent increase in U.S. coal exports in 2008. Reductions in global coal demand, coupled with the return to normal supply conditions in other major coal-producing and exporting countries are expected to reduce U.S. coal exports by 11 million short tons (a 13-percent decrease) in 2009.