

STATEMENT OF
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U.S. DEPARTMENT OF ENERGY
BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
March 29, 2012

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you today to discuss current and near-term future price expectations and trends for motor gasoline and other refined petroleum products.

The U.S. Energy Information Administration (EIA) is the statistical and analytical agency within the U.S. Department of Energy. EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding regarding energy and its interaction with the economy and the environment. EIA is the Nation's premier source of energy information and, by law, its data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. Therefore, our views should not be construed as representing those of the Department of Energy or other federal agencies.

Recent Gasoline and Diesel Prices

Prices for all petroleum products have risen in recent months, but gasoline prices are of particular concern to most consumers. The national average price of regular grade gasoline averaged \$3.58 per gallon in February 2012, 37 cents (11.5%) higher than in February 2011 and an historic high for any February in both real and nominal terms. Diesel fuel prices have moved higher along a parallel path, averaging \$3.95 in February 2012, also 37 cents per gallon (10.3%) higher than in the comparable year-

ago period and an historic high for any February. As illustrated in the color-coded map in Figure 1, there is significant regional variation in gasoline prices. During 2012, retail gasoline prices in the Rocky Mountain region have been well below the national average due to lower crude oil input cost for refiners in that region. On March 26, the average price in the Rocky Mountain region was \$3.69 per gallon. That was 56 cents per gallon lower than the average price on the West Coast, which was \$4.24 per gallon on the same day. The West Coast has recently experienced several refinery outages that pushed up retail prices in that region. The national average price for regular grade gasoline on March 26, 2012 was \$3.92 per gallon.

Key factors that drive petroleum product prices are the cost of crude oil to refiners, the costs of refining and marketing petroleum products, the balance between demand and available product supplies, and taxes applied to gasoline and other motor fuels. In the short term, changes in the cost of crude oil tend to be the single most important factor driving changes in product prices. But product prices are also affected by demand, which varies seasonally. Generally, gasoline prices peak during the summer driving season. Furthermore, imbalances between product demand and available supply affect prices. In extreme cases, local supply disruptions such as from unplanned refinery or delivery outages can push up product prices beyond any changes in crude oil prices. These types of imbalances are usually short-lived and tend to impact prices in specific local areas or regions.

Recently crude oil price increases have eclipsed other impacts on petroleum product prices, including any downward effect stemming from recent weakness in U.S. gasoline and diesel demand. While both gasoline and diesel prices rose 37 cents per gallon from February 2011 to February 2012, the cost of crude oil to refiners rose by about \$20 per barrel (48 cents per gallon) over the same period. Figures 2 and 3 show U.S. retail prices for gasoline and diesel fuel along with refiners' average crude oil costs, illustrating the significant impact of crude oil prices on product prices.

Crude oil price increases

Crude oil prices reflect both current market conditions and market participants' assessments of developments that could affect the future balance between supply and demand. The economic outlook is a key driver of demand expectations. Assessments of the decline rate for existing production, prospects for projects that can add liquids production at new and existing fields both inside and outside of member countries of the Organization of the Petroleum Exporting Countries (OPEC), and geopolitical developments that have the prospect to disrupt production and/or the flow of crude oil into the marketplace are key factors that enter into views of the future supply situation.

The increases in crude oil prices since the beginning of 2011 appear to be related to a tightening world supply-demand balance and concerns over geopolitical issues that have impacted, or have the potential to impact, supply flows from the Middle East and North Africa, a region that is critical to overall global supply of crude oil. While demand growth in the United States and especially in Europe has been weak, demand growth in developing countries has been relatively strong, resulting in world demand growth in 2011 of 0.8 million barrels per day (bbl/d) over 2010. At the same time, non-OPEC supply has had some setbacks recently, including production drops in South Sudan, Syria, Yemen, and the North Sea. In

addition, both the United States and the European Union have acted to tighten sanctions against Iran, including measures with both immediate and future effective dates. Current prices reflect expectations as well as current conditions, and many analysts see continued demand growth with possible tightening in supply over the coming months.

Changes in Petroleum Product Trade Flows

EIA data indicates a significant shift in petroleum product trade flows, as the United States became a net exporter of petroleum products in 2011 for the first time since 1949. EIA has been asked whether this development has contributed to rising gasoline prices. We do not believe that there is any significant causal linkage between these two phenomena. U.S. gasoline exports have grown mainly as a result of refineries having excess capacity as U.S. consumption of petroleum-based liquid fuels has declined. Between 2007 and 2011, U.S. consumption of liquid fuels fell by 1.85 million bbl/d (8.9%). Over this same period, domestic production of ethanol and biodiesel, which displaces petroleum-based components of motor fuels, increased by 0.51 million bbl/d (112%). Imports fell in both absolute terms and as a share of U.S. petroleum product demand over this period.

At the same time as domestic demand for petroleum-based liquid fuels declined, many U.S. refiners had a competitive advantage in some world markets that need to import gasoline. Most gasoline exports leave from Gulf Coast refineries to serve markets in Latin America where demand has been growing rapidly. U.S. refiners were able to take advantage of these export opportunities, and, accordingly, they only reduced crude oil inputs by 0.32 million bbl/d (2.1%) between 2007 and 2011. Without those product exports, refiners would likely have reduced crude inputs and refinery output much more than what actually occurred.

While the United States has been exporting gasoline from the Gulf Coast, we still import gasoline into the East Coast, which receives about 85 percent of U.S. gasoline imports. Both pipeline capacity and domestic waterborne shipping constraints currently discourage increased product volumes from traveling from the Gulf Coast to the East Coast. As long as European and other foreign gasoline supplies remain competitive, the East Coast is likely to continue to draw on these supplies. Also, if Gulf Coast refiners were not exporting to Mexico and other Latin American countries, Europe would likely be sending more supplies to those areas, potentially increasing the cost of gasoline imports to the Northeast.

The Near-Term Outlook for Motor Fuel Prices

In EIA's Short-Term Energy Outlook, the cost of crude oil to refiners continues to be the major factor affecting gasoline and diesel prices through the end of 2013. The average refiners' acquisition cost of crude oil is forecast to increase from \$102 in 2011 to almost \$115 in 2012, but falls back a bit in 2013 to \$110.

Significant uncertainties could push oil prices higher or lower than projected. A number of non-OPEC countries are currently undergoing supply disruptions. Oil prices could be higher than projected if current disruptions intensify, new non-OPEC projects come online more slowly than expected, or OPEC

members do not increase production. On the demand side, if the pace of global economic growth fails to recover in OECD countries, or if economic growth slows in non-OECD countries, prices could be lower.

The value of options on futures contracts is one key indicator of forward-looking market sentiment. Call options provide the holder with the right to buy a commodity at a specified price up to a specified future date, while put options provide the right to sell at a specified price up to a specified future date. Given strike prices and the time to expiration, the value of options contracts can be used to calculate the market's current assessment of the uncertainty range for future prices and/or the market's view that prices for future delivery at specified dates will exceed or fall below any particular level. Application of this approach to market prices for the 5-day period ending March 23 suggests that market participants believe there is a 14 percent probability that the June 2012 West Texas Intermediate (WTI) futures contract will expire above \$120 per barrel, \$14 higher than the WTI spot price on March 23. Given the higher absolute level of Brent crude prices, which are generally more representative of waterborne crude prices in today's market, the probabilities that the June Brent contract will exceed specified dollar thresholds are much higher.

EIA expects to see continued constraints in transporting crude oil from the U.S. midcontinent region, and thus a continued price discount for landlocked crude oils, including WTI, relative to other world crude oil prices. The projected WTI price discount to the average U.S. refiner acquisition cost of crude oil narrows over the forecast from about \$10 per barrel in the second quarter of 2012 to \$4 per barrel by the fourth quarter of 2013, as physical pipeline capacity constraints diminish. EIA expects WTI prices to remain relatively flat in 2013, averaging about \$106 per barrel, while the U.S. average refiner acquisition cost of crude oil declines to \$110 per barrel, narrowing the gap.

Given its forecast for crude oil prices, EIA is expecting an increase in gasoline and diesel prices in 2012 of almost 30 cents per gallon over their average prices in 2011. Product prices decrease along with crude oil prices in 2013. EIA expects regular-grade motor gasoline retail prices to average \$3.79 per gallon in 2012, compared with \$3.53 per gallon in 2011. During the April-through-September summer driving season this year, prices are forecast to average about \$3.92 per gallon, with a peak monthly average price of \$3.96 per gallon in May. Based on implied volatilities calculated from options and futures prices over the 5 days ending March 23, the probability of the June 2012 futures contract for reformulated blendstock for oxygenate blending (RBOB) expiring above \$3.35 per gallon (comparable to a \$4.00 per gallon national monthly average retail price for regular grade gasoline) is approximately 44 percent. The corresponding market-based probability that the June 2012 RBOB contract will expire at a level that would imply a national monthly average retail price for regular grade gasoline of \$5.00 per gallon or more is less than 1 percent.

Diesel prices are projected to average \$4.15 per gallon in 2012, which is 31 cents higher than in 2011. Prices are forecast to decline slightly to \$4.11 in 2013. Throughout this forecast, diesel prices are expected to remain above gasoline prices. World demand growth for diesel fuel, primarily in the emerging economies, has significantly outpaced gasoline demand growth in recent years. EIA expects retail gasoline prices to average 36 cents per gallon below diesel in 2012 and 40 cents per gallon lower in 2013.

One of the major uncertainties that could impact gasoline and diesel prices in the Northeast this summer is the possible closure of the Sunoco Philadelphia refinery. If Sunoco is unable to find a buyer for its Philadelphia refinery, it plans on shutting the facility, which could create some local supply disruptions as the transition occurs. This issue was discussed in a recent EIA report, *Potential Impacts of Reductions in Refinery Activity on Northeast Petroleum Product Markets*, and we continue to monitor that situation.

Given the near-term focus of this hearing, this testimony does not address longer-term projections related to the supply and demand for crude oil and petroleum products that are considered in EIA's *Annual Energy Outlook* and *International Energy Outlook*, which provide domestic and international energy projections through 2035 for a variety of cases reflecting alternative assumptions about economic growth, supply conditions, and policies. These longer-term projections may be relevant to policymakers' consideration of possible proposals that could significantly impact demand or supply trends for crude oil and petroleum products over an extended time period.

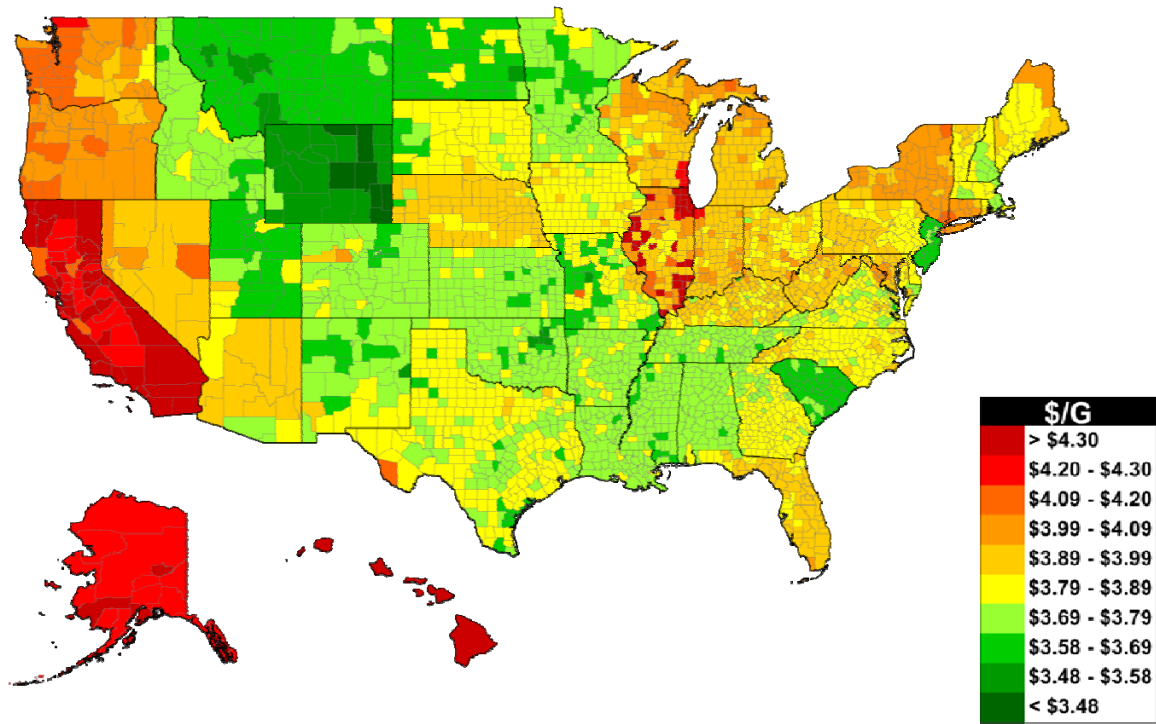
Conclusion

As I noted at the outset, while EIA does not take policy positions, its data, analyses, and projections are meant to assist policymakers in their energy deliberations. EIA has often responded to requests from this Committee and others for data and special analyses, and I want to assure you that we stand ready to do so over the coming weeks and months.

This concludes my testimony, Mr. Chairman and Members of the Committee. I would be happy to answer any questions you may have.

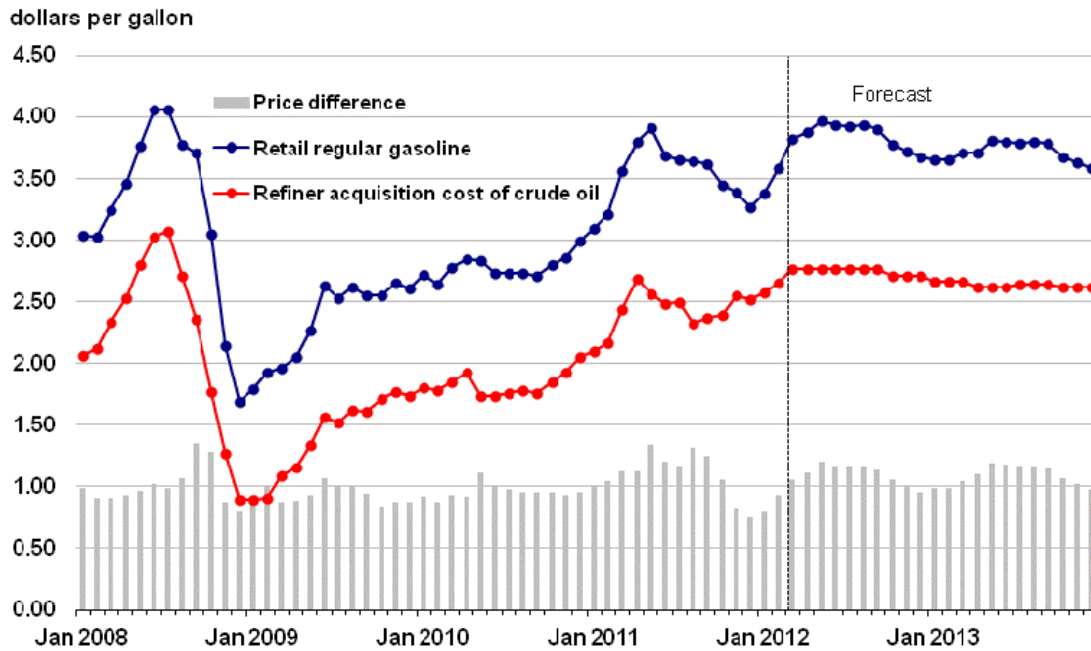
Figure 1. Regular Gasoline Prices by County

National Gas Prices by County



Source: Provided by GasBuddy.com, March 27, 2012.

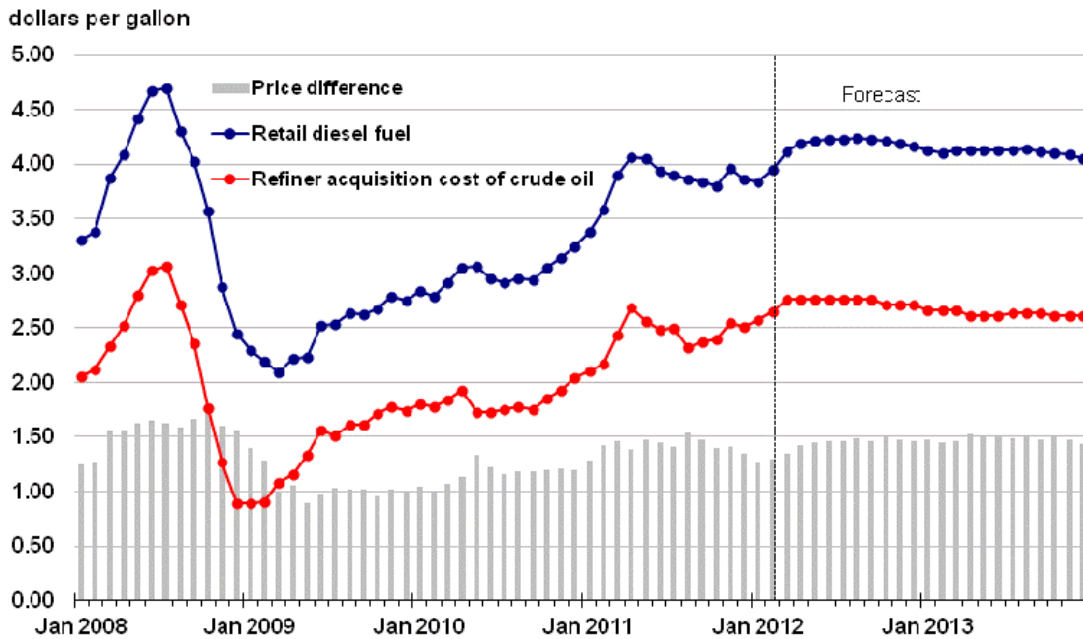
Figure 2. U.S. Gasoline and Crude Oil Prices



Source: Short-Term Energy Outlook, March 2012



Figure 3. U.S. Diesel Fuel and Crude Oil Prices



Source: Short-Term Energy Outlook, March 2012

