
GasBuddy
FUEL PRICE OUTLOOK
2019

SUMMARY

About Our Annual Outlook

Accuracy, reliability, and neutrality are GasBuddy's mission with price forecasting, and it is achieved with the independent analysis featured in this outlook.

Note that this outlook is not indicative of what will happen but rather what we believe could happen given specific inputs, potential impacts on production as well as supply and demand.

Fuel markets are complex. This analysis is intended to take current factors and speculate on how today's events may impact gasoline prices in the future. GasBuddy works to make these forecasts as reliable as possible and to be understood by anyone with little or no background of oil and petroleum markets or economics.

About the Authors

Patrick DeHaan, head of petroleum analysis, has been called one of the most accurate fuel forecasters in the U.S. by the San Jose Mercury News and has been analyzing fuel prices and trends for nearly fifteen years. He provided expertise to authorities during Hurricane Harvey and Irma and is regularly cited in U.S. periodicals and news broadcasts for his knowledge on various topics including oil, fuel prices, motor fuel taxation, pipelines and retail stations.

The Honorable Dan McTeague, senior petroleum analyst, is a noted expert in the energy field. He is heralded as "Canada's gas guru" for helping motorists save money at the pump and offer insight into pricing and market dynamics. Dan has also been cited hundreds of times by virtually every Canadian news organization during his decades of experience.

2019 Gasoline Forecast

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2019 Gasoline Forecast

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Month	Range of Possible	Average
January	$2.19 - $2.51	**$2.35**
February	$2.13 - $2.63	**$2.38**
March	$2.41 - $2.75	**$2.58**
April	$2.63 - $2.94	**$2.79**
May	$2.72 - $3.22	**$2.97**
June	$2.68 - $3.15	**$2.92**
July	$2.63 - $3.11	**$2.87**
August	$2.67 - $3.22	**$2.83**
September	$2.58 - $3.04	**$2.76**
October	$2.49 - $2.93	**$2.71**
November	$2.44 - $2.86	**$2.65**
December	$2.38 - $2.74	**$2.56**
2019 U.S. Average		*$2.70*

Numbers reflect range of national average by month, with monthly average in bold. ($/gal)

2019 Gasoline Forecast

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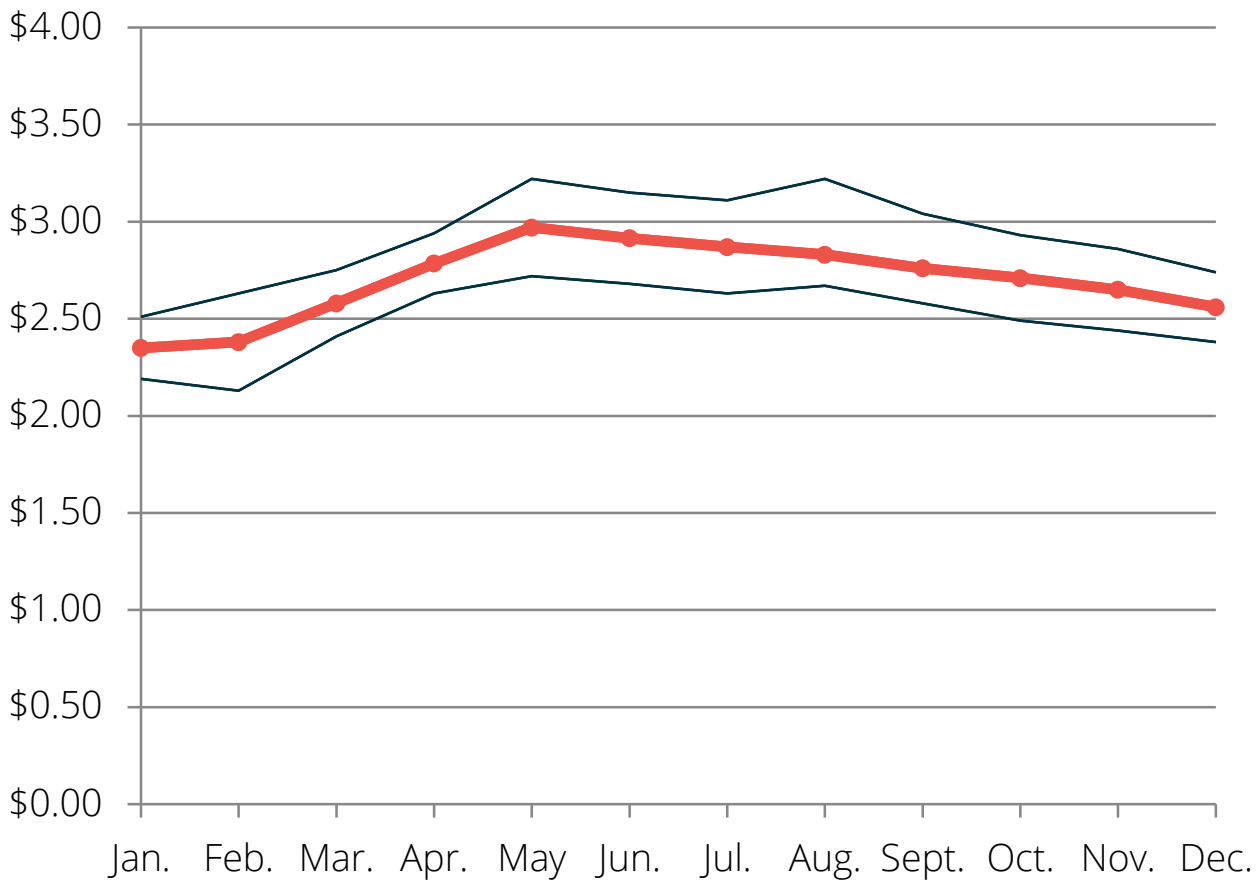

Chart reflects range of national average by month, with monthly average shown as red line.

2019 Gasoline Forecast

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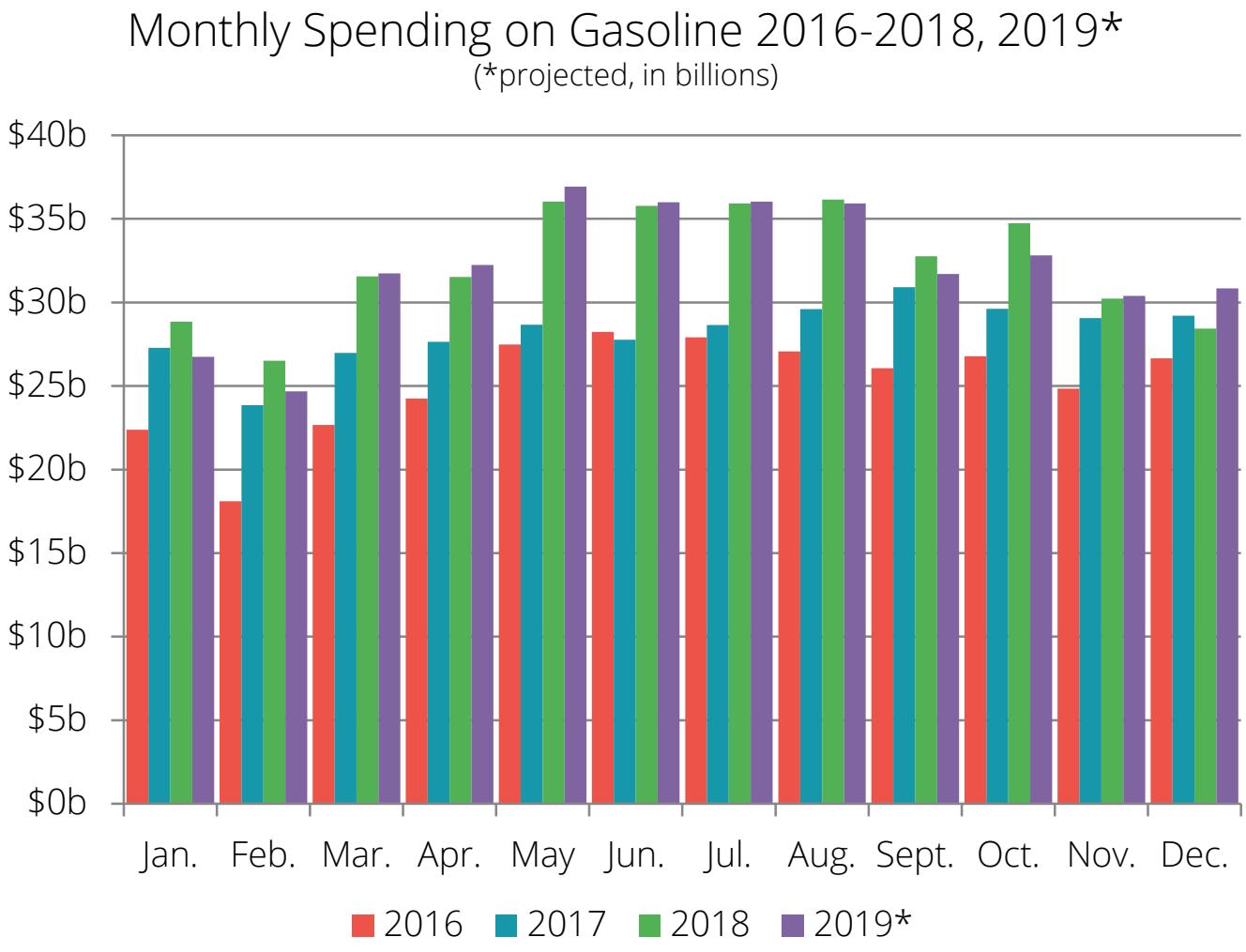

2019* Total U.S. Gasoline Spending: $386.0 billion

2018 Total U.S. Gasoline Spending: $388.5 billion

2017 Total U.S. Gasoline Spending: $339.2 billion

2016 Total U.S. Gasoline Spending: $302.5 billion

2019 Gasoline Forecast

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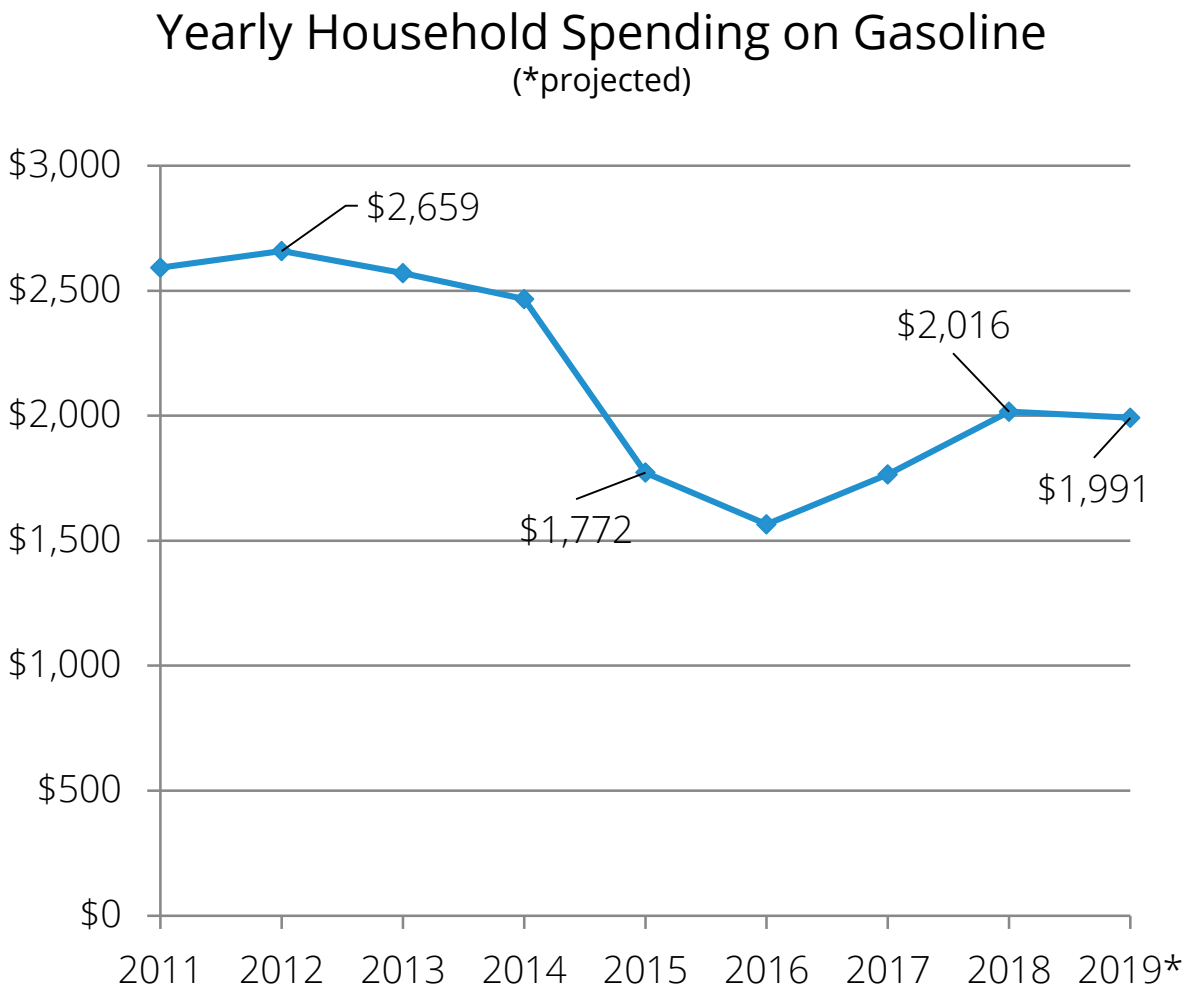

2019* Average Household Gasoline Spending: $1991

2018 Average Household Gasoline Spending: $2016
2017 Average Household Gasoline Spending: $1765
2016 Average Household Gasoline Spending: $1566

Highest Daily Average Gas Price Select Cities, 2019

City	Highest Daily Average
Atlanta	$2.80-$3.10
Boston	$2.85-$3.15
Chicago	$3.10-$3.50
Cleveland	$2.75-$3.05
Dallas/Ft. Worth	$2.60-$2.95
Denver	$2.70-$3.05
Detroit	$2.90-$3.20
Houston	$2.55-$2.90
Los Angeles	$3.70-$4.15
Miami	$2.80-$3.15
Minneapolis	$2.75-$3.10
New York City	$3.05-$3.35
Orlando	$2.75-$3.05
Philadelphia	$2.90-$3.30
Phoenix	$2.85-$3.25
Sacramento	$3.50-$4.10
San Francisco	$3.75-$4.20
Seattle	$3.45-$3.85
St. Louis	$2.70-$3.05
Tampa	$2.65-$3.05
Washington, D.C.	$2.90-$3.20

Prices represent peak average daily gas price by city for select U.S. cities

Forecasting Volatility

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Unless something out of the ordinary or catastrophic occurs, little thought is given to the *process* by which gasoline arrives at our neighborhood convenience stores and gas stations. It is assumed that gasoline is always available whenever we need it. More often than not, most of us pay little attention to the fuel we rely on until prices at the pump surprise us. Events like major hurricanes, remind us that gasoline is very much a "just-in-time" commodity.

When we take a closer look, we see that volatility is built into the price we pay at the pump because many components, both globally and locally, have a hand in simultaneously pressing those prices higher and/or lower. These components include: the specific time of year and the federal regulations that dictate whether 'summer blend' (June 1 through September 15 in much of the U.S.) or 'winter blend' (the remainder of the year in most areas) gasoline must be available, and how much; the strength of global economies; the relative value of major currencies; crude oil prices; supply and demand of oil and gasoline; refinery operations; pipeline logistics; state and local taxes; weather; OPEC policy; and, last but not least, politics, especially true thus far under President Trump.

Gasoline is a product derived from crude oil, and retail gasoline prices are tied to the market price of crude oil and wholesale gasoline prices. We find that oil prices are especially sensitive to geopolitical events that can impact the ample supply and timely delivery of these commodities. These events whether perceived or actual and whether positive or negative can influence prices.

Gasoline prices are also subject to seasonal increases and decreases tied directly to both refinery maintenance season (spring and fall) and the Clean Air Act, which has been slowly elimination some pollutants from fuels.

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Forecasting Volatility

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The purpose of these regulations is to reduce smog and pollution, especially in large metro areas across the U.S. during the peak summer driving season. The transition from "winter blend" to "summer blend" gasoline which takes place as refiners perform seasonal maintenance and results in a reduction in the amount of gasoline produced and have increased gas prices starting in February or March between 25 to 75 cents per gallon on average over the last decade. This results in a rise in retail pricing that arrives every spring as refineries deplete their inventory of winter blend prior to the annual maintenance needed before they can begin production (in March and April) of the more expensive summer blend.

What is unpredictable are the unscheduled obstacles that refineries may encounter. In areas such as the West Coast and Great Lakes region, where gasoline is produced by a few dominant refineries, motorists are most susceptible to severe price spikes that are triggered when their refineries hit unexpected snafus (even brief ones) especially during a time of year when refineries are transitioning to a larger slate of localized blends. In addition, pipelines that carry refined fuels have increasingly had unexpected shutdowns that too may affect the price of fuels.

Weather always represents a potential threat, Hurricanes Harvey and Irma in 2017 prompted widespread fuel disruptions and shortages in Texas and Florida. The impact was felt in every corner of the country due to the amount of gasoline production that was shut down after tremendous amounts of rain fell on Texas, the nation's largest oil producing and refining state. Gasoline inventories plummeted and it took months to recover. There is no national emergency gasoline supply and significant events have the potential to challenge both fuel supply and prices.

2019 Diesel Forecast

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2019 Diesel Forecast

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Month	Range	Average
January	$2.95 - $3.42	**$3.19**
February	$2.98 - $3.49	**$3.24**
March	$2.99 - $3.46	**$3.23**
April	$2.97 - $3.38	**$3.18**
May	$2.94 - $3.35	**$3.15**
June	$2.91 - $3.33	**$3.12**
July	$2.87 - $3.26	**$3.07**
August	$2.93 - $3.27	**$3.10**
September	$2.96 - $3.39	**$3.18**
October	$2.99 - $3.46	**$3.23**
November	$3.07 - $3.54	**$3.31**
December	$3.11 - $3.61	**$3.36**
2019 U.S. Average		*$3.19*

Numbers reflect range of national average by month, with monthly average in bold.

2019 Diesel Forecast

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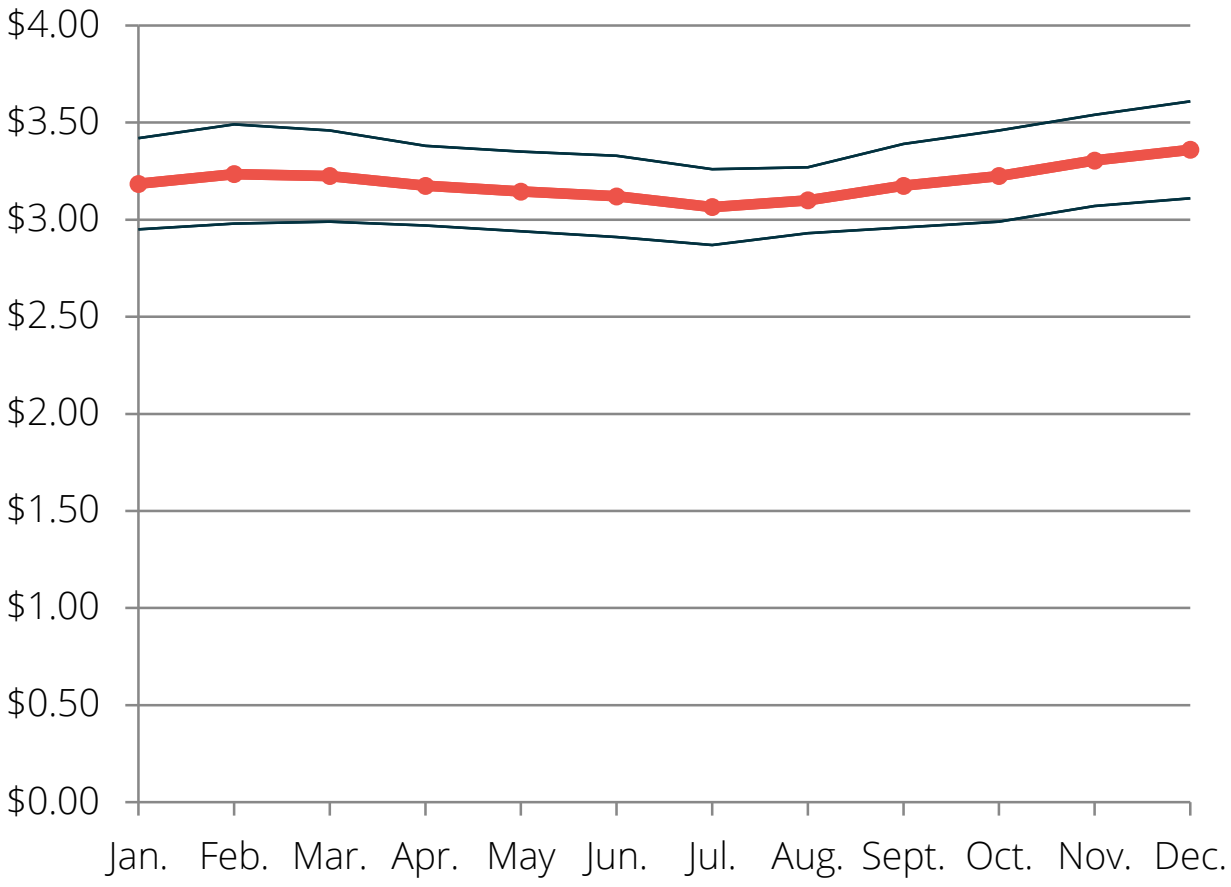

Chart reflects range of national average by month, with monthly average shown as red line.

Fuel Outlook Commentary

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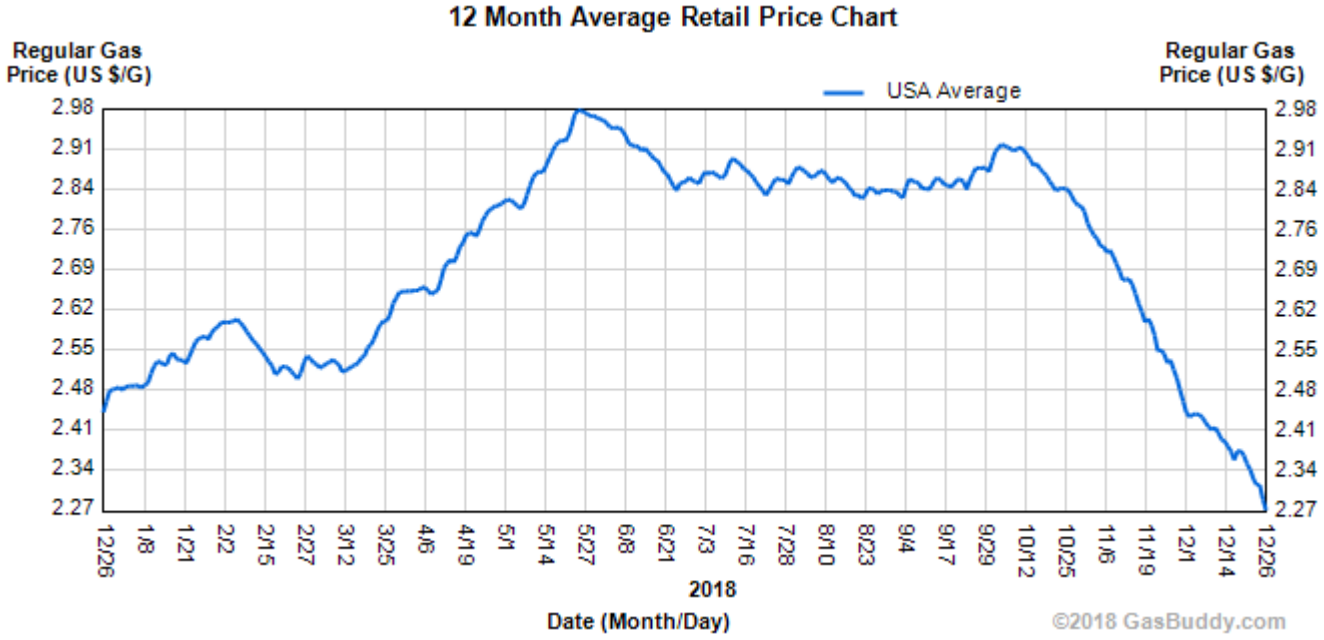
The national average price of gasoline increased year-over-year for the second straight year as the yearly average rose 34 cents to $2.73 per gallon versus 2017 ($2.39). 2018 goes down as being the priciest since 2014 due to oil's recovery amidst OPEC's continued production cuts. Prices closed out the final 12 weeks of the year, however, plummeting from $2.91 per gallon on October 10 to $2.28 per gallon ahead of New Years Eve, shaving $230 million off the country's daily gasoline bill from October's peak.



2018's rising pump prices can be traced to the success in OPEC and non-OPEC allies, such as Russia, achieving success at reducing the overhang in global oil supplies, which at its peak was estimated at nearly 2 million barrels per day. Oil supply fundamentals finally achieved a balance after two years of overproduction helped by substantial declines in Venezuelan output and intentions by the State Department to re-impose full sanctions on Iranian exports, including oil. Combined with strong economic growth and demand for oil, 2018 was a year of robust recovery which only began to falter on renewed signs of a growing oil surplus, as Saudi Arabia, the U.S. and Russia achieved record output in the final months of the year.

Fuel Outlook Commentary

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2019 presents perhaps the most challenging year in recent memory to pin down monthly gas prices with any reasonable accuracy. We take the view that two perhaps dramatically different scenarios may take place that may cause prices to be on the high or low side of our projections.

Scenario 1: Push (Up)

Our expectations for a higher range of prices is conditional on what we know and those we don't. In the category of factors that we know could lead to sustained upwards pressure on crude and fuel is OPEC's success in fully implementing its 1.2 million barrel per day cut in oil output. The agreement, if followed rigorously without exceptions by all OPEC and non-OPEC countries, like Russia and Kazakhstan, could begin to reverse the build up in global oil stockpiles that began on the assumption that the U.S. would completely embargo all Iranian oil exports last November. The subsequent waivers granted by the State Department are set to expire in June and if not renewed, would almost certainly place crude back on track to potentially retrace its October 2018 highs.

Trade tensions between the U.S. and China have also served as a weight on petroleum prices. Should the two economic superpowers achieve broad agreement on various issues that have held such an agreement back, absent threats of tariffs and retaliation, markets will remove the risk premium to global demand and would almost certainly lead to crude and refined products regaining lost ground.

Similarly, an orderly Brexit of the United Kingdom from the European Union could also soothe frayed market nerves and restore a more positive outlook for the European Union, despite the UK going about it alone, but cooperatively.

Fuel Outlook Commentary

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Another push factor is continued signs of economic progress in the U.S. economy which would be supportive of overall petroleum demand, keeping pace with supply and perhaps indications of the Federal Reserve holding the line on future interest rate hikes.

The unknowns can also have a dramatic effect on price escalation. Beyond unforeseen geopolitical events such as armed conflict or crisis in any of the world's producing regions, an existential threat to global supplies is always a guarantee of higher prices. A full sanctioning of Iranian oil once the waivers expire could be a flashpoint in the Arabian Gulf.

Ongoing unrest and civil war in Libya and the economic uncertainties of Venezuelan output will continue to support risks to the upside. As well, meteorological events such as Hurricanes affecting U.S. Gulf Coast oil production as seen with Hurricanes Harvey and Irma in 2017 or even forest fires in Fort McMurray that crimped heavy oil supply in May 2016, form part of the unknowns that can have drastic implications for fuel prices.

Not to be forgotten is the often-unexpected breakdown or unforeseen and unplanned events that may place a given refinery offline for an indefinite period. Even lengthy or prolonged turnarounds can lead to unusually high pump prices. This is particularly true in certain regions of the country, notably PADD 2 and 5 where disruptions at Midwest and West Coast refineries can send fuel prices soaring.

On the distillate side of the barrel, new international rules on maritime fuels means that under IMO 2020 regulations, all global vessels must run on low sulfur diesel or its equivalent in emissions. As 2018 saw diesel prices catch and surpass gasoline futures prices, including, most unusually, the summer, refiners seeking to take advantage of the sudden surge in diesel popularity may contribute to higher prices for both crude and liquids alike.

Fuel Outlook Commentary

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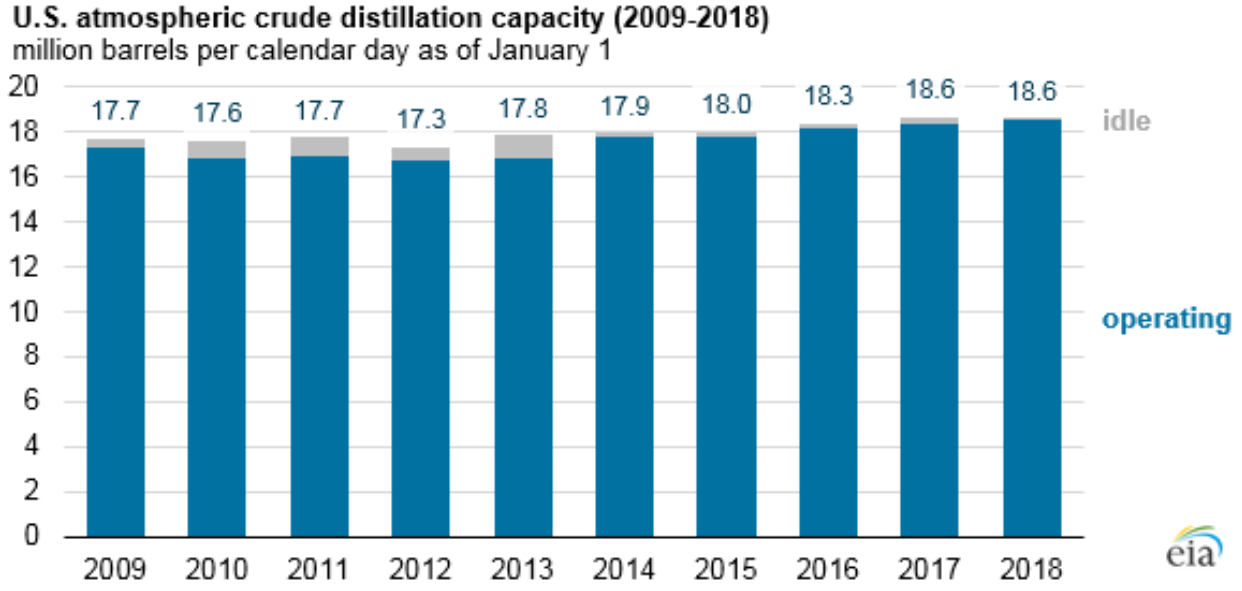
Scenario 2: Push (Down)

It's no secret that the equities and energy futures markets have recently been in a bearish funk and have been there since the first days of October. Leading the pessimism parade has been the ongoing fears of a global economic slowdown heightened by the prolonged war of words and threatened actions in the trade standoff between the U.S. and China.

The uncertainty over prospects of a deal to avert U.S. tariffs being imposed on China and its making good on promises to retaliate, stands as a major element in suppressing energy prices. In a related way as well, China appears to be facing economic headwinds which lessen prospects for demand and therefore oil imports to supplement its decline in domestic oil output. The addition of new refineries there lessens prospects for overall demand in petroleum products, challenging oil values. U.S. refining capacity is expected to rise in 2019, providing some measure of breathing room, yet is only keeping par with growing demand.

Refinery capacity, 2009-2018 (EIA):



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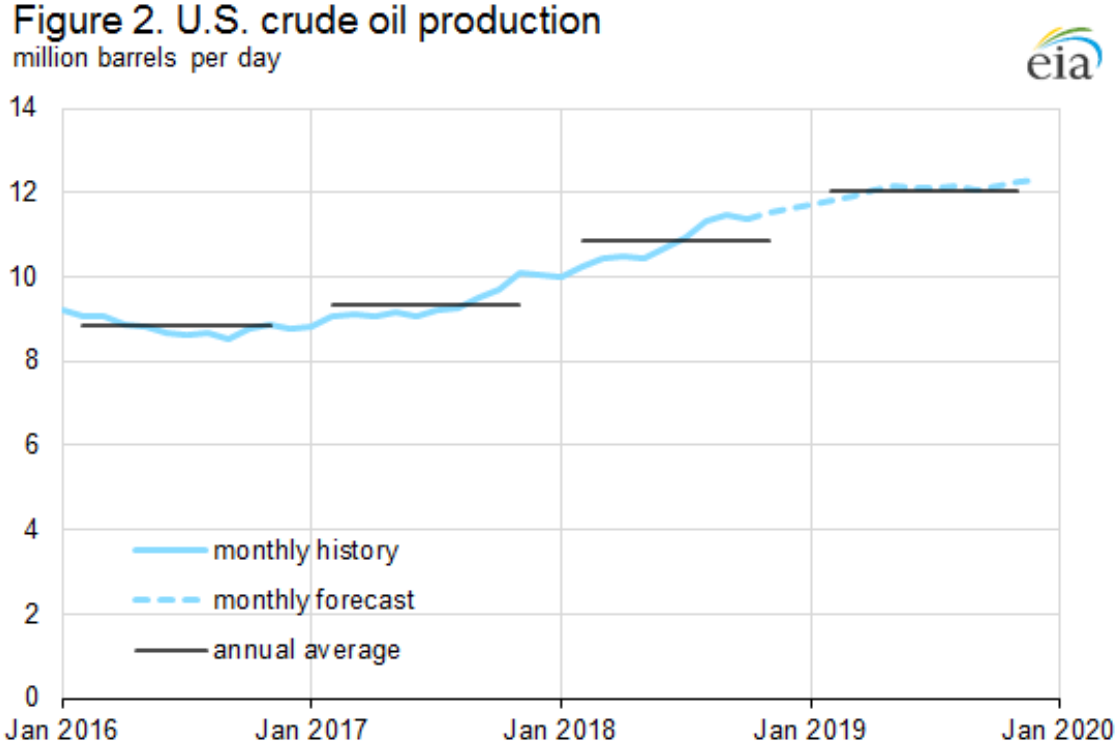
In a world where oil production technology has improved, given rise to the U.S. shale revolution and improved takeaway capacity such as pipelines and improved loading infrastructure in the U.S. and Saudi Arabia, the world's three top producers, America, Saudi Arabia and Russia have all proven their ability and propensity to increase output to record levels.

Figure 2. U.S. crude oil production

million barrels per day



Source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, December 2018

Even with an improvement in crude prices, the big three (U.S., Russia, Saudi Arabia) will no doubt raise output once again on any hint of improvements in oil prices, leading to the scenario which played out in 2018, where assumptions of a tightening crude outlook, in light of U.S. sanctions on Iran, led to record output by the three. With the EIA pointing to American production reaching 12 million barrels a day and weakening global demand, estimated now at a 1.25 m b/d, 100,000 below its earlier projections, the prognosis for a rally in crude prices looks improbable.

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There remain lingering questions over the domestic demand consumption numbers. In the last months of 2018, there was universal acceptance that U.S. demand for gasoline had dropped and was bearish at best. Aside from rising distillate use and exports, indications suggest that demand has peaked and with increasing fuel efficiency, total use may have already touched optimal levels. As such, a steady decline in demand even during peak summer driving could also weigh on prices for crude and at the pumps.

In noting that December 2018 saw the stock markets shed more than any December going back to 1931, the first full year of the Great Depression, unless January and February stage a major rebound, the year will begin with gasoline prices on the futures markets at their lowest showing going back to August 2016.

Absent a colder winter or active hurricane season, a less than active meteorological year ahead could also keep fuel on the cheaper side compared to events in 2017 and to a lesser extent in 2018. While we note that as U.S. refineries are configured to favor gasoline production over diesel, lucrative prices seen for distillates could see many refineries churning out more distillates by sacrificing lighter products where possible. Or, refiners may push through more oil to yield both additional gasoline and diesel. In such a scenario, gasoline stockpiles could continue to grow, despite moderating demand.

Considering the variables that go into our annual forecasts, we believe a dual approach is both appropriate and necessary in getting closer to what motorists can expect for the months ahead in 2019.

Fuel Outlook Commentary

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Variables to the direction of gas prices are also likely to be influenced by fiscal and monetary policies, such as government budgetary moves in the area of taxation and the decisions of central banks, like the U.S. Federal Reserve or the Bank of Canada, on interest rates. Direct moves by governments to increase fuel taxes, as seen in California in November or carbon taxes introduced in Alberta and Ontario in 2017, also add to the prospect of higher prices for fuel in the year ahead.

A stronger economy that affords motorists more disposable income matched with greater vehicle fuel efficiency will continue to incentivize Americans to take to the roads and quite possibly lead to a fourth consecutive year of increasing demand for fuel.

This means that refineries need to operate at optimum levels of output at all times, something of a tall order, especially in areas of the U.S. Midwest, the Pacific Northwest, California and the Northeast, where gasoline can be exported to foreign markets, if the price environment abroad is more attractive. Known as an “arb” or price arbitrage, the recent rise in U.S. petroleum product exports, reflects a new price challenge for American drivers - one that will contribute to higher costs for gasoline in 2019.

After taking into consideration all of the above, GasBuddy analysts constructed this forecast for the U.S. average price of gasoline, month-by-month, for 2019. We anticipate that consumers will see a slightly lower yearly national average than in 2018, yet higher than 2017, with a yearly average of $2.70 per gallon.

Fuel Outlook Commentary

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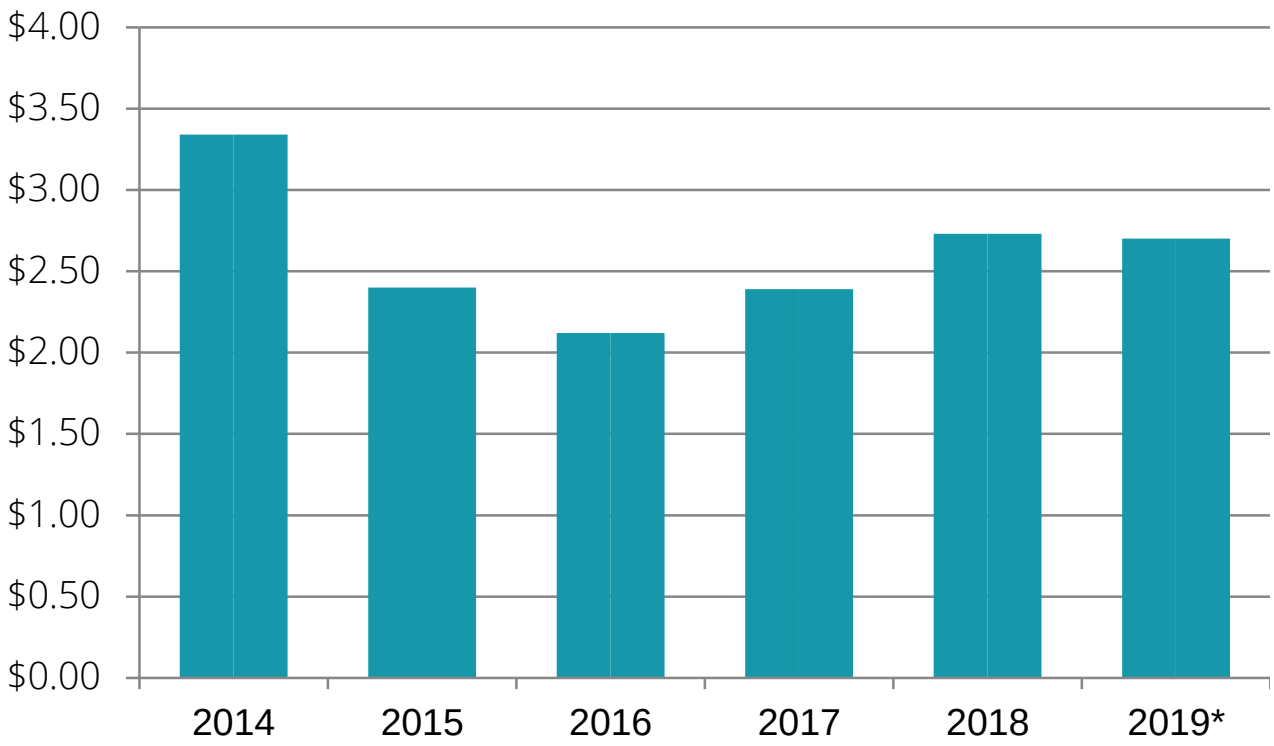
GasBuddy projects that the yearly average gas price in 2019 will be $2.70 per gallon. The month of January will see the lowest prices at an average $2.35 per gallon, while May will average $2.97 per gallon, making it the priciest month of the year.

On a yearly basis, a total of $386 billion will be spent on gasoline in the United States, down $2.5 billion from the $388.5 billion spent in 2018.

Yearly U.S. national average price of gasoline:



*Projected

Forecast Quotes

"2019 sets the stage for the first decline in the yearly national average since 2015, but before motorists drive for joy, it may be prudent to remind them that 2019 will still be the second most expensive year to fill up since then. For now, enjoy the bargain basement prices, because spring's 'new merchandise' will probably be a pretty penny higher than these $1-something prices of today."

-Patrick DeHaan, head of petroleum analysis

"The extreme volatility witnessed over the last several days on energy markets is a portent of what will come to define pump prices in 2019. Variations of 5% to 10% swings in a given week suggests that, although pump prices may move to the upside from their current end-of-year 2018 lows, the restoration of oil's value, which has a direct effect on gasoline prices, won't be linear. As has been the case since November 2018, moves in the price of crude can take several weeks before impacting having any appreciable effect on pump prices, especially as the price of crude dips."

-Dan McTeague, senior petroleum analyst

"In some respects, putting an accurate forecast together for fuel prices in 2019 feels like playing darts blind and hoping for a bullseye. Some of that feel comes from the White House playing an increasing role in volatility- you never know what President Trump might do or say to either cause a running of the bulls or bears, and so I say that 2019 represents one of the most difficult to predict fuel outlooks in my career."

-Patrick DeHaan, head of petroleum analysis

"In a climate where oil prices appear whipsawed daily by the latest headlines and priced based on the overall equities markets, motorists can be excused for trying to grapple with the bewildering effect. As if oil price fluctuations weren't enough, the growing demand for diesel and the generous profit margins they yield for refiners, may continue to see the price of the two fuels diverge, with less connection to the overall given value of crude itself."

-Dan McTeague, senior petroleum analyst

About GasBuddy

GasBuddy is a company that connects drivers with their Perfect Pit Stop. As the leading source for crowdsourced, real-time fuel prices at more than 150,000 gas station convenience stores in the U.S., Canada and Australia, millions of drivers use the GasBuddy app and website every day to find gas station convenience stores based on fuel prices, location and ratings/reviews. GasBuddy's first-of-its-kind fuel savings program, Pay with GasBuddy, has saved Americans more than $3.6 million at the pumps since its launch in 2017. The company's business solutions suite, GasBuddy Business Pages, provides Fuel Marketers and Retailers their best opportunity to maintain their station information, manage their brand, and promote to their target consumer audience. For more information, visit www.gasbuddy.com.

Market-specific and other forecasts are available from GasBuddy for a nominal charge. GasBuddy has provided forecasts for large end-users as well as smaller businesses. Other such forecast or data inquiries can be made via the contact information below.

To sign up to receive weekly gas price updates, alerts and other GasBuddy updates, e-mail the contact below with your state/province and e-mail address.

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