



Driving Summer Gas Demand in a Post-pandemic World

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Vaccinations are increasing, and societal restrictions are decreasing. More and more, people feel comfortable leaving their homes. New York, America's most populous city, recently announced it would **fully open** — meaning no restrictions on indoor dining, theater attendance, or sporting events.

Looking at refined fuels demand, should fuel marketers rejoice? Or should they keep their expectations low? Let's clarify the refined fuels market and indicate realistic expectations for the summer driving season.

Where we are now

The good news is that we are seeing an uptick in demand — even before the bulk of summer driving begins. In April 2021, the Energy Information Administration (EIA) reported daily gas demand moved above 9 million barrels for the first time since August 2020.

We still have a significant distance to go, however. The Federal Highway Administration (FHWA) reported that the number of vehicle miles traveled during January and February 2021 was down a little over 11% from a year ago. In addition, there have been only four weekly stock draws in 2021 through April. February's severe winter storm event sparked a 10% drop in gas stocks in a two-week period. Why is that particularly significant? The Gulf Coast is the largest refinery area in the United States.

In terms of production, drilling is down 11.8% from a year ago, and we see restraint from oil companies in their drilling. While there are upticks in production, producers want to make sure there's demand for their product. It's too early in the pandemic recovery to glean any meaningful insights from drilling activity — particularly since President Biden's energy and environmental policy initiatives largely remain undetermined, much less implemented.

So far this spring, we've seen fuel refiners producing more gasoline than diesel. Jet demand is still significantly down, which is driving production decisions. With light crude use setting a record pace, refiners are lightening the crude slate.

The combination of steep draws, the discipline of refiners, and demand growth has decreased the forward supply but hold your applause: this masks some market weaknesses.

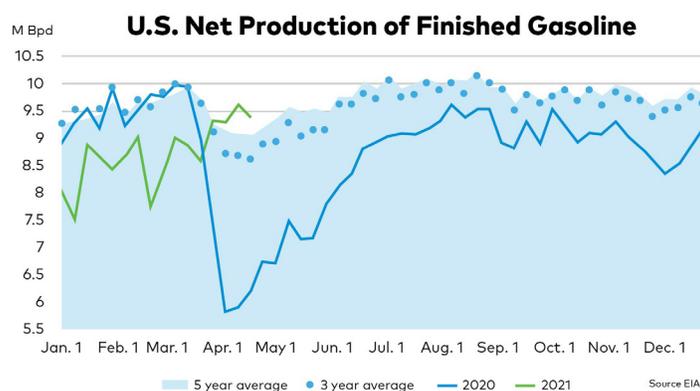


Figure 1: EIA gasoline production data. Note the April 2021 movement in demand to above 9 million barrels for the first time since August 2020.

Factors driving the trends

Employment is key, and there's a long way to go in restoring all of the U.S. jobs lost last year. While unemployment has shrunk considerably from its April 2020 high of 14.8% to 6% in April 2021 (the lowest we've seen since the onset of the pandemic), there were still more than 8 million unemployed people in March 2021 who had jobs in February 2020.

We expect that 57% employment-population ratio to remain constant heading into the summer. As long as employment lags, any increase in gasoline demand will be limited.

Another dynamic is discretionary spending: it's slowly increasing in 2021. After a lackluster holiday season, we saw a large increase in consumer spending in January 2021. There was an even bigger spike in March, likely due to the federal stimulus package and increasing availability of vaccines. Consumer sentiment is also rising, indicating that people plan to spend more as the year goes on. Movie theaters and live music venues have already announced show dates in late fall and early winter. It seems that the American public believes we have turned the corner on COVID-19. This is a very bullish signal for fuel marketers: both business and leisure travel look to increase, thus boosting demand for both jet fuel and gasoline.

Towards getting back to normal, U.S. vaccination production has been so successful that all states have opened vaccine availability to the general adult population. By early April, more than half of U.S. residents had at least one shot of a COVID-19 vaccination. While there are still hot spots, the daily case trend is far lower than the worst surge this past winter. We are making good progress toward herd immunity. It's possible that milestone could occur as early as Q3, but more likely by the end of the year. Of course, this will hinge

on overcoming vaccine resistance (in some areas). Social activity — and with it, gas demand — could well rise, then immediately fall, if a "super-spreader event" among unvaccinated people overwhelms local health systems in a specific area. Also lurking on the horizon is whether variants could take hold, rendering our current generation of vaccines moot.

The need for high-frequency data

Currently, the Mobility Index is at 4.0. Individuals are driving about six miles a day, on average. A big question facing refined fuel marketers is how durable is remote work? Most employers have instituted some kind of permanent remote work policy. This trend had accelerated before COVID-19, but the pandemic stuck a rocket engine on the shift. According to PwC, 83% of employers now say the shift to remote work has been successful for their company.

After finding most workers equally, if not more, productive working remotely, it's no wonder that many businesses are reevaluating just how much they're willing to spend on large office leases.

But there's a twist. People working at home might actually be more mobile than full-time onsite workers were. Consider this: most of us would attempt to squeeze in one doctor or mechanic appointment at the very beginning or end of the workday or possibly by taking a longer lunch. With remote work, where the most important thing is to turn in your work and attend meetings, it's suddenly easier to run to the grocery store for something you just realized you needed (or craved) or make that appointment you've been putting off because you didn't want to burn PTO hours.

Location, location, location

Where you measure demand is key. Of the roughly one million office workers in Manhattan, the mobility ratio in March 2021 was unchanged from October 2020.

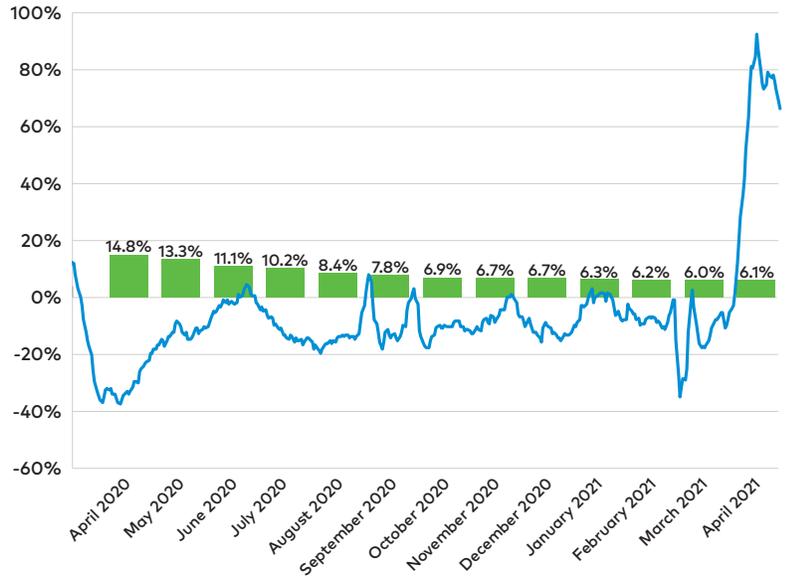
Look at the Houston gas demand graph though. It shows a leap in gas demand. A corollary that could be causative: the biggest month-to-month drop in history in Texas unemployment claims occurred in March 2021 (figure 2).

While Detroit demand surged back like Houston, it's declining again due to a massive increase in COVID-19 cases (figure 3).

U.S. unemployment rate

from April 2020 through April 2021

Source: Bureau of Labor Statistics



Houston, TX Y/Y gasoline demand

7-day moving average

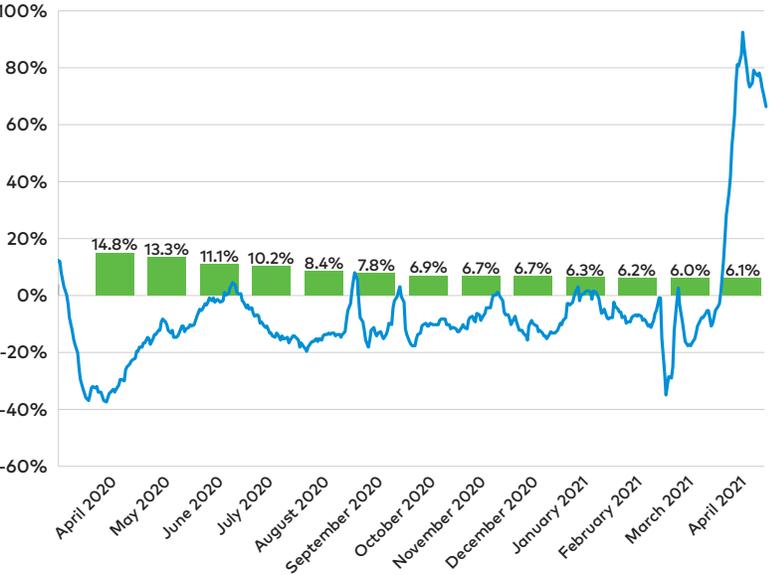
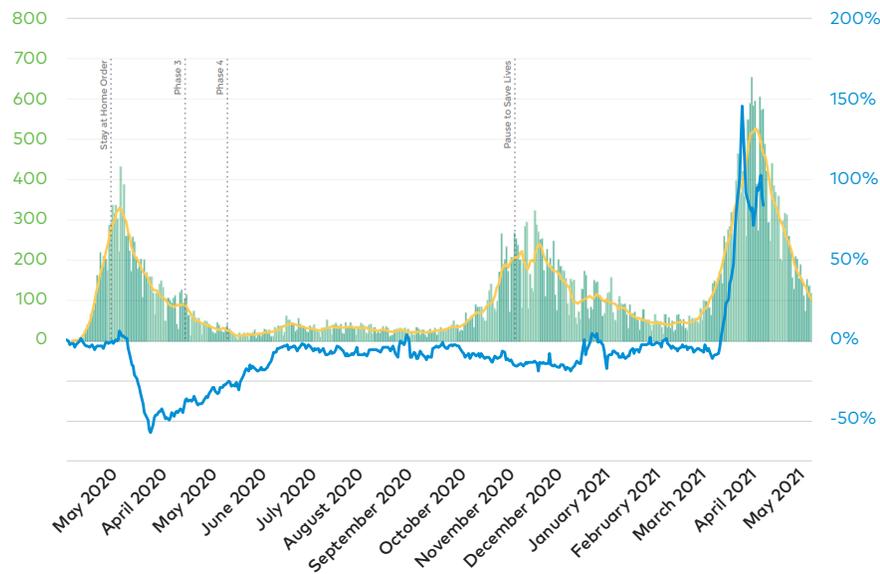


Figure 2: The seven-day moving average for Houston; note the spike in gas demand between March and April 2021.

Number of confirmed cases by date

with 7-day moving average

When available, the disease onset date is used. Otherwise, either the specimen collection date of the first positive COVID-19 test or referral date is used



Detroit, MI Y/Y gasoline demand

7-day moving average

Figure 3: The seven-day moving average for Detroit; note the spike and subsequent fall in gas demand during March and April 2021.

Summer demand expectations

The EIA had projected summer gasoline demand at 8.8M barrels per day, but that measure was reached by the end of April 2021. While that figure is down 7% from 2019, they think it will peak at 9.1M bpd this August. By comparison, August 2019 was 9.8M bpd and August 2020 was 8.5 M bpd. So, there are strong signs of recovering demand.

At the same time, we need to keep an eye on production targets. OPEC+ plans to add barrels to the market this summer, but they're doing so carefully to keep prices up.

There is excitement in the market, no doubt. However, we shouldn't ignore economic realities. When the NYMEX RBOB gets over \$2.10/gallon, you'll see pump prices over \$3/gallon, which would put downward pressure on demand — particularly with higher unemployment.

The EIA predicted a \$2.78/gallon average gas price for July 2021. We already reached that number in April. The recent cyberattack Colonial Pipeline suffered pushed prices up in early May, with NYMEX RBOB trading at a \$2.217/gallon three-year high in response. The disruption is not expected to have a long-term impact on prices, with May prices likely setting the high for 2021.

Is this increase in gas demand sustainable, or is it merely COVID-19 fatigue that will result in crushed demand later? You remember those big spikes we mentioned earlier? That's the effect of societal opening and the fulfillment of pent-up demand. But there's going to be a plateau. The growth rate will be sustainable only as vaccinations increase. There hopefully won't be spikes in this scenario, rather slow and steady growth as we approach herd immunity.

Conclusion

Of course, America is just one part of a global energy market. Our exports are trending down versus Europe, but that's because demand is off globally. To wit: if no one is driving for business or pleasure in the European Union, they don't need to buy U.S. petroleum products.

At the end of the day, we need the entire planet to reach herd immunity. Until that happens, the virus will impose a ceiling on demand, even as we see isolated, localized areas of improvement. The most critical data for refined fuel marketers to track isn't the generalized EIA data or national employment percentages. Instead, they must attune to the factors that drive demand in the specific markets in which they do business.