

In the Recovery Room:

How the Houston and Texas Energy & Economic Revival will Fare



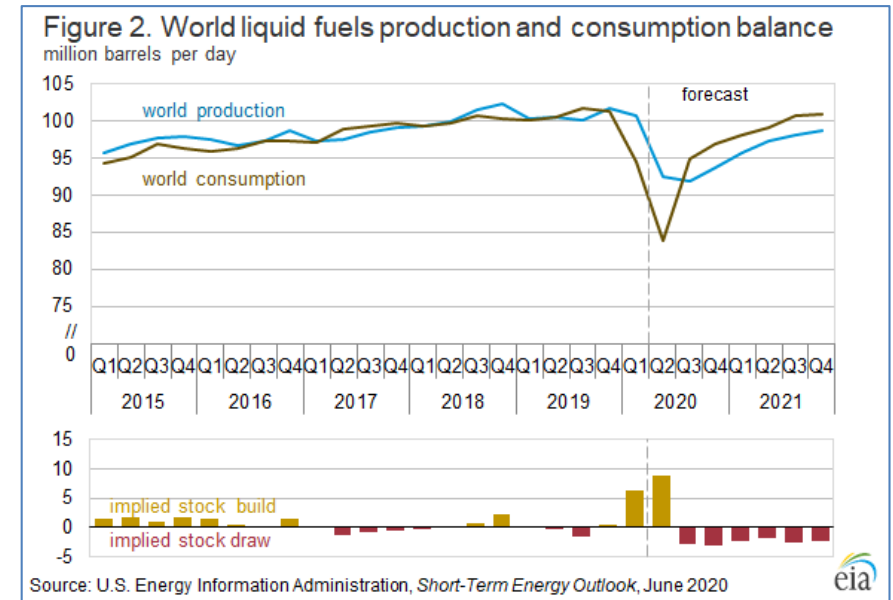
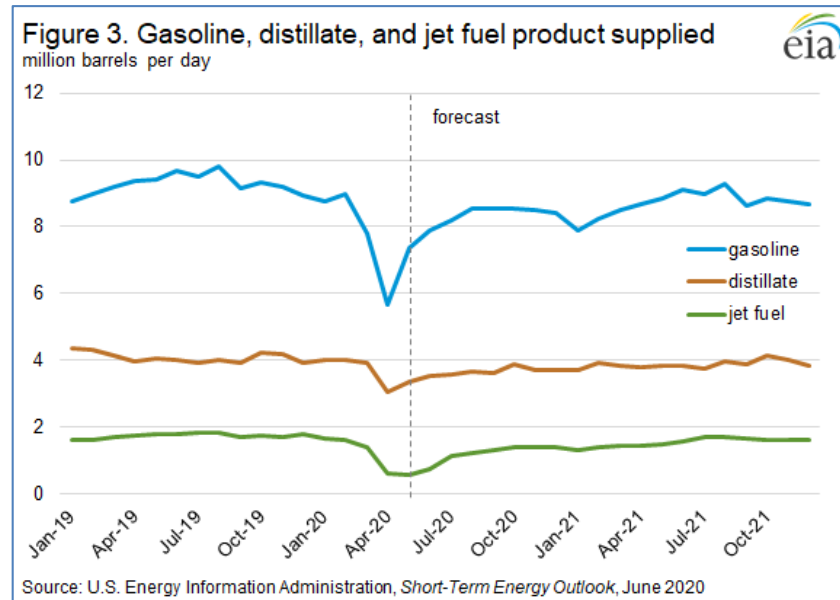
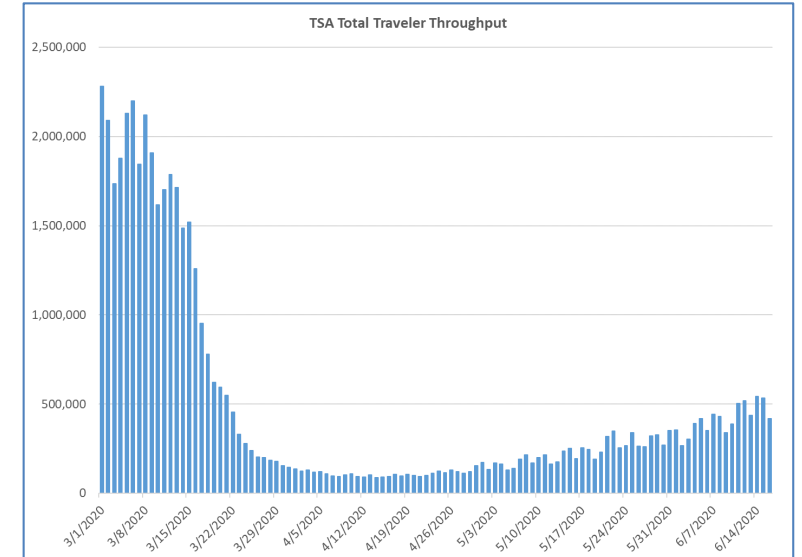
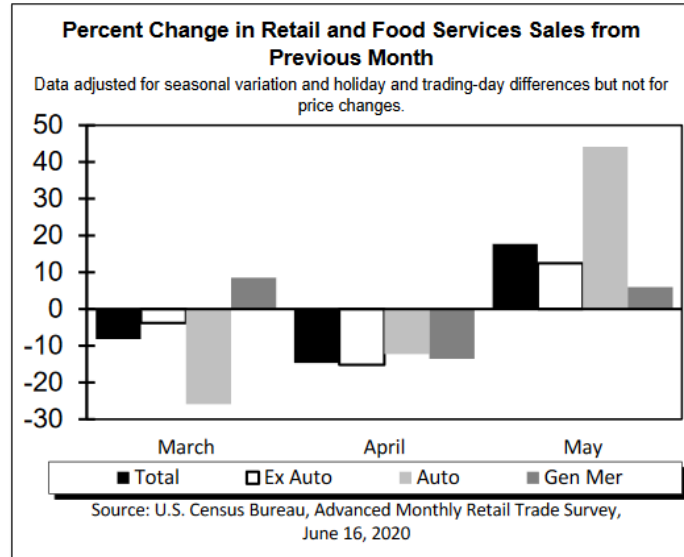
CES Friday Webinar Series, June 19, 2020

Welcome

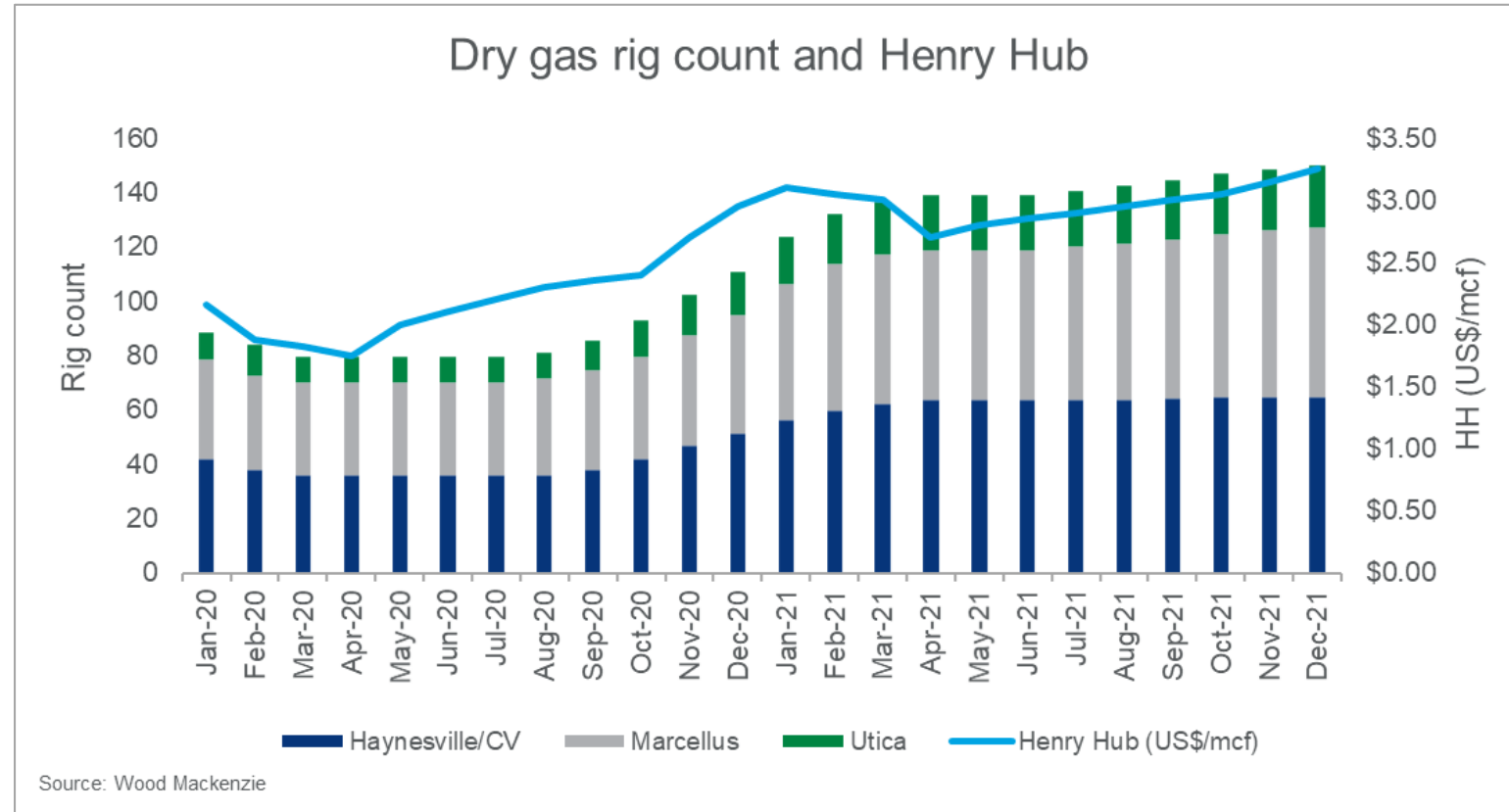
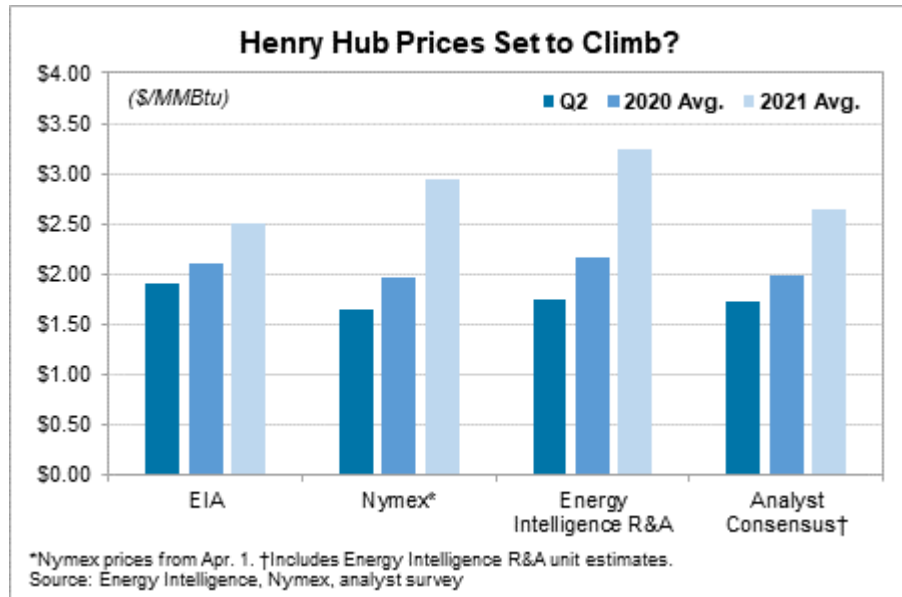
Our regular CES Friday webinar with:

- Bill Gilmer
- Brett Perlman
- Steve Klineberg

The Constant Gardener – Looking for Green Shoots



Silver linings playbook?





Houston's Economy in the Wake of COVID-19 and the Oil Bust

Robert W. Gilmer, Ph.D.

C.T. Bauer College of Business

June 19, 2020

Economic Effects of the Virus: What We Don't Know Right Now

- The virus is in charge. We don't know the case infection rate, case fatality rate, if re-infection is possible, herd immunity is possible, or when there might be effective treatment or vaccine. When do economic impacts end?
- Public health officials follow behind the virus and create their own uncertainty with timing and extent of public orders, especially sweeping mandates like stay-home orders and widespread business closings
- Along with mandatory social distancing we have trouble understanding or gauging the on-going economic cost of reactive social distancing by the public, in stores, restaurants, hotels, travel, or personal services. This continues at an unknown level after stay-home orders are lifted
- The shock of the virus/public orders creates huge structural breaks in the economic data. Supply and demand for oil, labor, basic foodstuffs, are suddenly and wildly out of balance. Economic models don't work any longer until balance is restored

Economic Impacts of A Pandemic

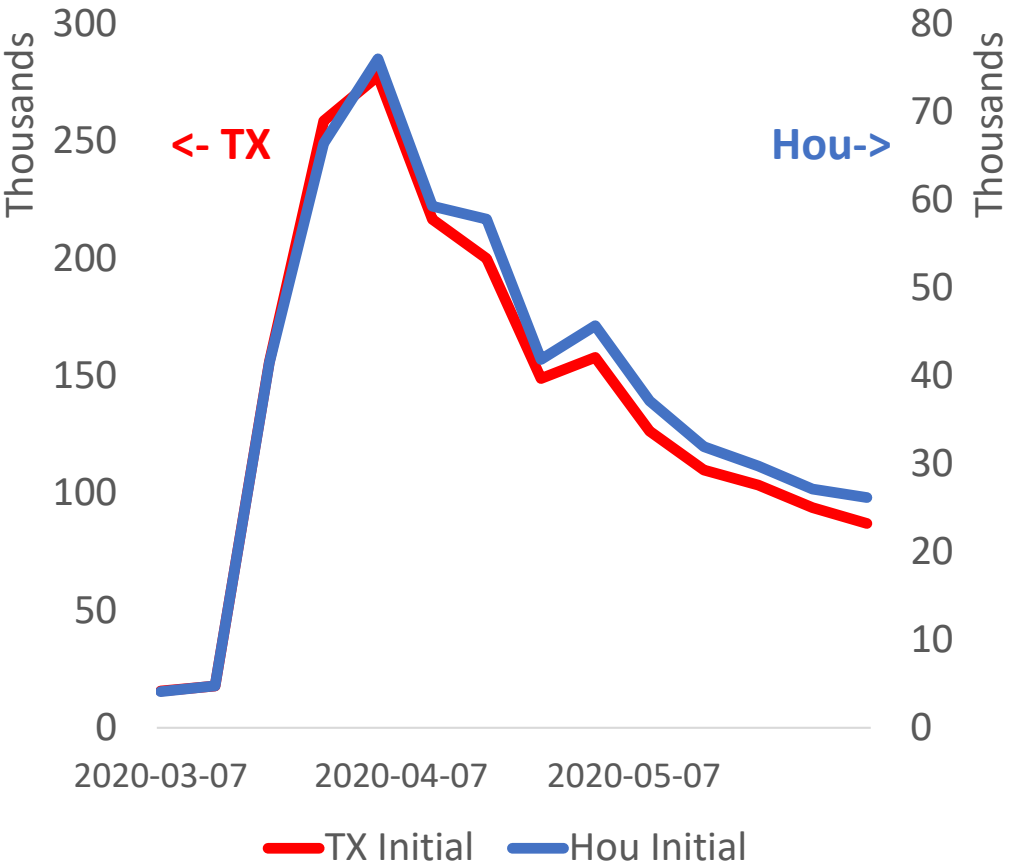
Pandemic Before 2010

- Starts with immediate reactive social distancing, fewer customers in bars, restaurants, stores, etc.
- Over 6- to 8-month period, the disease spreads through the workplace, millions lose jobs, worker shortages are acute, plants are closed, supply chain disrupted
- Business and consumer uncertainty slows spending
- Herd immunity or vaccine finally slows the virus
- At different places and times, local ordinances used to slow virus

COVID-19 Pandemic

- *With use of stay-home orders and business closings economic impacts all come at once: widespread business shutdown, a huge shock and uncertainty, millions immediately lose their jobs*
- Of course, millions don't fall ill now and fatality rate is lower. Also, many of the job losses under stay-home orders would have happened anyway as illness spread without orders
- A play for time? Epidemiology studies show you can lower the peak mortality (flatten the curve and prevent hospitals/essential services from being overrun) but cumulative mortalities are not reduced nearly as much

New Initial Unemployment Claims Show Economic Shock in Texas vs. Houston



- The initial claims data for the U.S., Texas, and Houston are virtually identical in their timing and extent of losses
- The shock is not the spread of the virus but the preemptive stay-home orders and essential business closings
- Jobs losses are mostly a combination of mandatory and reactive social distancing – plus the shock to businesses and households as they cut spending

March/April Payroll Job Losses in Houston By Sector

(Seas. Adj.)

<i>Upstream Oil</i>	-12,300	<i>Selected Services</i>	-225,300
Producers	-2,400	Accommodation	-10,200
Services	-5,500	Air Transportation	-3,600
Fabricated Metal	-1,600	Entertainment	-17,500
Machinery	-3,200	Food/Drink	-103,000
<i>Prof/Bus Services</i>	-25,200	Health Care	-45,200
Employment Services	-14,200	Other Services	-19,300
Headquarters	-3,200	Private Education	-3,900
Prof/Technical	-6,600	Retail	-22,600
Building Services	-1,600	<i>Other Sector Losses</i>	-34,200
<i>Construction</i>	-28,900	Total Losses	-325,900
Buildings	-4,300	<i>Economic Base Jobs</i>	-39,600
Heavy	-5,200	<i>Oil Base</i>	-16,100
Trades	-19,600	<i>Not Oil</i>	-29,100
<i>Finance</i>	-5,300		
<i>Other Manufacturing</i>	-4,200		

May not add to totals due to seasonal adjustment

What Public Health Orders Take Away in Jobs, the Treasury Puts Back As Income Payments

Monthly Change In Personal Income (\$ Billion s.a.)

	March	April	March/April
Personal Income	-34.5	163.8	129.3
Employee Compensation	-31.2	-73.2	-104.4
Wages and Salaries	-27.7	-61.7	-89.4
Proprietors Income	-12.4	-16.5	-28.8
Gov't Transfers	5.9	249.9	255.8
Unemployment	3.7	30.0	33.7
Economic Impact	0.1	215.7	215.8
Disposable Income	-29.1	177.3	148.2
Personal Outlays	-88.8	-159.5	-248.3
Personal savings	59.7	336.8	396.5

- Treasury stimulus is now \$2.9 trillion, with \$1.3 trillion for protecting jobs, direct payments to individuals, or supplementing unemployment payments
- \$1.3 trillion would pay \$33,900 to 33 million Americans, or 80% of the average annual U.S. wages and salaries
- Plus Federal Reserve stimulus with zero interest rates and return of 2008-09 credit facilities, plus new programs for corporations, states and localities, and small business

For Houston, Oil and Gas Turn a Typical Downturn Into a Serious Decline

- *Additional little problem of oil and gas in Houston:* An ongoing soap opera with a credit crunch last summer became an oil war between Russia and the Saudi's early this year, that turned into a virus-driven collapse this spring
- With global stay-home orders, the demand for oil fell from 100 mmb/d to maybe 85 million. All parties are on board to clean up the mess – U.S., Russia, Saudi Arabia, OPEC
- *Three stages of recovery:* (1) Get supply and demand back into balance and find the market-clearing price again; (2) once we find the fundamentals, they will be ugly with oil price at \$45 through much of 2021; (3) oil price improves to \$60 or better only as U.S. and global economy recover in late 2021 or early 2022

Oil and Houston?

- Oil-related jobs = Producers, Services, Machinery, and Fabricated Metals
- Around 31,000 local oil-related jobs will be lost to this downturn by early 2021. What happens between now and early 2021 with supply/demand out of whack is anyone's guess, with the rig count in freefall and oil services in retreat. But yes, briefly much bigger
- Why not more oil jobs lost? Lots of the house-cleaning has already been done and there is little fat left in the system. We lost 72,000 jobs to the speculative fracking bust of 2015-16 and restored only 21,000 by the middle of 2019 – when job losses began again. The rig count fell 25 percent pre-COVID
- Is there a place for fracking post-Covid-19? Yes, if there is a place for \$60 oil and a return to 100 mmb/d of oil demand

Outlook for Houston

- Suppose the virus has largely come under control by early- to mid-2021 – maybe herd immunity, treatment, or vaccine?
- *That puts aside all the crazy numbers of jobs swinging back and forth in response to enforced public orders and social distancing through this year. With a return to economic fundamentals for markets, we will probably be coming out of a significant recession in 2021Q2 that will find us 100,000 jobs below the prior peak in payroll employment in 2020Q1*
- **The deeper the recession, the faster the bounce back.** We see job growth turn strong in mid-2021, the growth far above trend at 80,000 to 90,000 jobs in 2022 as the U.S. economy comes back, then even faster in 2023 and oil makes a return in Houston. The local employment returns to trend growth rates again