

Ukraine and Russian Conflict: Oil Price Effect

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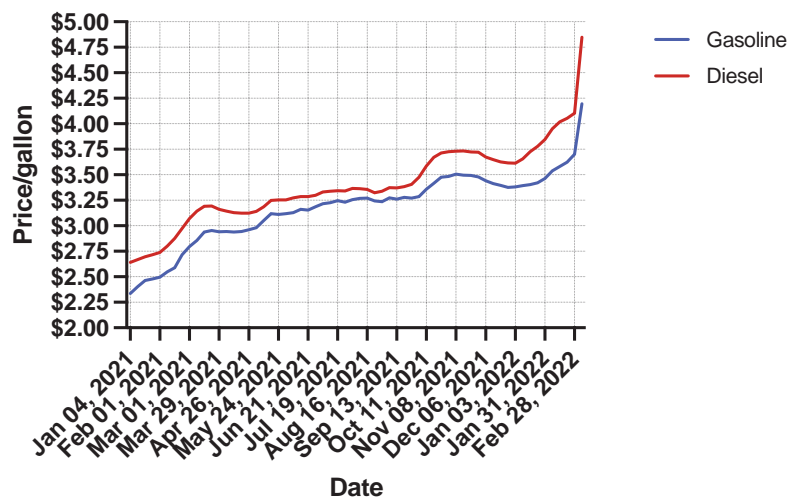
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Current situation – Gas and Diesel

- Gas is at record levels - \$4.20
- Gas up 24% this year
- Diesel up 34% this year
- Gas up \$0.50 in last week
- Diesel up \$0.75 in last week
- 2021 saw big price increases
 - Gasoline up 45%
 - Diesel up 37%

Weekly Highway Fuel Prices

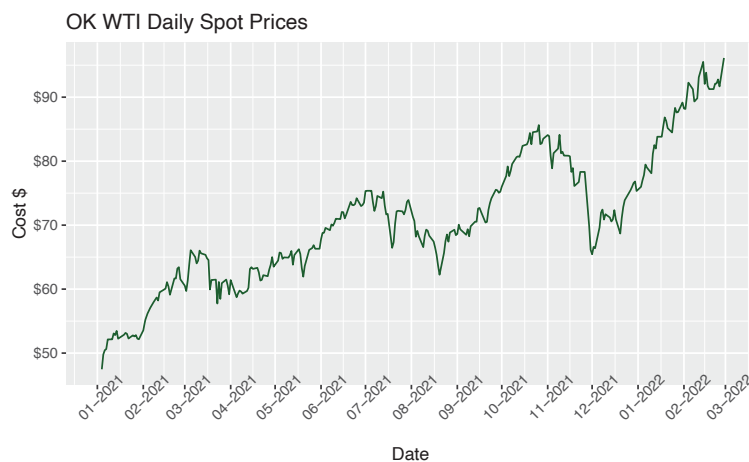


Source: U.S. Energy Information Administration

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Current situation - Oil

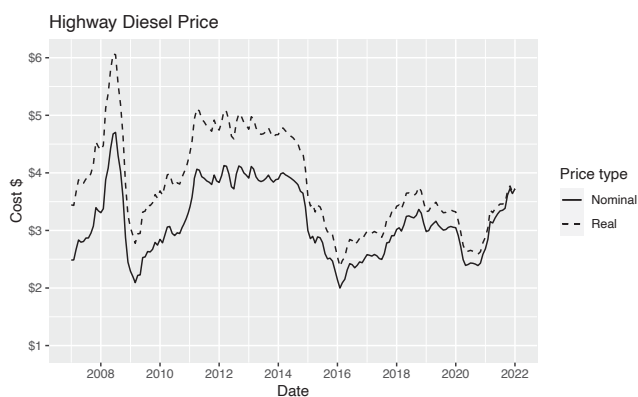
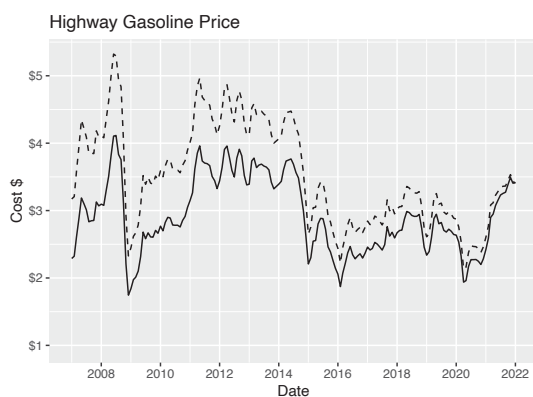
- WTI crude oil futures now at \$119.42 – up \$23.68 in last week
- Prices have doubled in the last year



Source: U.S. Energy Information Administration



Historical perspective on fuel prices



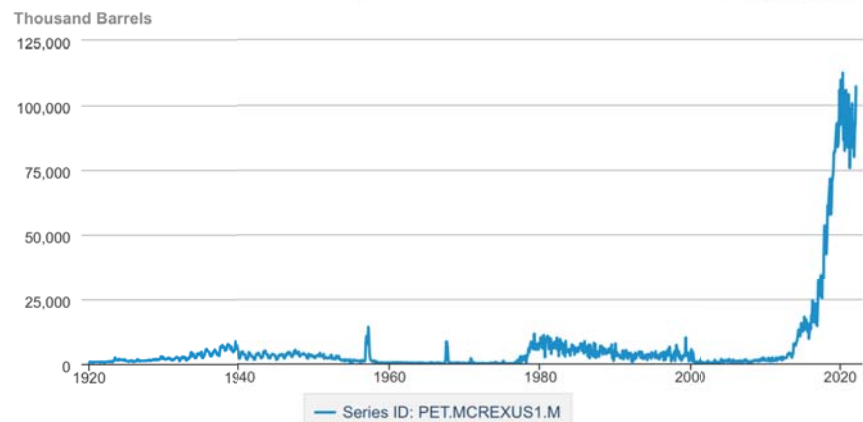
Source: U.S. Energy Information Administration



U.S. now exports oil

- Fracking
- We still import though
- Overall foreign usage has decreased

U.S. Exports of Crude Oil, Monthly



Source: U.S. Energy Information Administration

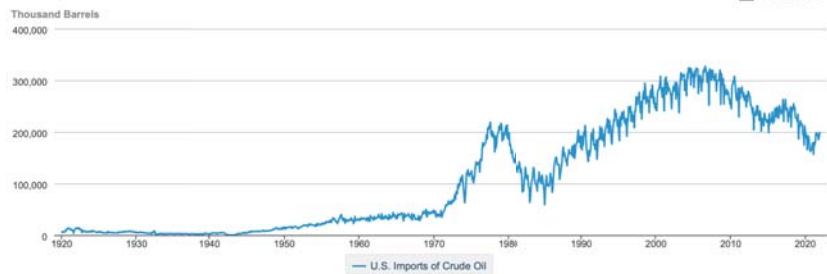


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U.S. still imports oil despite exporting

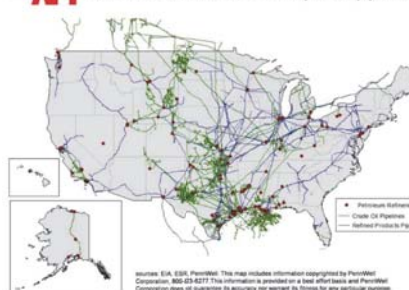
- Why import when we are exporting
 - Oil is not created equal
 - Quality
 - Location
 - Quantity

U.S. Imports of Crude Oil



Source: U.S. Energy Information Administration

U.S. refineries and crude & refined product pipelines

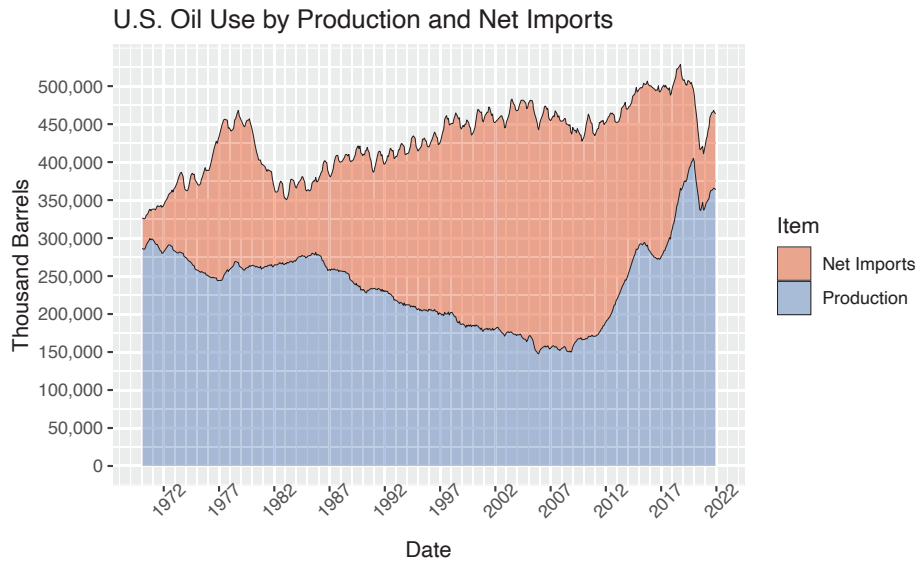


Source: <https://www.eia.org/news-policy-and-issues/blog/2018/06/14/why-the-us-must-import-and-export-oil>

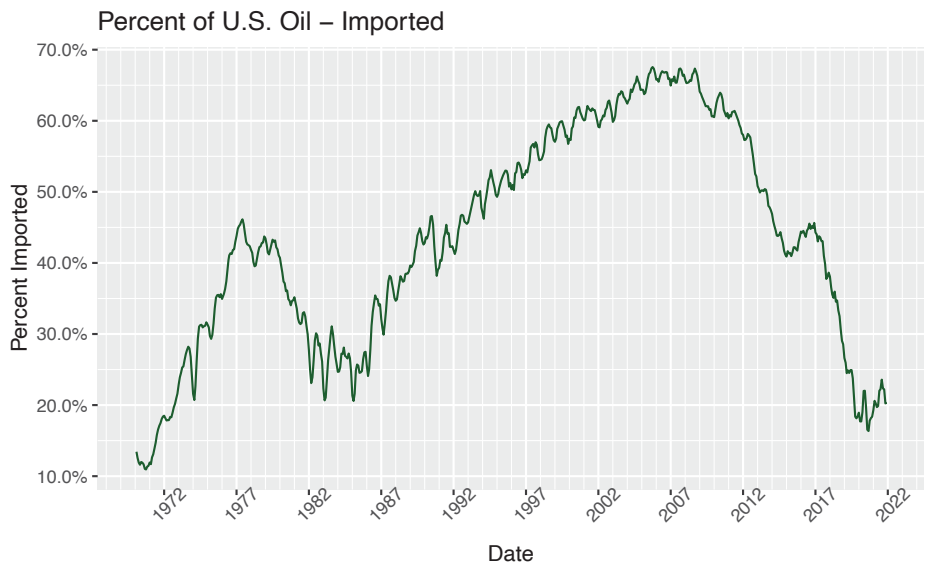


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U.S. reliance on foreign oil

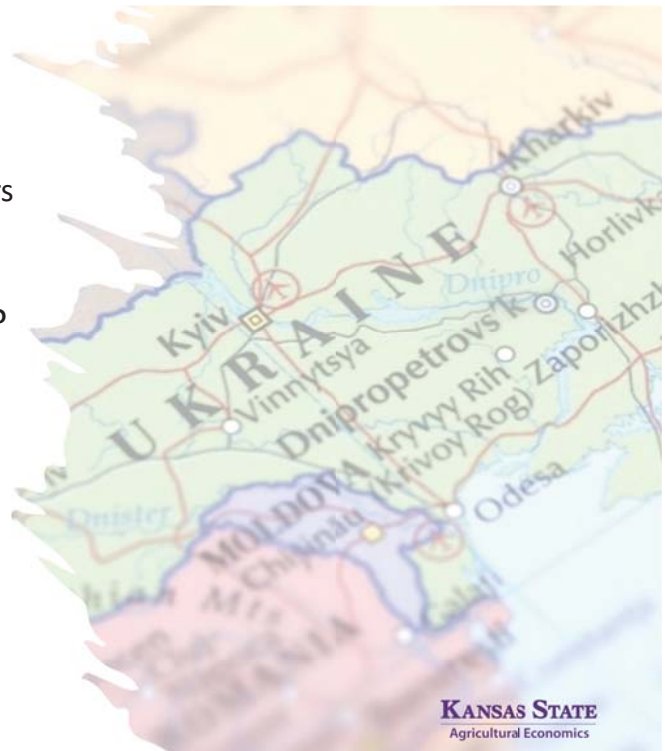


Net percentage of foreign oil



World situation

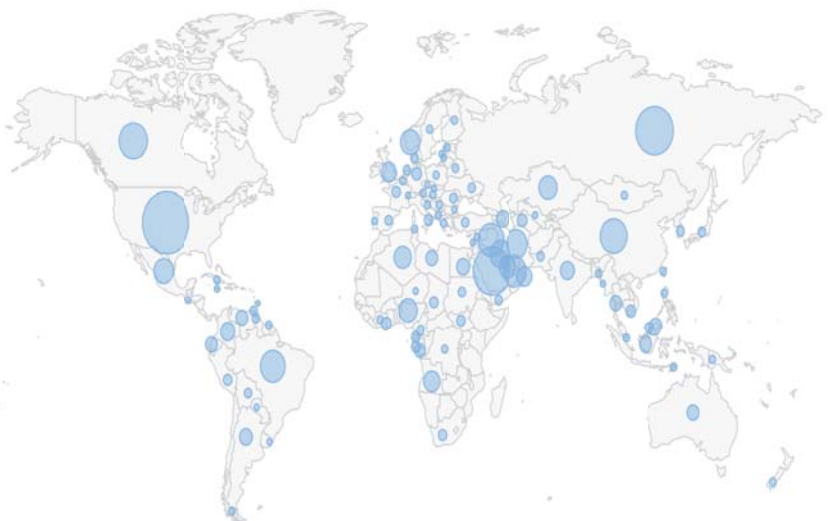
- U.S. is still reliant on foreign oil
 - Large improvement over last 15 years
 - From 70% of oil usage to 20% now
 - We still use a lot of oil though
- Where do our imports come from?
 - 15% from OPEC countries
 - 64% from Canada
 - 7.5% from Mexico
 - 1.5% from Russia



Production - Petroleum and other liquids - 2020

- Leading Production
 - 1,000 barrels/day

1 United States	18,609
2 Saudi Arabia	10,846
3 Russia	10,496
4 Canada	5,235
5 China	4,863
6 Iraq	4,152
7 United Arab Emirates	3,780
8 Brazil	3,769
9 Iran	2,990
10 Kuwait	2,735

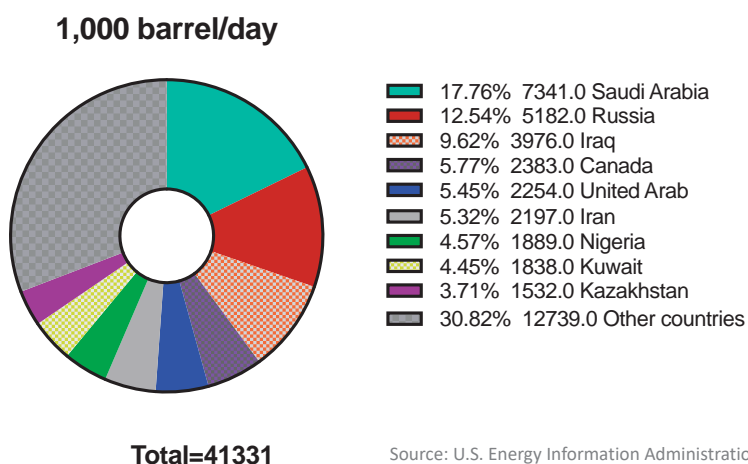


Source: U.S. Energy Information Administration



Leading countries for exporting oil

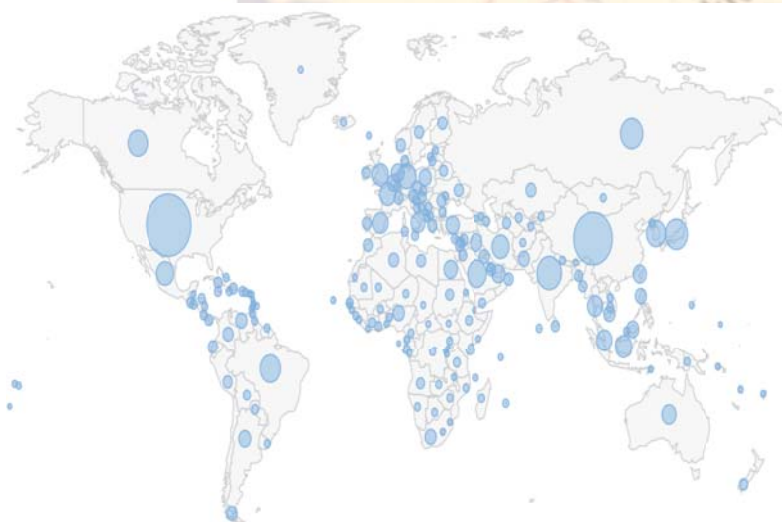
- The Middle East is the leading area for oil exports
- Russia is the world's 2nd largest exporter
 - 12.5% of exports
 - 5.2 million barrels a day



Consumption - Refined petroleum products - 2019

- Leading Consumption
 - 1,000 barrels/day

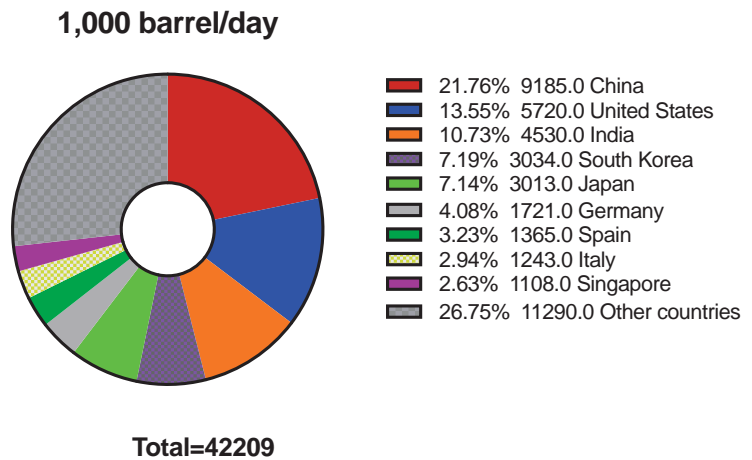
1 United States	20,543
2 China	14,008
3 India	4,920
4 Japan	3,739
5 Russia	3,699
6 Saudi Arabia	3,182
7 Brazil	3,142
8 South Korea	2,599
9 Canada	2,508
10 Germany	2,346



Source: U.S. Energy Information Administration

Leading countries for **importing** oil

- China is highly dependent on oil imports
 - Over 20%
 - 9.2 million barrels/day
- U.S. is a big user of foreign oil
 - 20% of domestic oil use
 - Over 13% of the export market
 - 5.7 million barrels/day
 - Remember Russia exports 5.2 million barrels/day



Source: U.S. Energy Information Administration



Production – Dry natural gas - 2019

- Leading Production
 - Billion cubic feet

1 United States	33,899
2 Russia	23,938
3 Iran	8,389
4 China	6,333
5 Canada	6,312
6 Qatar	5,914
7 Australia	5,154
8 Norway	4,057
9 Saudi Arabia	3,982
10 Algeria	3,103

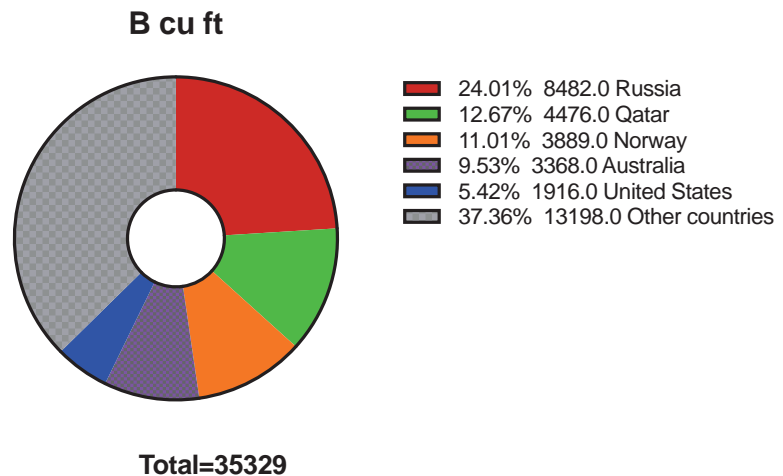


Source: U.S. Energy Information Administration



Leading countries for exporting natural gas

- Russia exports nearly a fourth of all exported natural gas (8.5 trillion cubic feet)
- The U.S. produces the most natural gas but also uses the most.



Source: U.S. Energy Information Administration

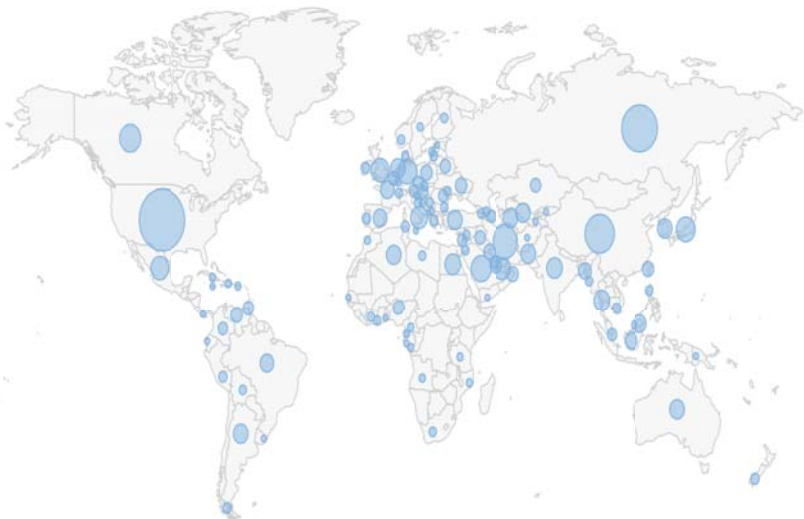


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Consumption – Dry natural gas - 2019

- Leading Consumption
 - Billion cubic feet

1 United States	31,132
2 Russia	16,933
3 China	10,827
4 Iran	7,794
5 Canada	4,397
6 Saudi Arabia	3,982
7 Japan	3,606
8 Germany	3,514
9 Mexico	3,041
10 United Kingdom	2,805



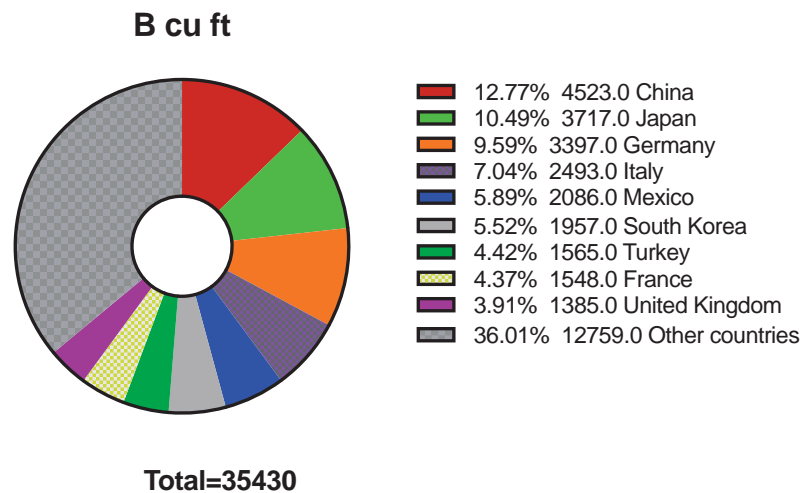
Source: U.S. Energy Information Administration



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Leading countries for **importing** natural gas

- Lots of countries import natural gas
- China imports 4.5 trillion cubic feet (13% of the exported volume)
- Most of Europe imports natural gas.
 - Russia exports enough natural gas to almost meet the needs of:
 - Germany
 - Italy
 - France
 - United Kingdom



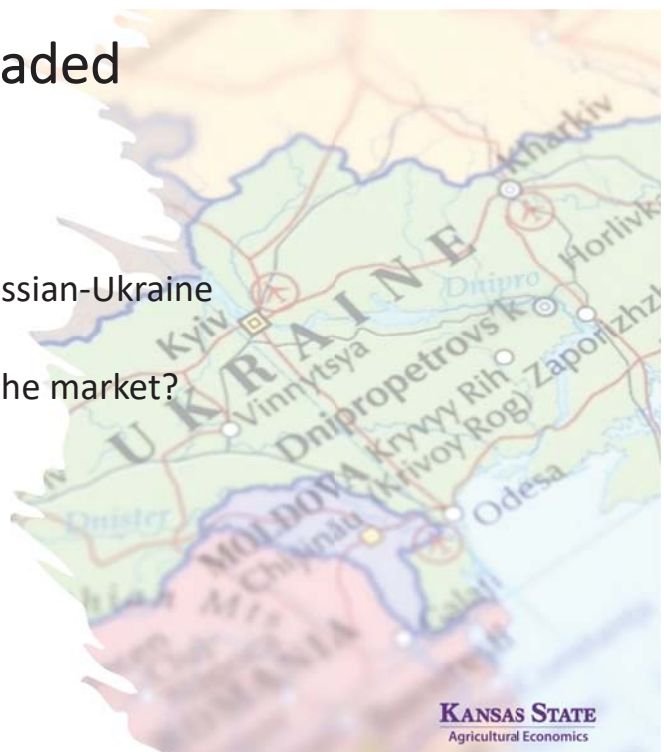
Source: U.S. Energy Information Administration



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Where are oil prices headed

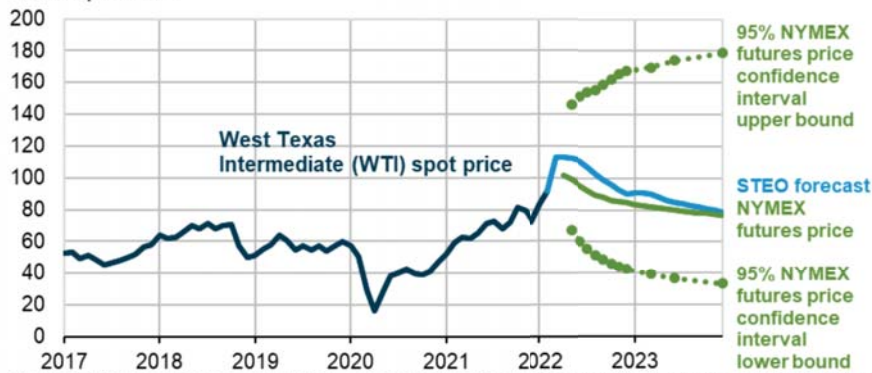
- As of 3/8/22 at 11:45 am
 - Brent crude - \$126.30
 - WTI crude - \$122.20
- Have traders already priced the Russian-Ukraine conflict into prices?
- Can we really keep Russian oil off the market?
- Does Russia really need to sell oil?



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EIA Forecast – Short-Term Energy Outlook

West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



Note: Confidence interval derived from options market information for the five trading days ending Mar 3, 2022. Intervals not calculated for months with sparse trading in near-the-money options contracts.

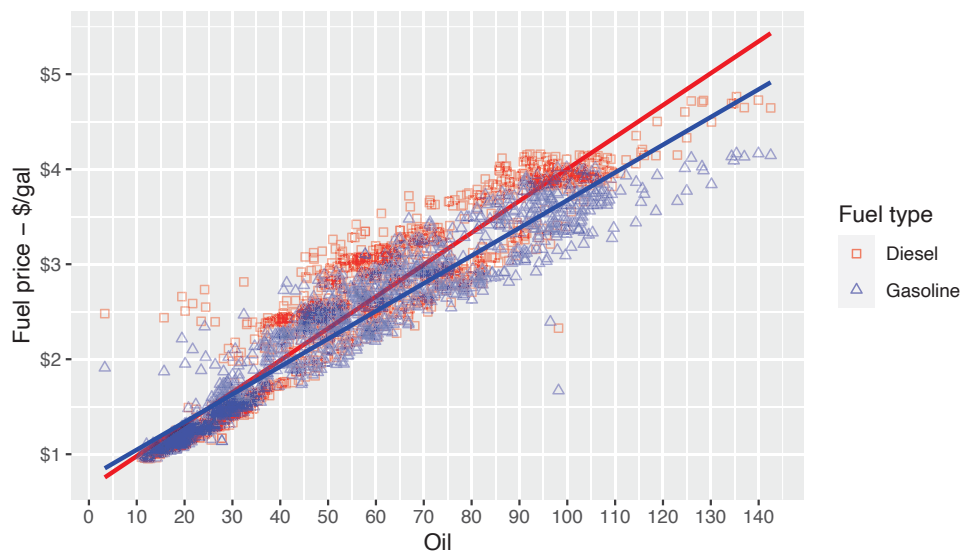
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2022, CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business



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Oil price to fuel price regression

Regression of Fuel vs Oil



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Effect on farmers

- Northeast Kansas corn budget
 - As of January 2022
 - \$627 - total expenses or 4.33/bu
 - Diesel budget price of \$2.95 = \$9.63 in total fuel cost
 - With farm diesel at \$4.30
 - Adds \$6 per acre to cost since first of year.
 - Other inputs like fertilizer greatly affected by oil prices



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Questions?

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