

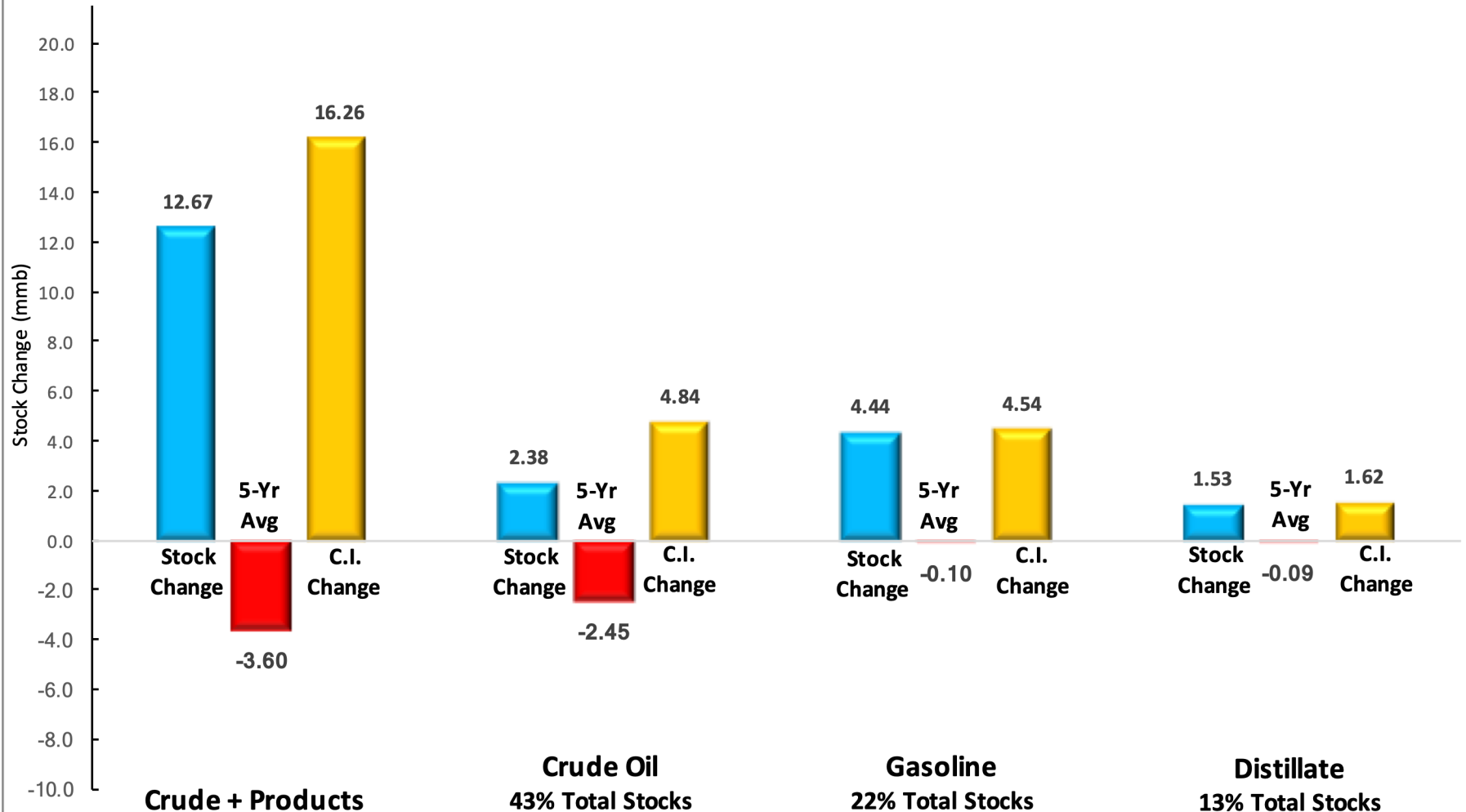
MacroVoices August 7, 2019

**Art Berman
Labyrinth Consulting Services, Inc.**

EIA STEO Summary

- U.S. production decreased for the 4th month in-a-row.
- U.S. year-over-year growth fell to lowest level since October 2017.
- World production decreased but remains above the 2019 year-to-date average.
- Norway, Canada, Brazil & Iraq led countries that increased production in July 2019.
- Saudi Arabia, China, Iran, UAE & Venezuela led countries that decreased production.
- U.S., UAE, Iraq Libya, China & Russia have increased production in 2019.
- Iran, Venezuela, Saudi Arabia, Brazil & Mexico have decreased production.
- World liquids supply expected to be in approximate balance in 2019.
- 3Q in slight deficit and 4Q in slight surplus with Brent flat at about \$65/barrel.
- OECD minus U.S. comparative inventory is more negative now than in Sept 2018 but Brent price is -\$14.85 (19%) lower.
- This is a measure of how much markets have devalued oil price in the last year.

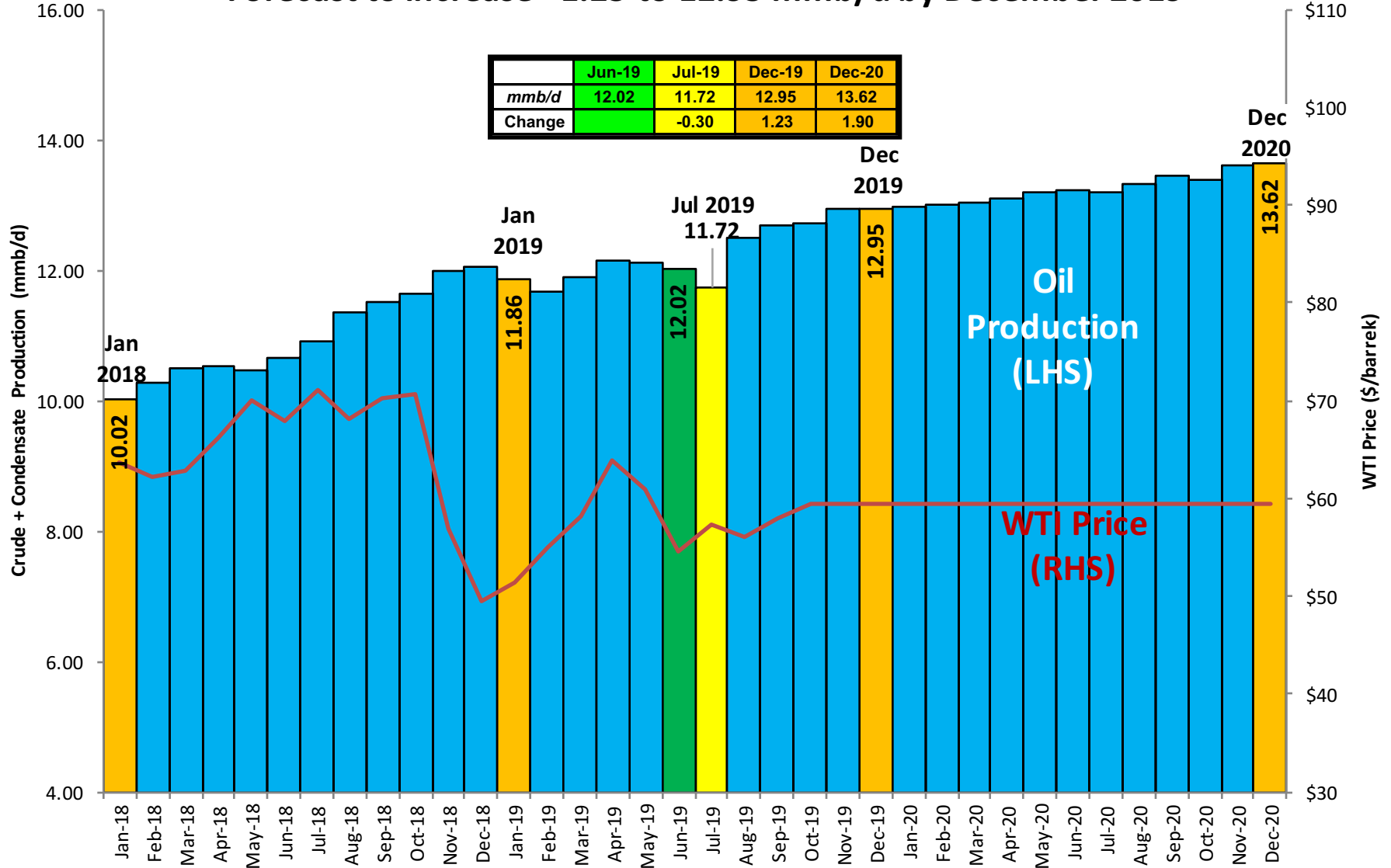
WTI crude + product comparative inventory increased +16.26 mmb week ending Aug2
Additions of +2.38 mmb crude oil & +4.44 mmb gasoline dominated stock changes
But inventories of all refined products except unfinished oil
increased more than the 5-year average



Source: EIA & Labyrinth Consulting Services, Inc.

EIA 2019/Weekly Updates/Crude Oil & Refined Products Inventories & CI

U.S. crude + condensate production decreased -0.3mmb/d in July to 11.17 mmb/d Forecast to increase +1.23 to 12.95 mmb/d by December 2019

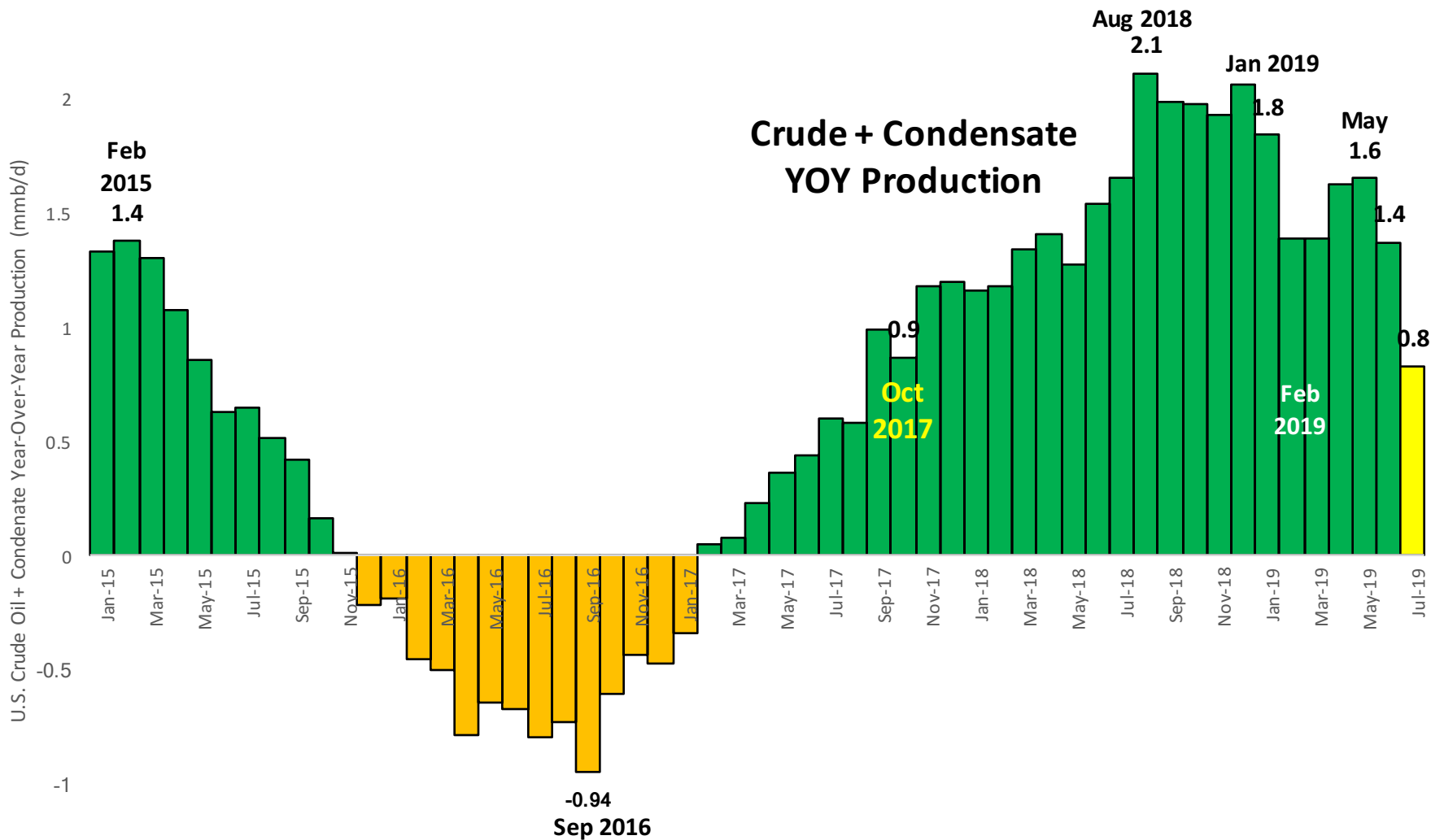


Source: EIA STEO & Labyrinth Consulting Services, Inc.

EIA 2019/STEO/STEO Master.xlsx

EIA 914 Data mmb/d	JAN	FEB	MAR	APR	MAY	Difference
Permian Tight Oil	3,096	3,118	3,250	3,261	3,296	35
Gulf of Mexico	1,909	1,717	1,906	1,982	1,904	-78
TX-NM CONV	1,368	1,490	1,337	1,421	1,425	4
Bakken	1,347	1,283	1,340	1,336	1,347	11
Eagle Ford	1,175	1,131	1,140	1,141	1,151	10
Oklahoma	578	569	583	615	603	-12
Alaska	496	488	481	475	475	0
California	457	456	452	451	454	3
CO-WY CONV	431	429	458	447	451	4
Other	359	352	358	371	373	2
Niobrara	329	319	274	312	322	10
Louisiana	119	122	122	121	121	0
Utah	101	103	103	106	106	0
Kansas	91	92	92	95	91	-4
Total	11,856	11,669	12,134	12,134	12,119	-15
Conventional	3,641	3,749	3,628	3,731	3,726	-5

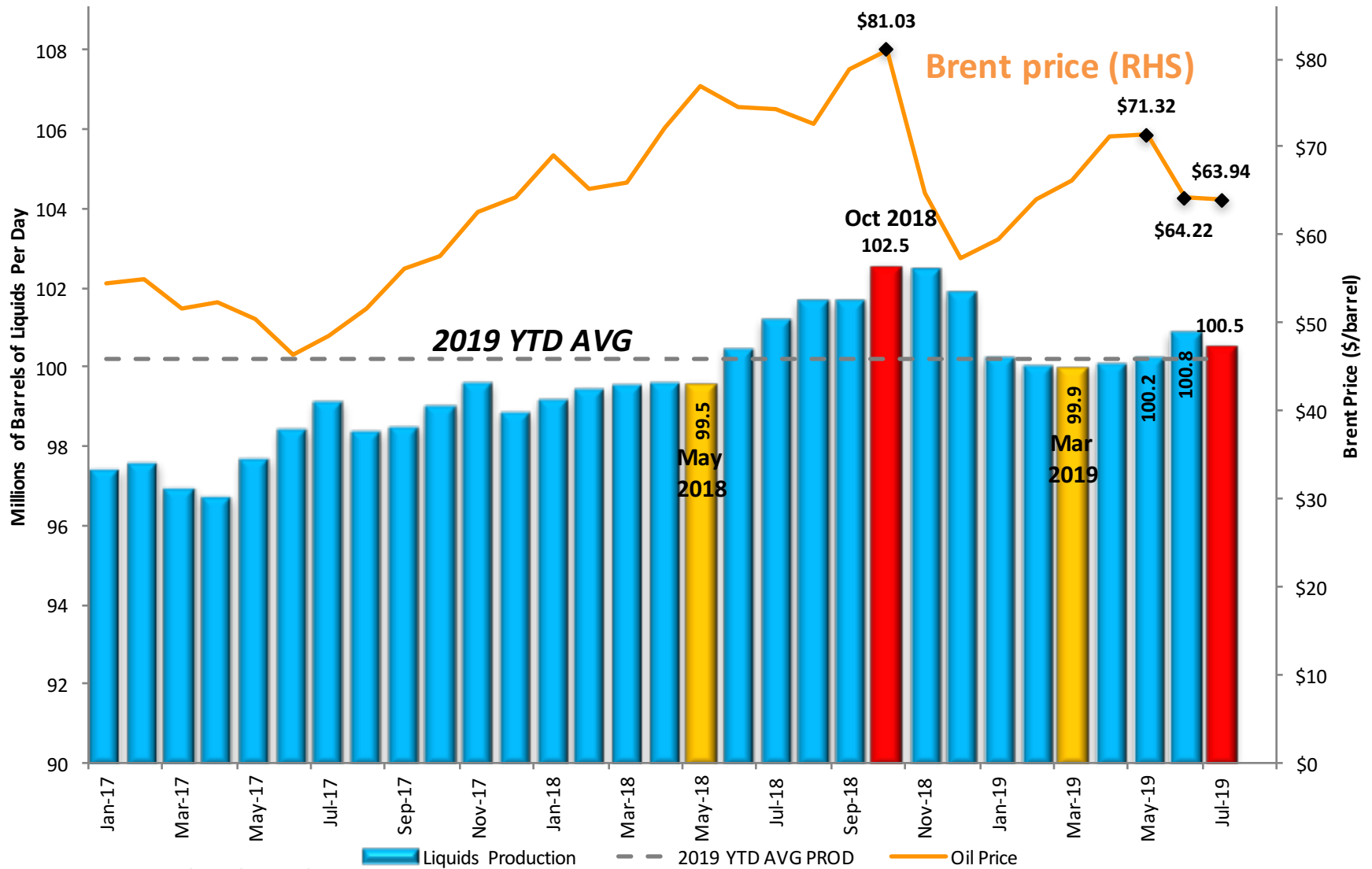
Year-over-year U.S. crude + condensate production decreased to 0.8 mmb/d in July Lowest growth since October 2017



Source: EIA STEO & Labyrinth Consulting Services, Inc.

EIA 2019/STEO/STEO Master.xlsx

**World liquids production decreased -0.32 mmb/d in July to 100.5 mmb/d
That is +0.25 mmb/d more than the 2019 YTD average of 100.22 mmb/d**

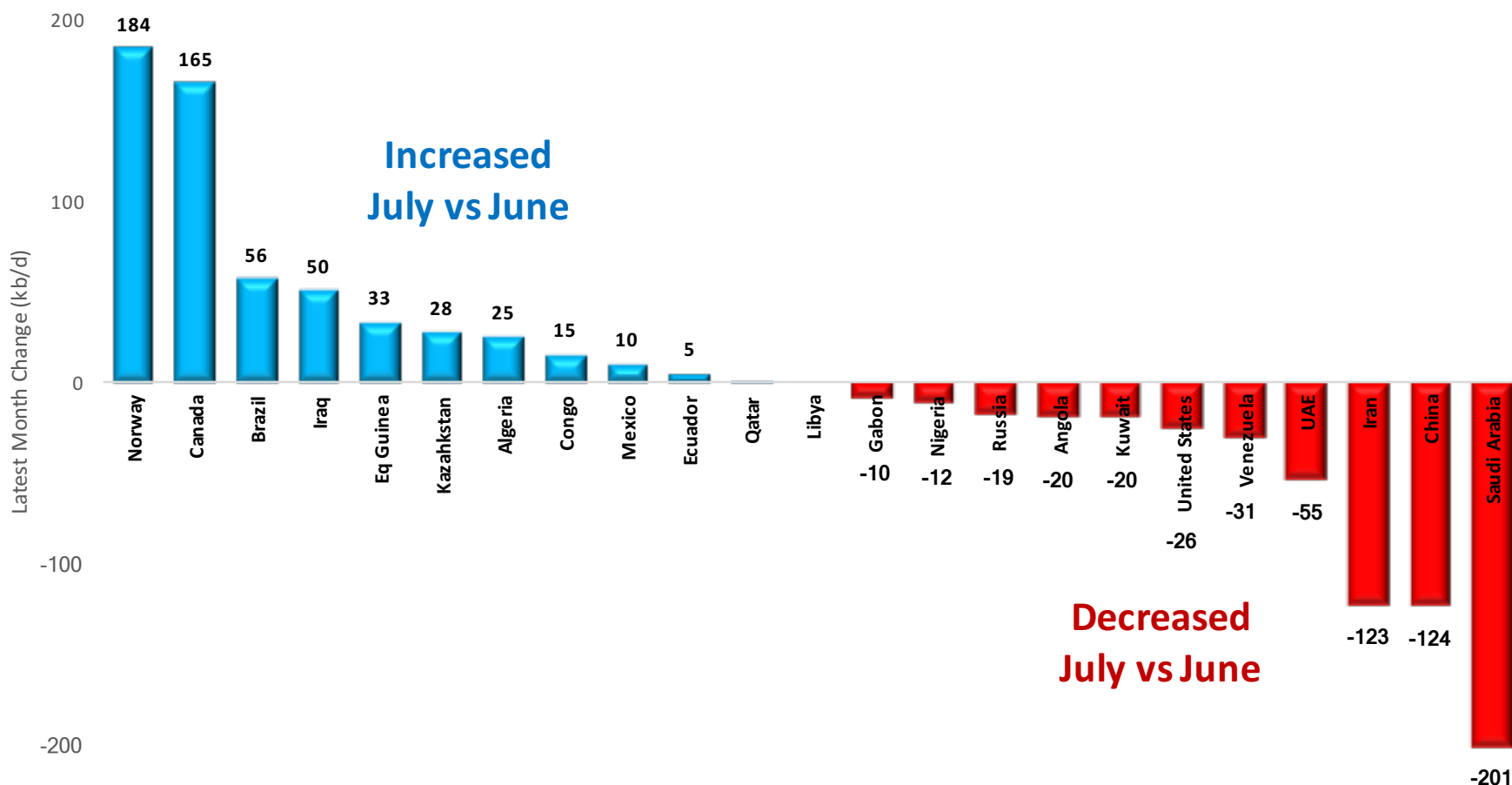


Source: EIA STEO & Labyrinth Consulting Services, Inc.

EIA 2019/STEO/STEO Master.xlsx

Norway, Canada, Brazil & Iraq led countures that increased production in July 2019

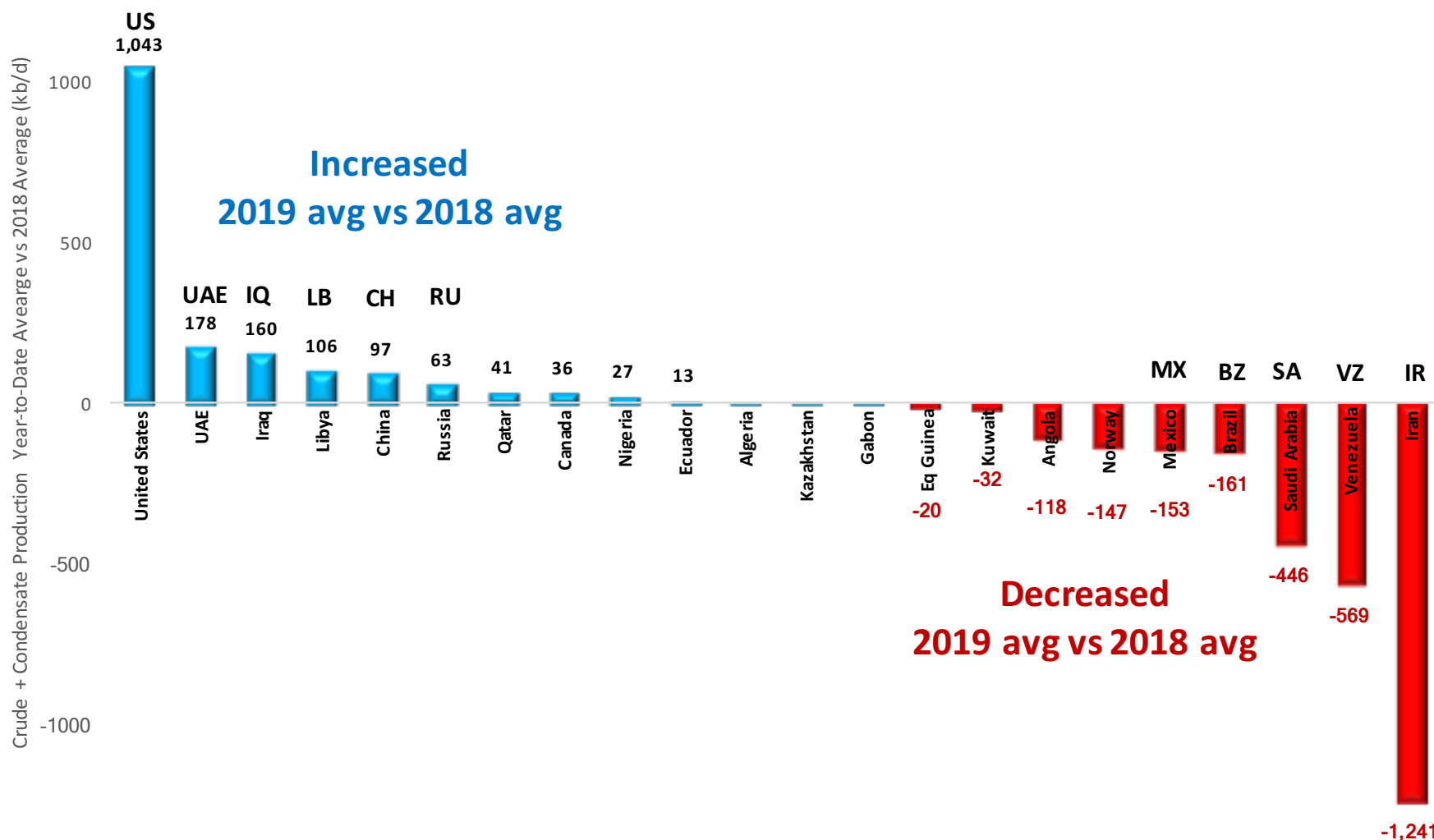
Saudi Arabia, China, Iran, UAE & Venezuela led countries that decreased production



Source: EIA & Labyrinth Consulting Services, Inc.

EIA/EIA International/International_data MASTER.xlsx

U.S., UAE, Iraq Libya, China & Russia have increased production in 2019 Iran, Venezuela, Saudi Arabia, Brazil & Mexico have decreased production

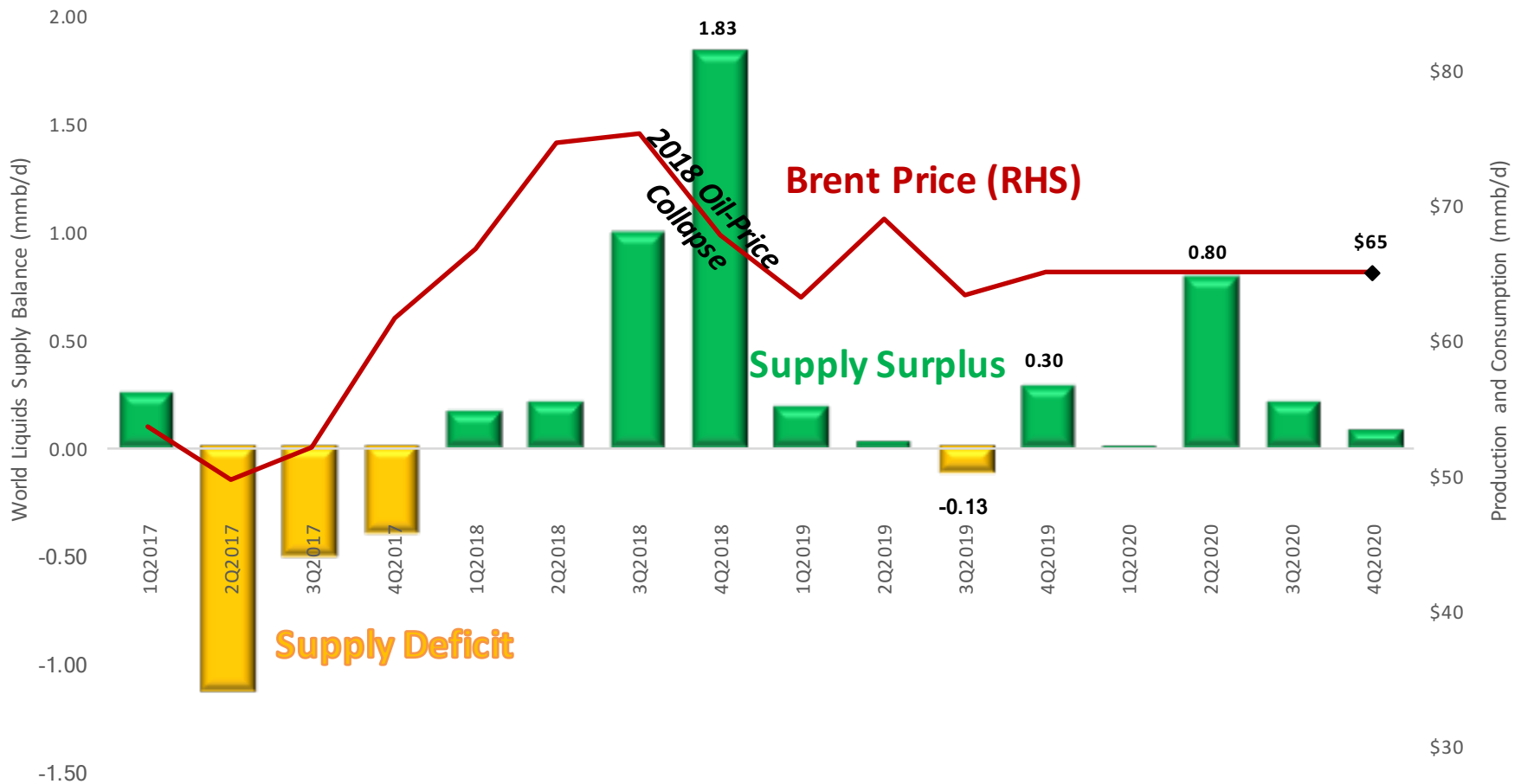


Source: EIA & Labyrinth Consulting Services, Inc.

EIA/EIA International/International_data MASTER.xlsx

World liquids supply expected to be in approximate balance in 2019

3Q in slight deficit and 4Q in slight surplus with Brent flat at about \$65/barrel

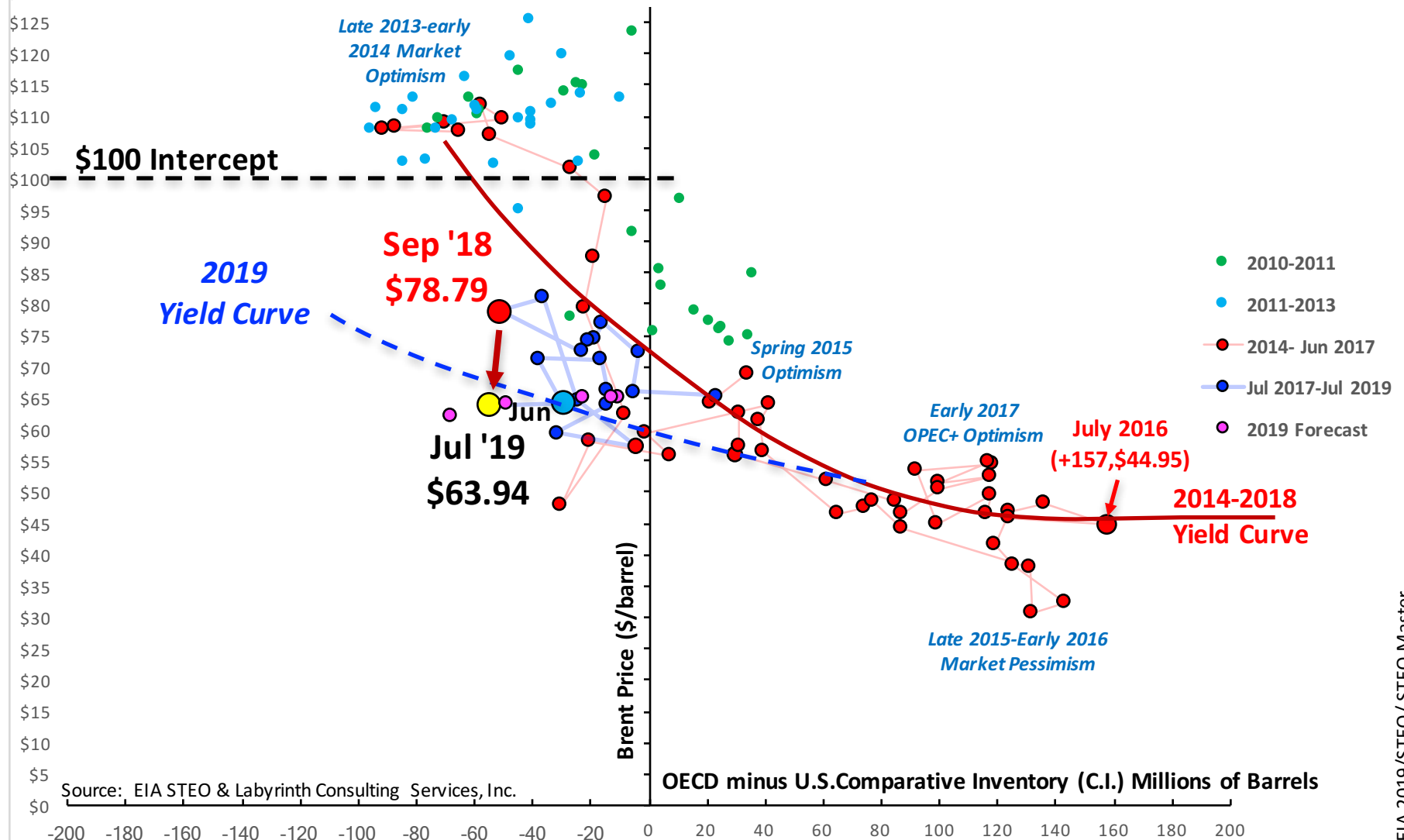


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EIA 2019/STEO/STEO Master.xlsx

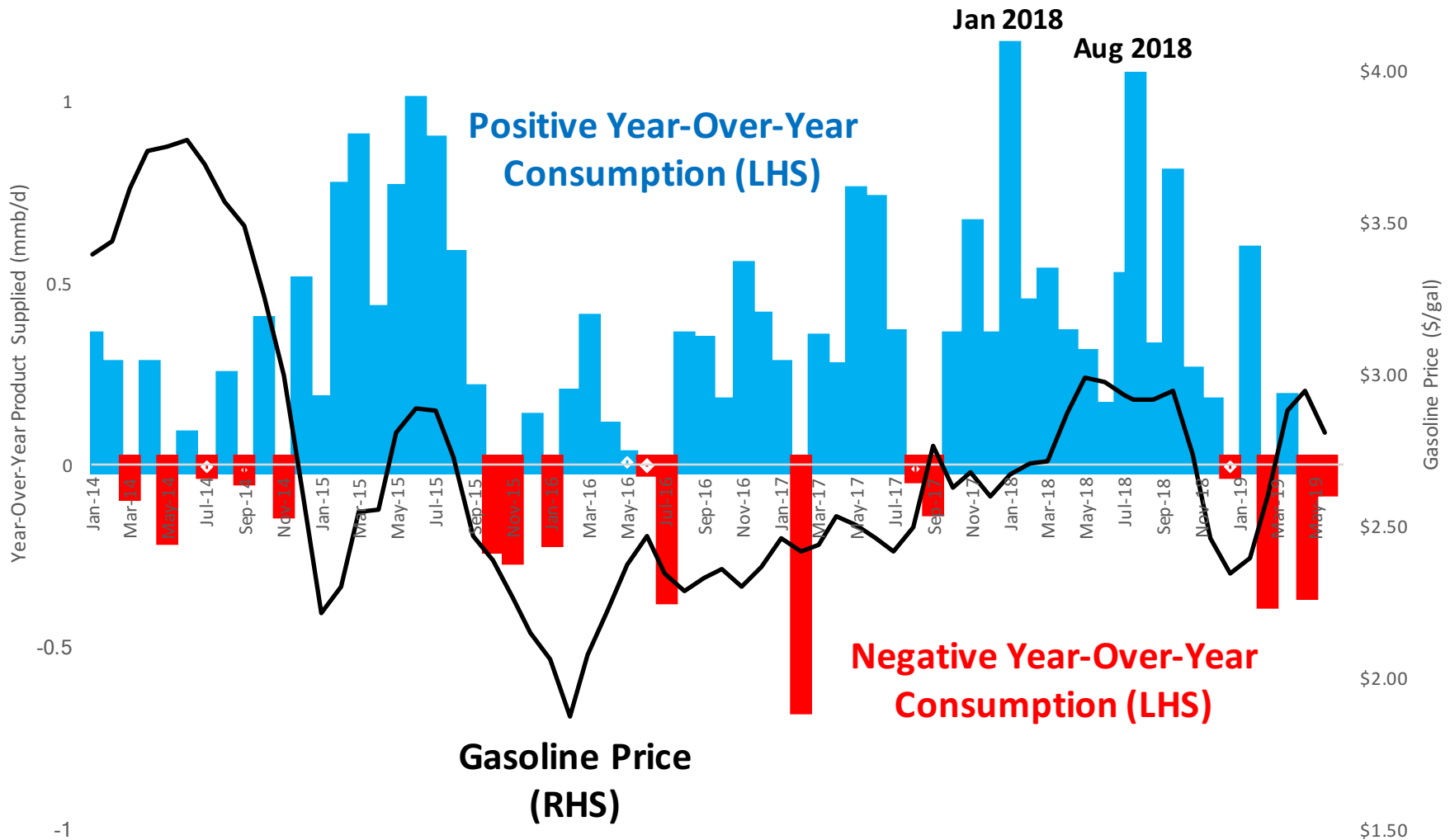
**OECD minus U.S. comparative inventory is more negative now than in Sept 2018
but Brent price is -\$14.85 (19%) lower**

This is a measure of how much markets have devalued oil price in the last year



U.S. refined product consumption has decreased since January 2018

Year-over-year consumption is at the lowest level since early 2017 suggesting weaker end-user demand

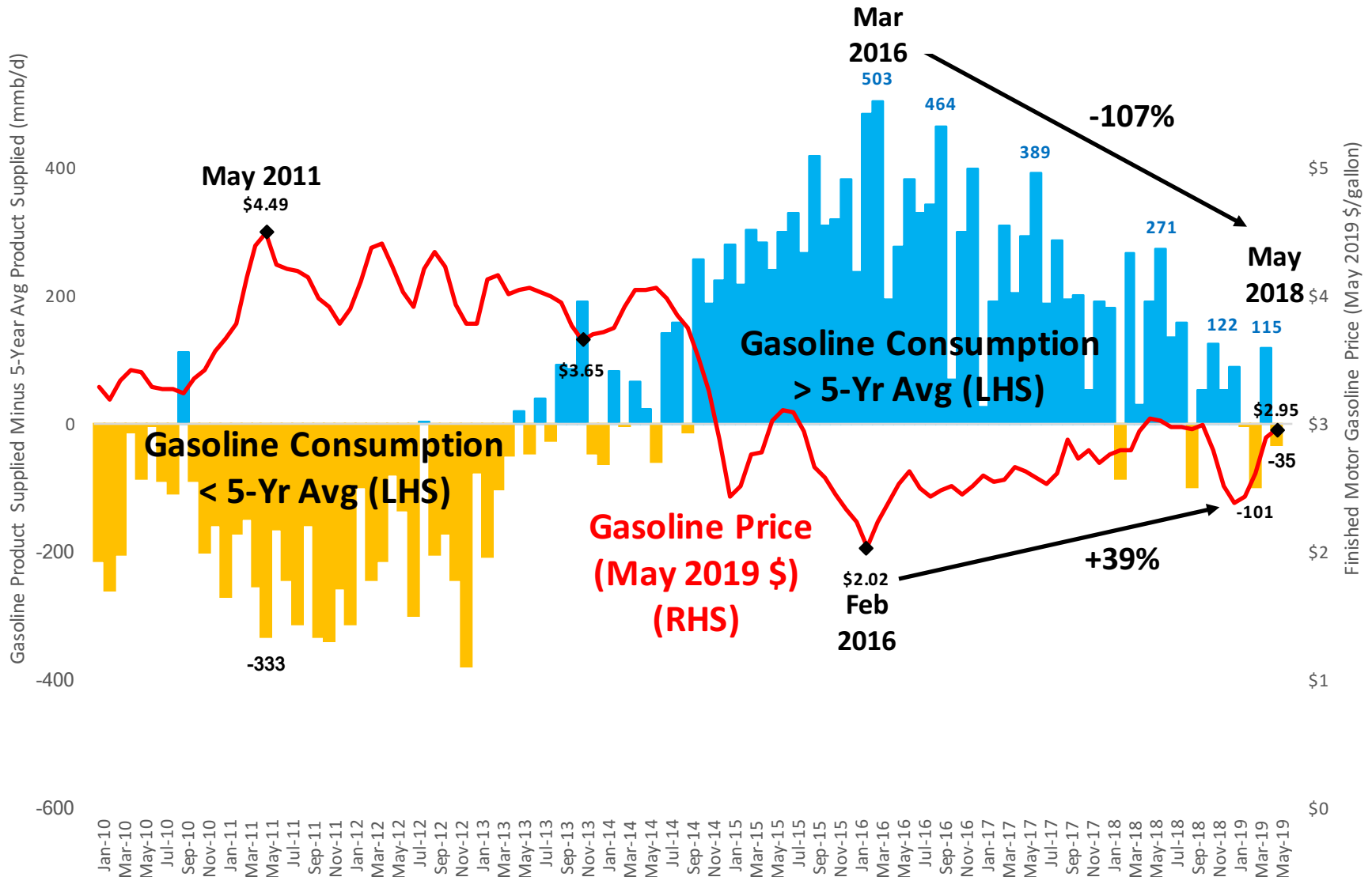


Source: EIA & Labyrinth Consulting Services, Inc.

EIA 2019/Monthly Updates/U.S. Product Supplied Master

U.S. gasoline consumption growth has fallen -107% from 2016 to 2019

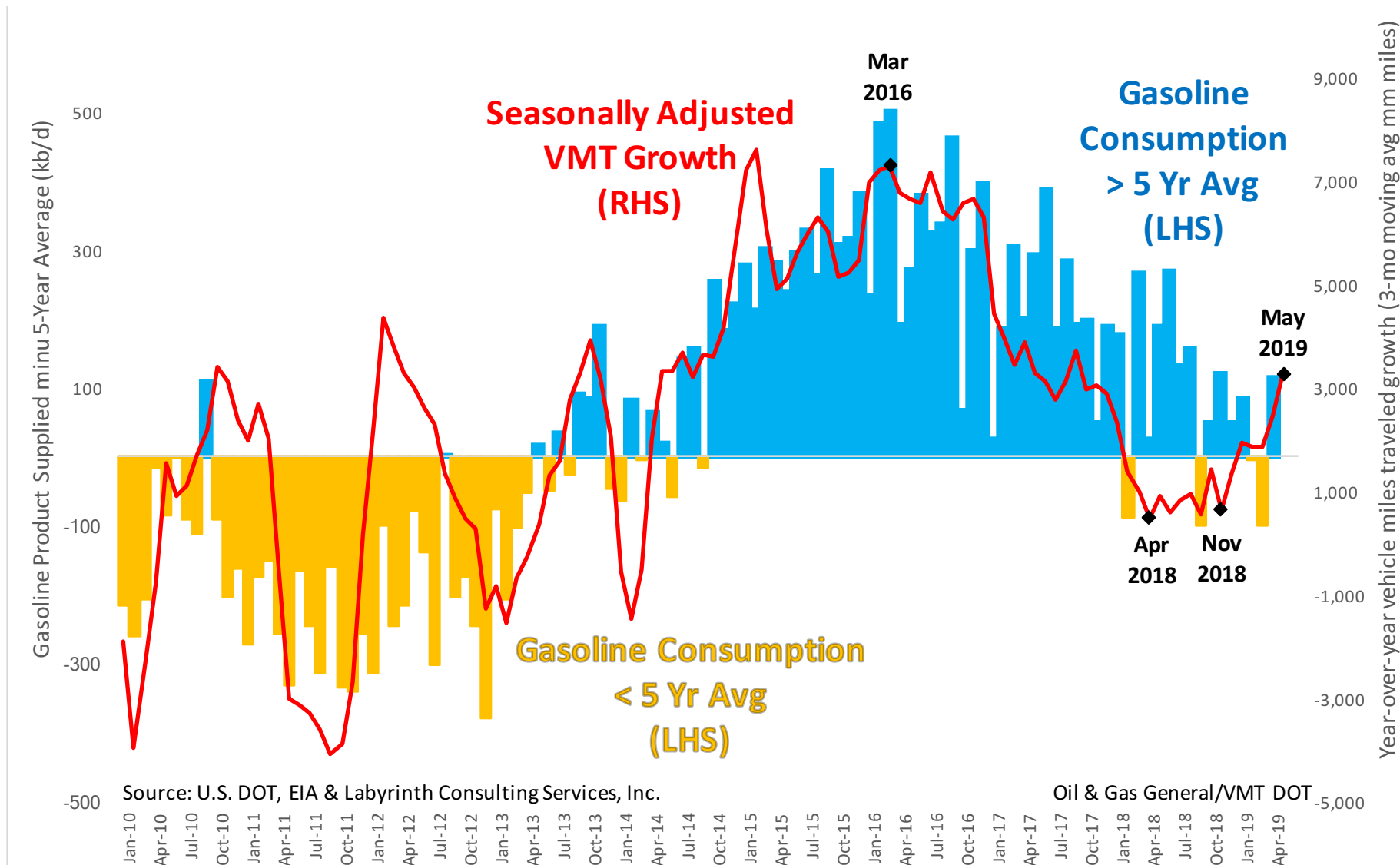
Constant gasoline prices have increased +39% over the same period



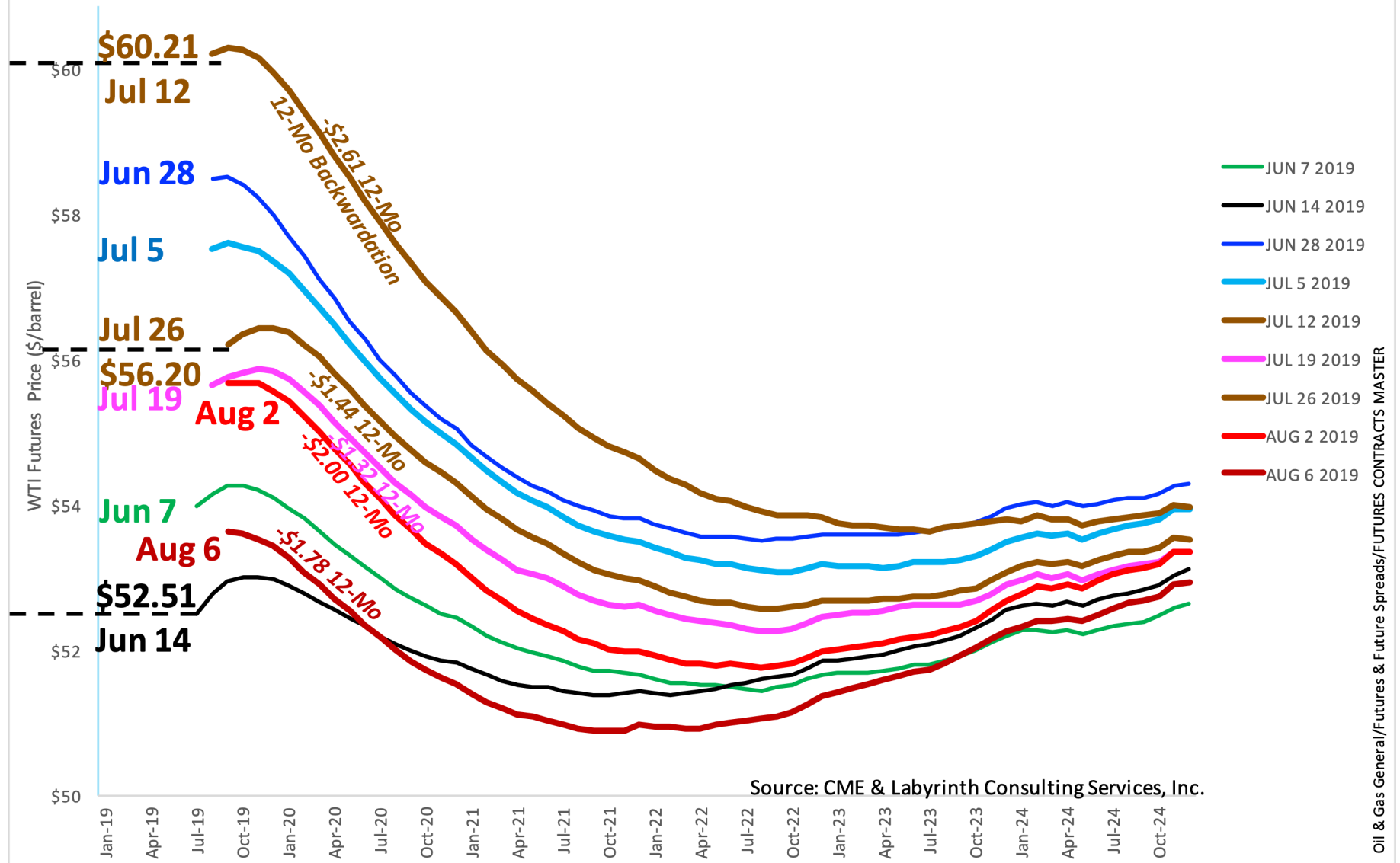
Source: EIA & Labyrinth Consulting Services, Inc.

EIA 2019/Monthly Updates/U.S. Product Supplied Master

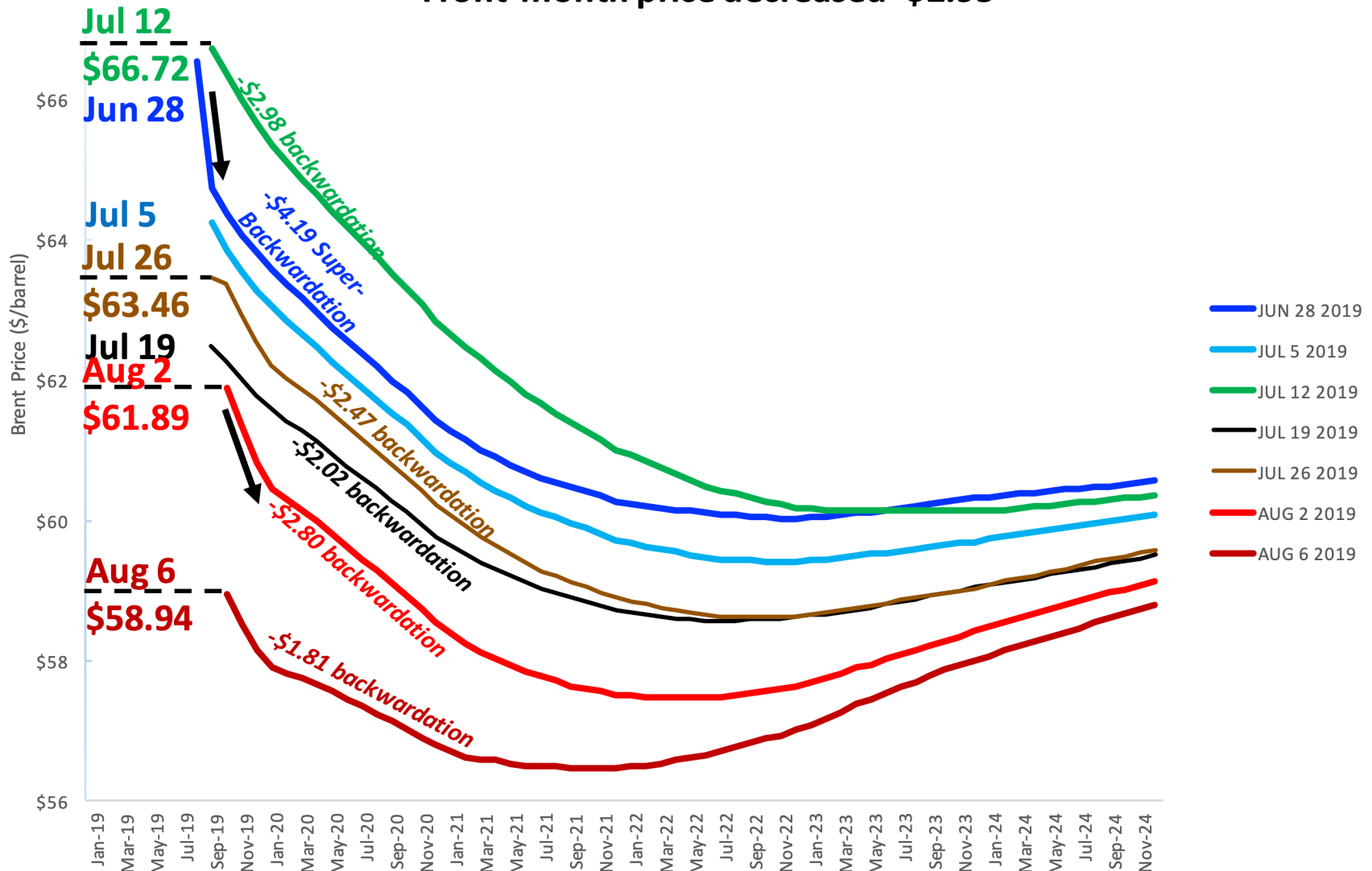
U.S. vehicle miles traveled (VMT) & gasoline consumption fell from 2016 through 2018 VMT growth has reversed since November 2018 & gasoline consumption is increasing



WTI front-month price decreased -\$1.29 between Friday August 2 & Tuesday August 6
12-month spreads widened \$0.22 from -\$2.00 to -\$1.78



**Brent 12-month spreads widened \$0.99 from -\$2.80 to -\$1.81
between Friday August 2 and Tuesday August 6
Front-month price decreased -\$2.95**



Source: CME & Labyrinth Consulting Services, Inc.

Oil & Gas General/Futures & Futures Spreads/FUTURES CONTRACTS MASTER