



## OVERVIEW

- Nymex crude futures rose ahead of a key meeting of the US Federal Reserve and as the US pledged to play a "significant part" in keeping open waterways that serve the Mideast Gulf. Nymex September light sweet crude futures rose by 67¢/bl to \$56.87/bl.
- Medium sour Mars has maintained a tight spread with Light Louisiana Sweet (LLS), and the sour bellwether even keeps a premium to WTI Houston so far during the prompt September trade month.
- WTI and Bakken fob were both assessed at discounts to November Ice Brent circling \$2.25/bl in a quiet session at the start of the week.
- Colombian heavy sour Castilla Blend and medium sour Vasconia firmed against Ice Brent amid rising prices against the benchmark for competing crudes on the US Gulf coast.
- WCS at Hardisty, Alberta, edged down to a \$14/bl discount to the basis as markets at Canadian hubs were largely steady from the prior session

## IN THE NEWS

### Infrastructure

- Valero Corpus Christi reports SRU unit upset
- Phillips 66 Borger reports FCC maintenance
- Phillips 66 Arroyo Grande reports unit upset

### Industry

- US commits to keeping strait of Hormuz open
- Appellate ruling affirms Citgo vulnerability
- India boosts imports of Venezuelan crude
- Pemex June oil output edges higher
- US Senate panel seeks higher highway fund
- Service firms see further N America slowdown

## KEY PRICES

All-day weighted average assessments				\$/bl
	Diff to WTI	Diff to LLS	Price	±
LLS St James	+4.65		61.52	+0.69
WTI Cushing		-4.65	56.87	+0.67
WTI Midland	-1.41	-6.06	55.46	+0.33
WTI Houston	+4.19	-0.46	61.06	+0.39
Mars Clovelly	+4.46	-0.19	61.33	+0.63
WCS Hardisty	-14.00	-18.54	42.98	+0.50
WCS Cushing	-5.83	-10.37	51.15	+0.79
WCS Houston	-3.21	-7.75	53.77	+1.11

Forward curve: Locational spreads				\$/bl
	WTI/Brent 4:30pm London	WTI/Brent 1:30pm Houston	LLS/Brent 1:30pm Houston	
Sep	-7.12	-6.84	-2.24	
Oct	-6.92	-6.66	-2.51	
Nov	-6.41	-6.19	-2.32	
1:30pm Houston		LLS/WTI	Mars/WTI	Mars/LLS
Sep	+4.60	+4.40	-0.20	
Oct	+4.15	+2.80	-1.35	
Nov	+3.87	+1.30	-2.57	

Forward curve: Time spreads					\$/bl
1:30pm Houston	ICE Brent	CME WTI	LLS	Mars	
Sep/Oct	+0.09	-0.09	+0.36	+1.51	
Oct/Nov	+0.42	-0.05	+0.23	+1.45	
Nov/Dec	+0.41	+0.04	+0.28	+1.08	

Forward curve: Outright prices				\$/bl
1:30pm Houston	LLS	WTI Midland	Mars	
Sep	61.47	55.52	61.27	
Oct	61.11	56.61	59.76	
Nov	60.88	56.93	58.31	

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WTI							\$/bl
	Timing	Low	High	WTI formula basis price	WTI formula basis MTD	Roll to next month	
WTI Cushing	Sep	56.85	56.89	56.87	56.54	0.09	<b>Argus documentation links:</b> <a href="#">Argus Americas Crude Methodology and Specification Guide</a> <a href="#">Argus Global Compliance Policy</a> <a href="#">Argus Media Editorial Code of Conduct</a>
WTI Cushing	Oct	56.94	56.98	56.96		0.05	
WTI Cushing	Nov	56.99	57.03			-0.04	
WTI Cushing	Dec	56.95	56.99				
	Timing	Price					
CMA Nymex	Sep	56.98					
CMA Nymex	Oct	57.00					
CMA Nymex	Nov	56.93					
CMA Nymex	Dec	56.79					

	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average
WTI Houston	Sep	Sep WTI	+4.10	+4.30	+4.19	+4.33	60.97	61.17	61.06
WTI Houston	Oct	Oct WTI	+3.65	+3.70	+3.68	+3.74	60.61	60.66	60.64
WTI Midland	Sep	Sep WTI	-1.45	-1.40	-1.41	-1.24	55.42	55.47	55.46
WTI Midland	Oct	Oct WTI	-0.40	-0.30	-0.35	-0.34	56.56	56.66	56.61
WTI diff to CMA Nymex	Sep	CMA	-0.11	-0.10	-0.11	-0.14			
WTI postings-plus	Sep	Postings	+3.27	+3.28	+3.27	+3.25			

Midcontinent										\$/bl
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	
Bakken Clearbrook	Sep	CMA Nym	-0.55	-0.25			56.43	56.73		
Bakken Cushing	Sep	Sep WTI	+0.50	+0.60	+0.55	+0.55	57.37	57.47	57.42	
White Cliffs	Sep	Sep WTI	-0.80	-0.70	-0.75	-0.75	56.07	56.17	56.12	
Niobrara	Sep	Sep WTI	+1.25	+2.00	+1.63	+1.57	58.12	58.87	58.50	
WCS Cushing	Sep	CMA Nym	-6.15	-5.50	-5.83	-5.92	50.83	51.48	51.15	

Texas										\$/bl
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	
WTL Midland	Sep	Sep WTI	-3.05	-2.25	-2.65	-2.45	53.82	54.62	54.22	
Bakken Beaumont-Nederland	Sep	CMA Nymex + Argus WTI diff to CMA	+3.95	+4.15	+4.11	+4.21	60.82	61.02	60.98	
WTS	Sep	Sep WTI	-1.95	-0.90	-1.43	-1.34	54.92	55.97	55.44	
WTS	Oct	Oct WTI	-0.45	-0.35	-0.40	-0.33	56.51	56.61	56.56	
Southern Green Canyon	Sep	Sep WTI	+3.60	+4.25	+3.93	+4.06	60.47	61.12	60.80	
WCS Houston	Sep	CMA Nym	-3.40	-3.10	-3.21	-3.46	53.58	53.88	53.77	

Louisiana										\$/bl
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	
LLS	Sep	Sep WTI	+4.55	+4.75	+4.65	+4.64	61.42	61.62	61.52	
LLS	Oct	Oct WTI	+4.05	+4.25	+4.15	+4.15	61.01	61.21	61.11	
HLS	Sep	Sep WTI	+4.65	+5.00	+4.70	+4.85	61.52	61.87	61.57	
Thunder Horse	Sep	Sep WTI	+4.85	+5.35	+5.10	+5.10	61.72	62.22	61.97	
Bonito	Sep	Sep WTI	+4.95	+5.50	+5.23	+5.17	61.82	62.37	62.10	
Poseidon	Sep	Sep WTI	+3.96	+4.01	+3.99	+3.97	60.83	60.88	60.86	
Mars	Sep	Sep WTI	+4.45	+4.50	+4.46	+4.48	61.32	61.37	61.33	
Mars	Oct	Oct WTI	+2.70	+2.85	+2.78	+2.77	59.66	59.81	59.74	
LOOP Sour	Sep	Sep WTI	+3.95	+4.10	+4.03	+4.04	60.82	60.97	60.90	

## US GULF COAST AND MIDCONTINENT

Medium sour Mars has maintained a tight spread with Light Louisiana Sweet (LLS), and the sour bellwether has even kept a premium to WTI Houston so far during the prompt September trade month.

September Mars was established at a 19¢/bl discount to September LLS, and the sour grade was at a 27¢/bl premium to WTI Houston on Monday. The sour crude strength has spilled over from the prompt August trade month, when Mars was at a premium to LLS in six of the last seven days of the trade month. Mars prices rose as the producers shut in critical offshore crude transportation infrastructure in order to prepare for Hurricane Barry.

Prompt Mars fell 4¢/bl to a \$4.46/bl premium to the light sweet benchmark at Cushing, Oklahoma, on Monday. Fellow Louisiana sour Poseidon traded at a discount to Mars ranging from as wide as 50¢/bl to as narrow as 45¢/bl, with trade establishing the value of Poseidon 5¢/bl higher in comparison to Cushing, up to a \$3.99/bl premium.

Prompt LLS rose 2¢/bl to a \$4.65/bl premium to Cushing and prompt WTI Houston fell 28¢/bl to a \$4.19/bl premium to Cushing.

Bakken at the US Gulf coast fell 19¢/bl versus Cushing, to a \$4.11/bl premium.

In the heavy sour market, Cold Lake transactions in the Houston area lifted the value of WCS Houston in comparison to CMA Nymex, as WCS Houston rose 49¢/bl compared to the basis, to a \$3.21/bl discount.

Export demand for Cold Lake has been heard to be on the rise, as 4mn bl were reported to be scheduled for loading from 25 August to 3 September. No Cold Lake exports were recorded in July.

Further inland, prompt WTI Midland fell 34¢/bl versus Cushing, to a \$1.41/bl discount on Monday.

### Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for LLS, Mars, Poseidon, WCS Houston, WTI Diff to CMA Nymex, WTI Houston and WTI Midland.

The Bakken at Clearbrook assessment was left unchanged as no fresh trade or market discussion emerged.

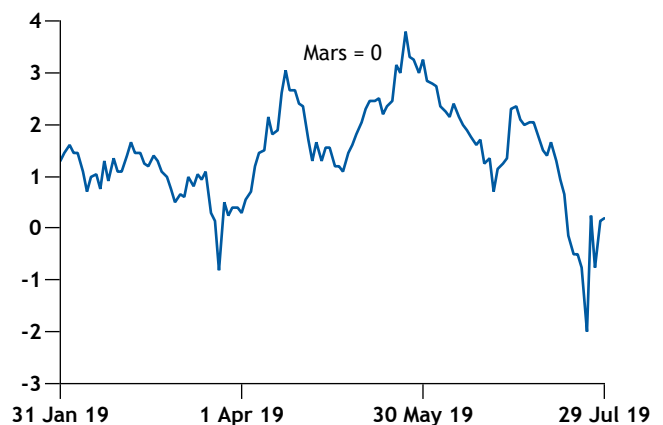
Southern Green Canyon was assessed at the midpoint of bids and offers.

WTS was assessed at the midpoint of bids and offers.

WCS Cushing was assessed at the midpoint of bids and offers.

LLS vs Mars 1.30pm Spread

\$/bl



## ANNOUNCEMENT

### Argus successfully completes annual losco assurance review

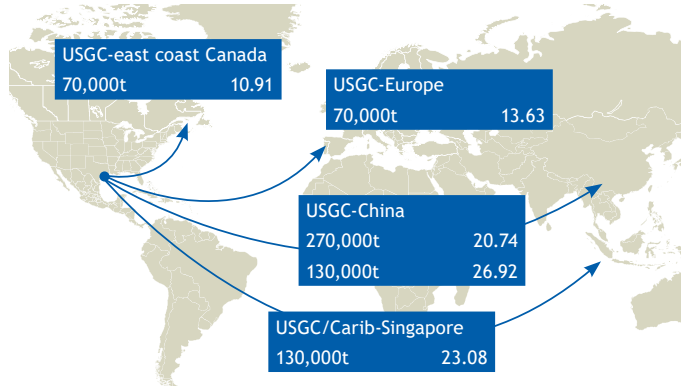
Argus has completed the seventh external assurance review of its price benchmarks covering crude, products, biofuels, thermal coal, coking coal, natural gas and biomass benchmarks. The review was carried out by professional services firm PwC. Annual independent, external reviews of oil benchmarks are required by international regulatory group losco's Principles for Oil Price Reporting Agencies, and losco encourages extension of the reviews to non-oil benchmarks.

For more information and to download the review visit our website <https://www.argusmedia.com/en/about-us/governance-compliance>

## US WATERBORNE

### Dirty freight rates

\$/t



Freight rate	\$ lumpsum
Route	Daily Worldscale
USGC Aframax reverse lightering	220,000

US crude flows to Asia-Pacific are poised to increase as many Chinese state-owned refineries come back online from second-quarter turnarounds.

There are at least 21 tankers on subjects to depart the US by 3 September with up to 39.82mn bl, or about 1.12mn b/d, according to shipping fixture reports compiled by Argus.

At least 12 of those tankers are expected to carry up to 26mn bl, or roughly 725,000 b/d, to China.

Preliminary tracking data indicates the US exported around 300,000 b/d in June, reflecting a 21.3pc month-on-month increase from the 247,400 b/d in US-to-China flows reported in the latest available monthly statistics by the US Census Bureau.

At least 32.51mn bl, or nearly 525,000 b/d, of US crude

US Gulf coast waterborne				\$/bl
	Timing	Basis	Diff low/high	Low/High
WTI fob Houston	Prompt	Sep CMA Nymex	+3.87/+4.07	60.85-61.05
	Prompt	Sep WTI Houston	-0.21/-0.01	
	Prompt	Nov Ice	-2.35/-2.15	
Bakken fob Beaumont/Nederland	Prompt	Sep CMA Nymex	+3.87/+4.07	60.85-61.05
	Prompt	Sep WTI Houston	-0.21/-0.01	
	Prompt	Nov Ice	-2.35/-2.15	

US Gulf coast prices vs global benchmarks				\$/bl
	Timing	Basis	Price	Differential
WTI Houston	Sep	Sep Dubai swaps*	60.47	-0.43
	Sep	Dec Ice Brent		-1.73
	Sep	Dec Dubai		+0.91
WTI Midland	Sep	Sep Dubai swaps*	54.93	-5.97
	Sep	Dec Ice Brent		-7.33
	Sep	Dec Dubai		-4.69
LLS	Sep	Sep Dubai swaps*	60.63	-0.27
	Sep	Dec Ice Brent		-1.27
	Sep	Dec Dubai		+1.37
Mars	Sep	Sep Dubai swaps*	60.50	-0.40
	Sep	Dec Ice Brent		-1.46
	Sep	Dec Dubai		+1.18
Bakken Beaumont/Nederland	Sep	Dec Ice Brent		-1.81
	Sep	Dec Dubai		+0.83

Argus uses today's US pipeline outright prices at Nymex settlement to calculate spreads to today's Ice Brent settlement and Argus Dubai prices three months forward, to account for travel time from the US to Asia-Pacific.

\*Outright prices are calculated by applying the previous day's US pipeline differentials to today's Singapore Nymex WTI 4.30pm timestamp, to then calculate spreads to Dubai swaps at that timestamp.

exports are anticipated to load in July and August for South Korea compared to an estimated 500,000 b/d in June, according to preliminary tracking data compiled by Argus.

Anticipated US crude export cargoes – 15-45 days forward							
Tanker name	Approximate volume '000 bl	Estimated grade	Load window	Load port	Chartered destination	ETA	
Irini N Lemos	2,000	WTI/Eagle Ford	17 Aug	tbd	Ulsan, South Korea	5 Oct	
Hatteras	2,000	WTI	15-18 Aug	Galveston lightering	China	19 Sep	
New Melody	2,000	WTI	18 Aug	Galveston lightering	China	19 Sep	
Amphion	2,000	WTI or Mars	15-19 Aug	tbd	Ningbo, China	16 Sep	
Montreal Spirit	1,000	West Texas Light or WTI	9-14 Aug	tbd	Ulsan, South Korea	27 Sep	
Ghinah	2,000	Cold Lake	28 Aug-3 Sep	tbd	South Korea	1-10 Oct	
KHK Empress	2,000	ANS	15-20 Aug	US west coast	China	3 Sep	
Amphitrite	2,000	WTI	9-14 Aug	Panama	China	27 Aug	
Dia	2,000	WTI	15 Aug	Galveston lightering	China	16 Sep	
Trikwong Venture	2,000	Cold Lake	25 Aug	tbd	Ningbo, China	26 Sep	
Maran Ares	2,000	WTI	29 Aug	Ingleside, Texas	Asia-Pacific	tbd	

The US exported just 331,000 b/d of crude to South Korea in May, according to official customs data.

The arbitrage appears workable amid rising delivered-Shandong values for Russia's distillate-rich ESPO Blend, which is trading at premiums to November Ice Brent around \$4.30/bl.

WTI and Bakken fob were both assessed at discounts to November Ice Brent circling \$2.25/bl in a quiet session at the start of the week.

Bakken was last heard valued on a delivered basis to Asia at a roughly \$3.40/bl premium to Dubai, which this session would reflect a nearly \$2.60/bl premium to November Ice Brent.

### Assessment rationale

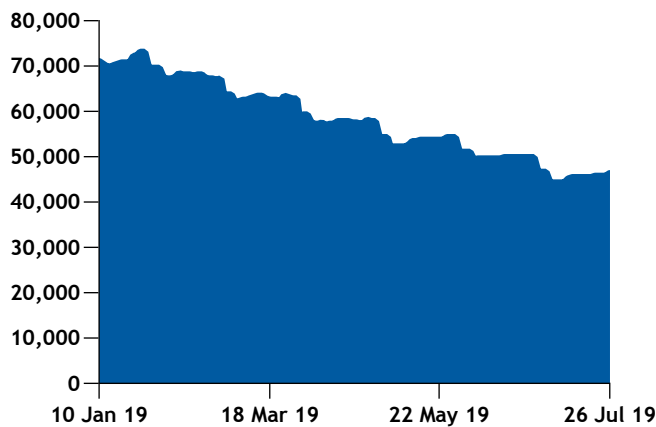
ANS was steady against Ice Brent to reflect the \$1.60/bl premium at which the grade was last reported trading.

US west coast pipeline, 26 Jul				\$/bl
	Basis	Diff to Ice Brent		Outright
Light postings avg	Sep	+1.87		65.33
Heavy postings avg	Sep	-2.90		60.56

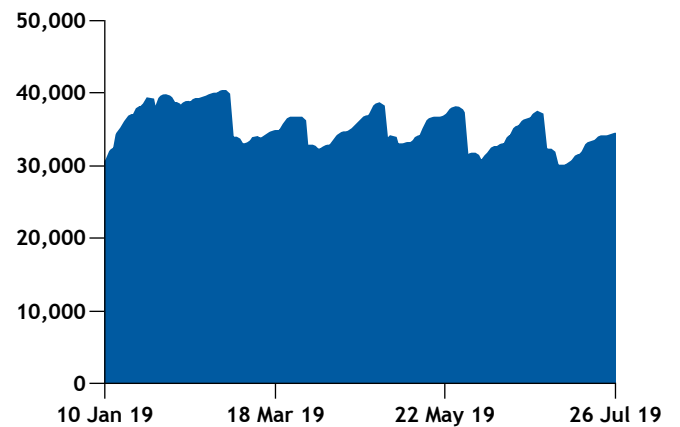
US west coast waterborne					\$/bl
	Timing	Basis	Diff low/high		Low/High
ANS del	Sep	CMA Nym	+7.77/+7.87		64.75-64.85
	Sep	CMA Ice	+1.55/+1.65		
ANS del concurrent	Sep	Sep WTI	+7.77/+7.87		64.64-64.74

ANS del USWC monthly volume-weighted average				\$/bl
		Basis		Diff
Jun		Ice CMA		+0.86
Jul		Ice CMA		+1.04
Aug		Ice CMA		+1.51
Sep MTD		Ice CMA		+1.59

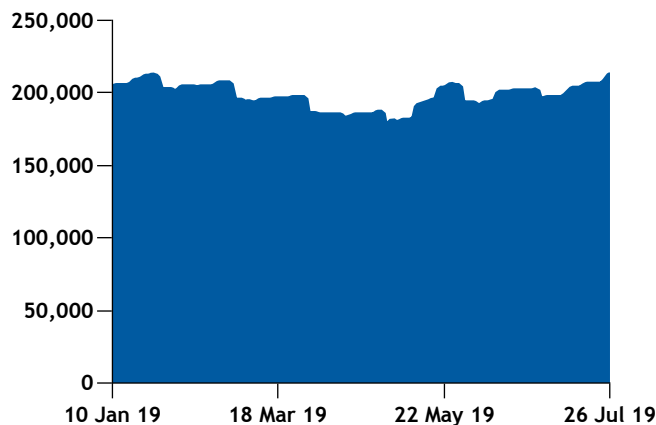
Total CME LLS open interest *lots*



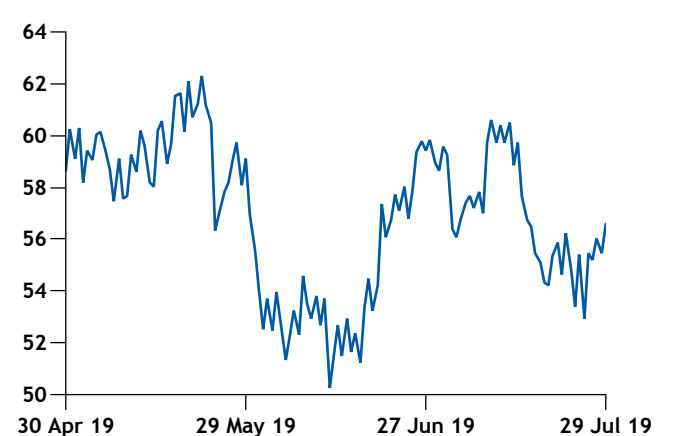
Total CME Mars open interest *lots*



Total CME WTI Midland open interest *lots*



WTI Midland outright *\$/bl*



**LATIN AMERICA**

Colombian crudes heavy sour Castilla Blend and medium sour Vasconia firmed against Ice Brent Monday amid rising prices against the benchmark for competing crudes on the US Gulf coast.

Argus assessed Castilla at a \$4.95/bl discount to November Ice Brent for September-loading cargoes, while Vasconia was assessed at a midpoint of roughly \$1.93/bl under the international benchmark.

Castilla tracked an 85¢/bl climb versus Ice Brent for heavy sour Western Canadian Select (WCS) delivery into the US Gulf coast. The Canadian crude was assessed at a \$3.21/bl discount to benchmark Nymex CMA, narrowing its discount from \$3.70/bl on Friday.

US offshore medium sour Mars was assessed at \$4.46/bl premium to US benchmark WTI in the physical pipeline market for September delivery into the US Gulf coast.

This reflects a roughly 40¢/bl climb versus Ice Brent this session, used to set the low end of the Vasconia assessment while bullish market indications set the high.

Medium sweet Brazilian Lula for delivery to China's Shandong province was assessed about \$4.05/bl over Ice December Brent for October delivery.

Limited supply underpinned values for the Brazilian grade, with offers for November-delivery Lula at \$4.80-\$4.90/bl over Ice January Brent. Buyers had yet to start purchasing November-delivery cargoes.

Elsewhere, India's imports of Venezuelan crude jumped by 25pc in June from a year earlier and by 37pc sequentially. India's imports from Venezuela rose to 303,000 b/d last month from 221,000 b/d in May and 243,000 b/d a year earlier, according to Indian customs data.

Private-sector refiner Reliance Industries and Russian Rosneft-owned Nayara Energy are the only Indian buyers of Venezuelan oil. Venezuelan crude exports to India averaged \$57/bl.

RIL has repeatedly said it is adhering to US sanctions with respect to crude imports from Venezuela. Any cutbacks by RIL may have been offset by higher purchases from Rosneft for its 400,000 b/d refinery in Vadinar on India's west coast.

Rosneft has outstanding oil-backed credit to PdV, which is partly secured by shares in PdV's US refining subsidiary Citgo.

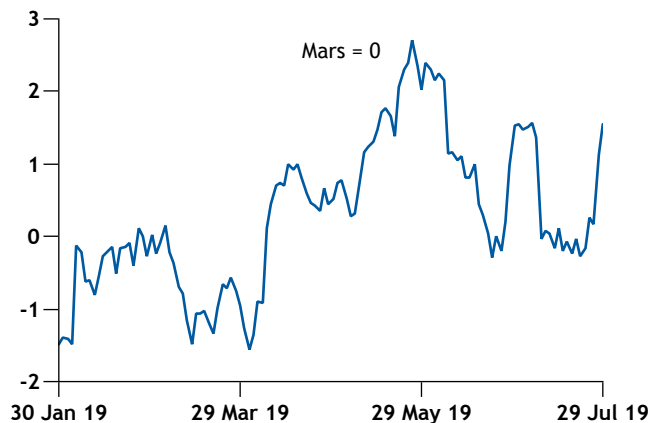
South America				\$/bl
	Timing	Basis	Diff low/high	Low/High
<b>Colombia</b>				
Vasconia	Prompt	Nov WTI	+3.84/+4.69	60.85-61.70
		Nov Ice	-2.35/-1.50	
Castilla	Prompt	Nov WTI	+0.84/+1.64	57.85-58.65
		Nov Ice	-5.35/-4.55	
<b>Argentina</b>				
Escalante	Prompt	Nov WTI	+4.29/+5.19	61.30-62.20
		Nov Ice	-1.90/-1.00	

Mexico				\$/bl
	Timing	Basis	Diff to Nymex	Price
<b>Maya</b>				
Excluding USWC	Jul	Sep	+1.69	58.56
USWC	Jul	Sep	+1.69	58.56
<b>Isthmus</b>				
Excluding USWC	Jul	Sep	+5.49	62.36
USWC	Jul	Sep	+5.49	62.36
<b>Olmeca</b>				
Americas	Jul	Sep	+8.56	65.43

Mexico K-factors			\$/bl
	Timing		K-factor
Maya USGC	Jul		+1.15
Maya USWC	Jul		+1.15
Maya Europe	Jul		-1.90
Maya Asia	Jul		-4.20
Isthmus USGC	Jul		+3.15
Isthmus USWC	Jul		+3.15
Isthmus Europe	Jul		-1.20
Isthmus Asia	Jul		+0.30
Olmeca USGC	Jul		+5.80
Olmeca Europe	Jul		-1.20

Vasconia vs Mars 2

\$/bl



Canada domestic							\$/bl		
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average
Syncrude (SPP)	Sep	CMA Nym	+0.75	+1.25	+1.00	0.00	57.73	58.23	57.98
WCS	Sep	CMA Nym	-14.25	-13.75	-14.00	0.00	42.73	43.23	42.98
WCS Cushing	Sep	CMA Nym	-6.15	-5.50	-5.83	-5.92	50.83	51.48	51.15

Canada domestic				\$/bl
	Timing	Basis	Diff low/high	Low/High
Condensate	Sep	CMA Nym	-4.25/-3.25	52.73-53.73
MSW	Sep	CMA Nym	-4.00/-3.30	52.98-53.68
LSB	Sep	CMA Nym	-4.50/-3.50	52.48-53.48
LLB	Sep	CMA Nym	-13.85/-13.35	43.13-43.63

Canada waterborne prices				\$/bl
	Timing	Basis	Diff low/high	Low/High
Hibernia	Dated	North Sea	-0.25/+0.75	61.87-62.87
Terra Nova	Dated	North Sea	-0.35/+0.65	61.77-62.77

CME Nymex light sweet						\$/bl
Timing	Open	Low	High	4:30pm London	1:30pm Houston settle	±
Sep	56.20	55.81	57.10	56.38	56.87	+0.67
Oct	56.31	55.94	57.18	56.50	56.96	+0.63
Nov	56.43	56.03	57.22	56.59	57.01	+0.59
Dec	56.41	56.03	57.16	56.59	56.97	+0.54

## CANADA

The Canadian heavy sour benchmark edged down slightly to start the week as markets at Albertan hubs were largely steady from the prior session.

Prompt-month Western Canadian Select (WCS) gave 12¢/bl back to the market relative to the basis in Monday's outing. September WCS traded at a \$14/bl discount to the CMA, while the outright price was given a boost by rising global markets. WCS' flat price for September-delivery rests at \$42.98/bl, up by about 50¢/bl on the day.

Thin trading resulted in other key assessments maintaining their differential to the basis, as Syncrude Sweet Premium (SSP) remains pegged at a \$1/bl premium to the September CMA. Mixed Sweet Blend (MSW), meanwhile, is at a \$3.65/bl discount.

Condensate at Edmonton, Alberta, was steady at \$3.75/bl under the September CMA. The outright price for condensate is now \$53.20/bl, identical to that of one month ago.

Two sessions remain before the start of the September trade window, which is expected to attract more liquidity. The window officially opens on 1 August.

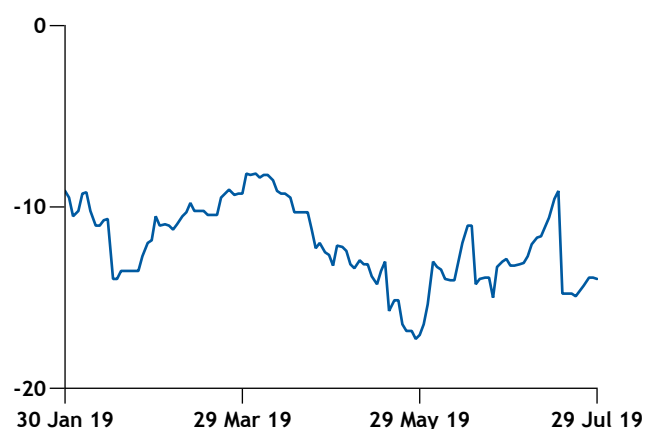
### Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for WCS Houston. WCS Cushing was assessed at the midpoint of bids and offers.

Ice Brent							\$/bl
Timing	Open	Low	High	4:30pm London	1:30pm Houston settle	±	
Sep	63.32	62.92	63.79	63.50	63.71	+0.25	
Oct	63.23	62.85	63.73	63.42	63.62	+0.25	
Nov	62.80	62.47	63.30	63.00	63.20	+0.25	

WCS differential to WTI

\$/bl



## Argus month average prices: US domestic pipeline Aug 19 trade month

		Code	Price	Trade day average Differential to WTI
WTI formula basis for grades	Cushing, Oklahoma	PA0003373	57.78050	
WTI P-Plus	Cushing, Oklahoma	PA0003361		+3.29650
WTI diff to CMA Nymex	Cushing, Oklahoma	PA0003360		-0.07650
WTI Cushing	Cushing, Oklahoma	PA0002668	57.78050	
Bakken Cushing	Cushing, Oklahoma	PA0019565	58.55750	+0.77700
Bakken Beaumont/Nederland	Beaumont/Nederland, Texas	PA0022255		+4.04500
White Cliffs	Cushing, Oklahoma	PA0019571	56.88200	-0.89850
Niobrara	Cushing, Oklahoma	PA0019568	59.31450	+1.53400
WTI Midland	Midland, Texas	PA0003358	56.90300	-0.87750
WTL Midland	Midland, Texas	PA0026294	55.64700	-2.13350
WTI Houston	Magellan East Houston, Texas	PA0016059	62.05950	+4.27900
Bonito	St James, Louisiana	PA0003359	62.93650	+5.15600
Thunder Horse	Clovelly, Louisiana	PA0005612	62.93700	+5.15650
HLS	Empire, Louisiana	PA0003356	63.67350	+5.89300
LLS	St James, Louisiana	PA0003364	63.02750	+5.24700
Mars	Clovelly, Louisiana	PA0003362	62.19450	+4.41400
Poseidon	Houma, Louisiana	PA0003357	61.42300	+3.64250
Southern Green Canyon	Texas City/Nederland, Texas	PA0003968	61.56300	+3.78250
WTS	Midland, Texas	PA0003363	56.88900	-0.89150
LOOP Sour	Clovelly, Louisiana	PA0020616	61.83350	+4.05300
				Differential to CMA Nymex
Bakken (US pipeline schedule)	Clearbrook, Minnesota	PA0009012		-0.27375
WCS Houston	Houston area	PA0018492		-2.47500
WCS Cushing	Cushing, Oklahoma	PA0019353		-5.78200

## Canadian pipeline Aug 19 trade month

				Cumulative trade month weighted average
Syncrude (SPP)	Pembina AOSP at Edmonton	PA0008308		+1.00
WCS	Husky at Hardisty	PA0008320		-9.10
				Differential to CMA Nymex
Bakken (Canadian Pipeline Schedule)	Clearbrook, Minnesota	PA0009012		-0.17

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The averages are trade-day averages of prices published for the trade month listed. Argus only publishes on days when the New York Mercantile Exchange is open for trade, and so only those days are averaged. Weekends and holidays are not included. The trade month is the period beginning with the 26th day of the month that is two months prior to the month of delivery through and including the 25th day of the month immediately prior to the month of delivery. Should the first day of the trade month fall on a day when the market is closed, the trade month will begin on the first trading day thereafter. Should the last day of the trade month fall on a day when the market is closed, the trade month will end on the last trading day prior.

The absolute prices for Argus US domestic crude grades are calculated using the Argus "WTI Formula Basis" value. The "WTI Formula Basis" average plus the crude grade's differential average equals the absolute price for the crude grade. The "WTI Formula Basis" price is an average of the Nymex WTI settlement price from the 26th of the month up to and including futures expiry, and the Argus WTI Cushing price from the day following futures expiry up to and including the 25th of the month. Each price component is rounded independently. Discrepancies due to this independent rounding must be accommodated by the user.

## Monthly data corrections

Grade	Location	PA code	Publication date	Published diff	Corrected diff	Published price	Corrected price
WTS	Midland, Texas	PA0003363	22 Jul	+0.10	-1.52	56.32	54.70

## DEALS DONE

North America pipeline deals done							
Grade	Location	Trade month	Basis month	Differential basis	Differential	Price \$/bl	Volume b/d
HLS	Empire Louisiana	Sep	Sep	WTI	+4.70		1,000
LLS	St. James Louisiana	Sep	Sep	WTI	+4.65		2,000
LLS	St. James Louisiana	Sep	Sep	WTI	+4.65		3,000
LLS	St. James Louisiana	Sep	Sep	WTI	+4.65		4,000
Mars	Clovelly Louisiana	Sep	Sep	WTI	+4.45		1,000
Mars	Clovelly Louisiana	Sep	Sep	WTI	+4.45		5,000
Mars	Clovelly Louisiana	Sep	Sep	WTI	+4.50		2,000
Poseidon	Houma Louisiana	Sep	Sep	Mars	-0.50		3,000
Poseidon	Houma Louisiana	Sep	Sep	Mars	-0.45		5,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		2,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		2,250
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		3,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		5,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		5,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		6,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		8,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.11		11,000
WTI	Cushing Oklahoma	Sep	Sep	CMA Nymex trade days	-0.10		5,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.10		2,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.10		3,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.15		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.15		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.15		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.15		2,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.20		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.20		2,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.20		2,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.20		3,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.25		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.25		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.25		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.25		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.30		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.30		1,000
WTI	Magellan East Houston	Sep	Sep	WTI	+4.30		1,000
WTI	Midland Texas	Sep	Sep	WTI	-1.45		2,000
WTI	Midland Texas	Sep	Sep	WTI	-1.40		1,000
WTI	Midland Texas	Sep	Sep	WTI	-1.40		2,000
WTI	Midland Texas	Sep	Sep	WTI	-1.40		2,000
WTI	Midland Texas	Sep	Sep	WTI	-1.40		4,000
WTI	Midland Texas	Sep	Sep	WTI	-1.40		5,000
WCS Houston	Houston area	Sep	Sep	CMA Nymex trade days	-3.15		2,000
Bakken	Beaumont / Nederland	Sep	Sep	CMA Nymex + Argus WTI Diff to CMA	+3.95		2,000
Bakken	Beaumont / Nederland	Sep	Sep	CMA Nymex + Argus WTI Diff to CMA	+4.15		2,000
Bakken	Beaumont / Nederland	Sep	Sep	WTI	+4.15		5,000
Cold Lake Houston	Houston area	Sep	Sep	CMA Nymex trade days	-3.40		2,500
Cold Lake Houston	Houston area	Sep	Sep	CMA Nymex trade days	-3.10		3,333

## INFRASTRUCTURE NEWS

### Valero Corpus Christi reports SRU unit upset

A sulfur recovery unit upset led to increased flaring yesterday at Valero's 275,000 b/d refinery in Corpus Christi, Texas.

The upset with the unit's incinerator in the refinery's east plant was reported at 12:14pm yesterday, according to a filing to state environmental quality monitors.

Sulfur recovery units help to remove sulfur and other impurities from refinery products and gas streams.

### Phillips 66 Borger reports FCC maintenance

Phillips 66 has scheduled maintenance of a fluid catalytic cracking (FCC) unit at its 147,000 b/d refinery in Borger, Texas, starting tonight.

Work to upgrade the unit's ammonia injection controls was expected to begin tonight at 11pm ET and last through 2 August, according to a filing to state environmental quality monitors. The FCC unit is not scheduled to go down during maintenance, but occasional flaring may occur, according to the filing.

FCCs convert vacuum gas oil primarily into gasoline and diesel.

### Phillips 66 Arroyo Grande reports unit upset

Phillips 66 reported a unit upset over the weekend in the Arroyo Grande end of its 120,000 b/d San Francisco refining complex in California.

The upset because of an electrical fault was reported at 2:50pm on 27 July, according to a filing to state hazardous material monitors. Flaring occurred as a result of the upset, according to the filing.

The company did not immediately state the unit involved.

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## INDUSTRY NEWS

### US commits to keeping strait of Hormuz open

US secretary of state Mike Pompeo is reiterating Washington's commitment to freedom of navigation in the strait of Hormuz, after President Donald Trump questioned the US Navy's role in safeguarding a chokepoint for about a fifth of the world's oil.

The US is prepared to play a "significant part" in keeping open waterways that serve the Mideast Gulf but needs other countries to help, Pompeo said. Iran two weeks ago seized an oil tanker transiting the strait, raising concerns about rising tensions in waterways that saw 21mn b/d of tanker traffic last year.

"We are going to keep them open," he said today at an event hosted by the event the Economic Club of Washington, DC. "We are going to build out a maritime security plan. Countries from all across the world who have a vested interest in keeping those waterways open will participate."

The remarks reiterate a decades-old US commitment to protect the strait of Hormuz, after Trump last week [complained](#) about the US protecting the shipping lane without reimbursement from other countries. Most tankers transiting the shipping channel are serving "very rich" destinations in Asia, Trump said, while the US only gets a fraction of its crude via the strait.

"We get very little oil from the straits anymore," Trump said on 23 July. "Why do we have our ships there?"

Pompeo said he had no timeline for negotiating a new deal with Iran, after the US last year withdrew from the 2015 nuclear accord. Tehran today [said](#) it wants crude and condensate exports to reach pre-sanctions levels of close to 2.8mn b/d if it is to stay in the deal with the five other signatories to the agreement: the UK, Germany, France, China and Russia.

But restoring those levels of oil exports would likely run counter to the US administration's goal of using sanctions to cut off revenue it believes Tehran would use to destabilize the region.

"We are trying to reduce their resources to conduct terror campaigns all around the world, build out their missile systems and their nuclear program," Pompeo said. "And we have been incredibly effective."

### Appellate ruling affirms Citgo vulnerability

Appellate judges today affirmed that companies may seek shares of entities controlling US independent refiner Citgo to satisfy billions of dollars in Venezuelan debts.

The decision could upend control of Venezuela's most valuable overseas asset and a key anchor to the impoverished

## INDUSTRY NEWS

country's loans, opening a path to compensation for more than a dozen entities with assets expropriated by Venezuelan governments. An auction of Citgo shares could move forward as early as September unless the US Treasury's Office of Foreign Assets Control (Ofac) declares such transactions blocked by US sanctions, a senior financial sector executive close to Venezuela's creditors told *Argus*.

The unanimous three-judge panel also rejected arguments that third-party bondholders must be considered in reaching that decision, finding that any lenders to national oil company PdV had ample notice of the government's involvement in the company.

Venezuelan attorneys argued that the country's interests in Citgo were immune from such attachments. But the US Third Circuit Court of Appeals panel found that Venezuela's involvement in PdV easily cleared a legal determination that the company effectively served as alter-ego of the Venezuelan government, and that entities seeking assets to satisfy numerous arbitration awards could attach its US companies controlling Citgo.

"Indeed, if the relationship between Venezuela and PdV cannot satisfy the Supreme Court's extensive-control requirement, we know nothing that can," the opinion said.

Judges affirmed a district court finding last fall that Citgo assets were directly held by Venezuela despite the use of US subsidiaries. That finding allowed the defunct mining firm Crystallex, now controlled by New York-based investment firm Tenor, to seek payment of a \$1.2bn arbitration award for Venezuela's expropriation of the company's Las Cristinas gold mining assets almost a decade ago.

"The Third Circuit's decision is a crucial step in getting Venezuela finally to honor its legal obligations," Crystallex chief executive Bob Fung said. "We look forward to proceeding with our lien to recover at least part of our expropriated investment in Venezuela."

PdV did not comment, and Citgo and Treasury did not respond to requests for comment.

Appellate court judges in Philadelphia questioned in an [April hearing](#) why Citgo should be immune from the billions of dollars of debts accrued by the Venezuelan government. The panel said today that Venezuelan national oil company and Citgo owner PdV failed to show significant separation between the government and the national oil firm.

Citgo's 750,000 b/d of complex refining capacity and fuel network west of the Rocky Mountains make a lucrative target for the country's creditors, who seek more than \$150bn. These

most valuable overseas assets fall subject to the US court system and an executive branch that does not recognize President Nicolas Maduro's government.

That change in White House recognition has rippled through more than a dozen separate petitions in US courts for recognition of arbitration awards for expropriated assets over the past decade. The US-recognized opposition headed by National Assembly leader Juan Guaido repeatedly requested judges overseeing petitions from oil services companies, defense contractors, plastics manufacturers and ranchers to delay proceedings so the new leadership could review the cases – and judges almost always said yes. The Third Circuit recognized Guaido's representatives as speaking for Venezuela, though noted "there is reason to believe that Guaido's regime does not have meaningful control over Venezuela or its principal instrumentalities such as PdV." The government dropped requests for a stay in this case as oral arguments began.

The appellate opinion dealt [another setback](#) to the Venezuelan opposition. Guaido declared himself interim president on 23 January, a move recognized by the US and more than 50 western governments that led directly to US sanctions on PdV. Guaido-appointed directors have controlled Citgo since February. But both the Maduro and Guaido governments now face a potential loss of control over its profitable US refining system and the [exit of US oil major Chevron](#) as a key bond payment comes due in October.

Crystallex "repeatedly reached out to Venezuela's interim government to seek a fair settlement that would compensate Crystallex for its property and preserve the value of Citgo for the Venezuelan people," the company said today.

The company was asked if that offer was extended.

"We look forward to proceeding with the legal process to recover the value of our expropriated investment in Venezuela," the company said.

### India boosts imports of Venezuelan crude

India's imports of Venezuelan crude jumped by 25pc year on year in June and by 37pc from May, reflecting the limited reach of US sanctions on the South American nation.

Imports from Venezuela rose to 303,000 b/d last month from 221,000 b/d in May and 243,000 b/d a year earlier, according to Indian customs data.

Indian private-sector refiner Reliance Industries (RIL) and Russian Rosneft-owned Nayara Energy are the only Indian

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buyers of Venezuelan oil. Venezuelan crude exports to India averaged \$57/bl.

Indian refiners reduced total crude imports in June by 13.4pc from a year earlier as state-controlled refineries had shutdowns, reducing the impact of the loss of Iranian crude that is subject to separate US sanctions.

Indian refiners purchased only 4.13mn b/d of overseas crude last month, down from 4.76mn b/d a year earlier. Venezuela accounted for more than 7pc of India's crude purchases in June compared to a 6pc share for US supply. The US shipped 252,000 b/d to India in June compared with 317,000 b/d in May and 129,000 b/d a year earlier, at \$75/bl.

RIL has repeatedly said it is adhering to US sanctions with respect to crude imports from Venezuela. Any cutbacks by RIL may have been offset by higher purchases from Rosneft for its 400,000 b/d refinery in Vadinar on India's west coast.

Rosneft has outstanding oil-backed credit to PdV, which is partly secured by shares in PdV's US refining subsidiary Citgo.

The [US oil sanctions on Venezuela](#), which were imposed in late January, are aimed at forcing the departure of President Nicolas Maduro in favor of a transition government headed by opposition leader [Juan Guaido](#).

### Pemex June oil output edges higher

Mexico's state-owned Pemex produced 1.67mn b/d of crude in June, down by 10pc on the year but slightly higher than the 1.66 b/d in May that was the company's second-lowest monthly crude output ever.

Including NGLs, liquids production still sits at 1.909mn b/d, which is a drop of 9.8pc from 2018 but is a marginal increase of 0.2pc from May, according to the company's latest monthly data.

Mexican oil production has been in decline for more than a decade and the government does not expect its recent push to increase production through the development of 22 fields until August at the earliest. Meanwhile, shallow-water production stemming from the three rounds of upstream auctions that followed the 2014 energy reform that dismantled Pemex's monopoly is expected to start coming online by year-end.

Pemex [stabilized its oil production](#) in the second quarter compared with the previous one.

Pemex has pledged to increase production to 2.69mn b/d by 2024 and, once production in the new fields starts this year, it hopes to close out 2019 at 1.73mn b/d.

Crude exports dropped to 995,000 b/d in June from 1.2mn b/d

in May – exports are also down from 1.11mn b/d in June 2018.

Mexico's crude basket price reached \$58.33/bl in June, down more than \$5/bl year-on-year and also down by nearly 4pc, or \$2.35/bl on a monthly basis.

Some 56pc of crude exports went to the Americas in May, while Europe accounted for 20pc and Asia-Pacific and other regions 24pc.

### Gas output stable

As for natural gas output, Pemex produced 4.843 Bcf/d of natural gas in June, marginally up from 4.84 Bcf/d in May 2018 and slightly up from 4.841 Bcf/d in May.

Of June's output, 964mn cf/d was non-associated gas, down from 1.04 Bcf/d in June 2018 but up from 967mn cf/d in May.

Associated gas production in June stayed at 3.87 Bcf/d, up from 3.79 Bcf/d in June of last year but practically unchanged from May.

After President Andres Manuel Lopez Obrador took office on 1 December, Pemex began accounting for production with a new methodology, which began with December's monthly report. It reclassified some production as crude condensates, leading to the annual increase in associated gas production figures.

Pemex imported 1.061 Bcf/d of gas in June, up from 1.034 Bcf/d of gas in May. Import volumes mirror the first three months of 2019, which averaged 1.071 Bcf/d, but are down from 1.458 Bcf/d in June 2018.

Pemex's ethane production from wet gas processing – which is essential to meet contractual obligations with Braskem Idesa's Etileno XXI – slid further in June to 74,000 b/d from 77,000 b/d in May from an annual recovery to 81,000 b/d in February. But production has plunged over the past decade from 117,000 b/d, which has led the state-owned company to raise imports.

Dry gas processing increased in June to 2.238 Bcf/d from 2.19 Bcf/d in May, but is still down from 2.46 Bcf/d in June 2018.

### US Senate panel seeks higher highway fund

Leaders of a key Senate panel want to pass what would be the largest highway bill in the nation's history, a measure that would authorize spending up to \$287bn over five years.

Now lawmakers just have to figure out how to pay for it.

The bill, unveiled today, would authorize 27pc more federal spending from fiscal 2021-25 than lawmakers approved under the current five-year highway bill, dubbed the Fast Act.

The proposed legislation would authorize about \$259bn to maintain roads and bridges. The remaining funds would help pay

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for programs such as alternative fueling infrastructure, congestion relief and programs to reduce greenhouse gas emissions.

The Senate Environment and Public Works Committee plans to start debating the 467-page bill tomorrow. The committee's chairman John Barrasso (R-Wyoming) and ranking member Tom Carper (D-Delaware) have agreed to find ways to pay for the bill but have not yet said how.

"Infrastructure is critical to our country and we should responsibly pay for this legislation," Barrasso said.

The US Congress in its latest transportation bill in 2015 had to provide \$70bn in funds to offset projected shortfalls in the US Highway Trust Fund. The gap is projected to grow to \$74.5bn by the end of fiscal 2025 at existing spending levels, unless lawmakers approve more transfers or agree to raise fuel taxes for the first time in more than 25 years.

President Donald Trump last year privately told lawmakers he would support raising fuel taxes to help pay for a \$1 trillion infrastructure bill. But that initiative appears to have almost no chance of advancing, which has shifted congressional efforts to pass a highway bill before the existing one expires in about a year.

The transportation bill includes a first-ever climate title. That title includes \$1bn for infrastructure for fueling electric, hydrogen and gas vehicles; \$3.5bn in grants to help states reduce greenhouse gas emissions from vehicles; \$1bn for congestion relief; and \$370mn to reduce truck emissions at ports.

The bill would also exempt oil and gas gathering lines that cross federal land from reviews under the National Environmental Policy Act, so long as they meet conditions such as reducing methane flaring and trucking traffic. It also would codify a streamlined process for highway projects that seeks to finish federal environmental reviews within two years.

### Service firms see further N America slowdown

Leading oil service companies are bracing for a further decline in North American activity as many producers need higher crude prices to expand operations.

Capital efficiency gains have stalled and may weaken through 2020, ratings agency Moody's says. Service costs have eased since late 2018 because of a declining rig count and excess capacity, but some expenses are still trending higher, including labour and steel, as well as the cost of acquiring leases. Exploration and production companies need WTI prices of at least \$60/bl for further improvements in returns on the capital deployed, Moody's says.

This muted outlook for a sector that has been a mainstay for the services industry over the past four years has prompted leading provider Schlumberger to sharpen its focus on technology solutions to meet the shale industry's cost challenges. Its appointment of a new chief executive, Olivier Le Peuch – whose previous roles included heading the firm's integrated software solutions business – comes as the firm beefs up technology offerings to improve surface and reservoir efficiency as majors and large independents scale up their shale businesses. Le Peuch will replace Paal Kibsgaard when he retires on 1 August.

Schlumberger is not alone. Offering the latest technology to boost efficiency has taken centre stage at service firms as producers push to drive down costs and improve returns. Halliburton, the biggest service provider in North America, has had a tie-up with Microsoft since 2017 to use cloud computing to deepen its learning on reservoirs, modelling and simulation, and enable real-time data streaming to optimise drilling and production. US conglomerate GE in 2016 combined its oil and gas business with service firm Baker Hughes to provide a range of services, from physical equipment to data processing.

Boosting efficiency through technology may take on added urgency, as Schlumberger forecasts a 10pc decline in exploration and production spending by North American producers this year. Some operators may scale back completion programmes, while others are expected to drop rigs and work through their inventories of drilled but uncompleted wells.

Schlumberger is preparing to stack equipment as it expects a drilling activity trough in the fourth quarter, followed by a possible rebound in the first, similar to a trend seen a year earlier. "We will be doing what is necessary to withstand this trough, but we are ready for it," Le Peuch says.

Like Schlumberger, Halliburton is preparing to stack equipment. The pressure pumping market remains oversupplied, and Halliburton says it is ready to reduce operations instead of chasing market share. This may affect revenue, but it will lead to stronger margins. The firm booked a \$247mn impairment charge in the second quarter. Of the total, \$108mn was on assets, while \$58mn was on severance cost as it lowered its headcount in the region by 8pc.

Halliburton's 2019 capital expenditure plan remains at \$1.6bn, 20pc lower than a year earlier, but spending in 2020 is expected to decline by another 20pc. The fall will be driven by North America, with the bulk of the investment going toward increasing efficiency and refurbishing equipment. "We see no

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reason to spend on growth when it comes at the expense of returns,” chief executive Jeff Miller says.

Schlumberger’s North America revenue declined by 11pc from a year earlier, to \$2.8bn in the second quarter, while international business revenue rose by 8pc to \$5.5bn, largely in line with expectations. Halliburton’s North America revenue fell to \$3.3bn from \$3.8bn a year earlier, with an international recovery helping soften some of the impact on total revenue.

### Samsung wins contract for Dos Bocas units

South Korea’s Samsung Engineering has been awarded a contract to build processing units at the 340,000 b/d Dos Bocas refinery that Mexican state-run oil company plans to build in Tabasco state.

Samsung received a letter of award from the Pemex Transformacion Industrial unit of Pemex to build diesel hydrotreating units and fluidized catalytic crackers at Dos Bocas, the South Korean company said in a public filing. The two projects are part of the first phase of development at the refinery and are valued at 100.2bn won (\$84.6mn) and W68.2bn, respectively.

The letter of award marks a step forward for the controversial \$8bn Dos Bocas project, which critics such as US independent refiner Valero Energy have called uneconomic, but Samsung’s contract will have to be finalized with Pemex before work can go forward. The ability of Mexico’s government to finance the project also is in question, as Pemex has been unable to complete refinery upgrades, such as a \$4.26bn project at its 315,000 b/d Tula refinery that has been stalled for years with a new coker unit partially complete.

Samsung itself has felt the effects of Pemex’s financing struggles. The firm’s \$550mn contract to upgrade Pemex’s Salamanca refinery in Guanajuato state has been delayed at least five times since October 2016. The latest suspension will keep Samsung’s work from going forward at Salamanca through at least 23 December.

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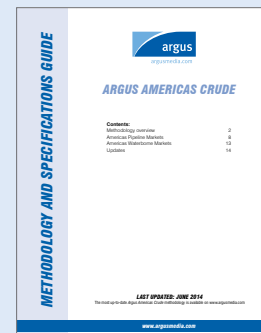
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## Petroleum

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