Par Pacific

INVESTOR PRESENTATION | NOVEMBER 2021

Forward-Looking Statements / Disclaimers

The information contained in this presentation has been prepared to assist you in making your own evaluation of the company and does not purport to contain all of the information you may consider important. Any estimates or projections with respect to future performance have been provided to assist you in your evaluation, but should not be relied upon as an accurate representation of future results. Certain statements, estimates and financial information contained in this presentation constitute forward-looking statements.

Such forward-looking statements involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from the results implied or expressed in such forward-looking statements. While presented with numerical specificity, certain forward-looking statements are based (1) upon assumptions that are inherently subject to significant business, economic, regulatory, environmental, seasonal and competitive uncertainties, contingencies and risks including, without limitation, our ability to maintain adequate liquidity, our ability to realize the potential benefit of our net operating loss tax carryforwards, our ability to obtain sufficient debt and equity financing, our capital costs and operating costs, anticipated commodity pricing, differentials or crack spreads, anticipated or projected pricing information related to oil, NGLs, and natural gas, our ability to realize the potential benefits of our supply and offtake agreements, assumptions related to our investment in Laramie Energy, LLC, Laramie Energy, LLC's financial and operational performance and plans, including estimated production growth and Adjusted EBITDAX, our ability to meet environmental and regulatory requirements, our ability to increase refinery throughput and profitability, estimated production, our ability to evaluate and pursue strategic and growth opportunities, our estimates of anticipated Adjusted EBITDA, Adjusted Net income per share, and Adjusted earnings per share, the amount and scope of anticipated capital expenditures and turnaround activities, expectations related to our Washington renewable fuels project, other maintenance and growth capital projects, our retail store conversion, anticipated 10 year and next 12 months turnaround schedule and expenditures, including costs, timing, and benefits, anticipated throughput, production costs, on-island and export sales expectations in Hawaii, anticipated throughput and distillate yield expectations in Wyoming, our estimates related to the annual gross margin impact of changes in RINs prices, our expectations regarding RINs prices and related small refinery exemptions, estimates related to the impact of COVID-19 on our business, results of operations, financial position, and liquidity, as well as our expectations related to our reduction in capital and operating expenditures and the idling of certain refining units at our Par West facility in Kapolei, Hawaii, expectations related to anticipated cost savings, estimated impact on annual free cash flow of key drivers, expectations regarding Par Pacific's posted market indices and the other metrics we utilize, (including free cash flow, Adjusted EBITDA, Adjusted Net income per share, and Adjusted earnings per share), and other known and unknown risks (all of which are difficult to predict and many of which are beyond the company's control), some of which are further discussed in the company's periodic and other filings with the SEC and (2) upon assumptions with respect to future business decisions that are subject to change.

There can be no assurance that the results implied or expressed in such forward-looking statements or the underlying assumptions will be realized and that actual results of operations or future events will not be materially different from the results implied or expressed in such forward-looking statements. Under no circumstances should the inclusion of the forward-looking statements be regarded as a representation, undertaking, warranty or prediction by the company or any other person with respect to the accuracy thereof or the accuracy of the underlying assumptions, or that the company will achieve or is likely to achieve any particular results. The forward-looking statements are made as of the date hereof and the company disclaims any intent or obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable law. Recipients are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, recipients are expressly cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

This presentation contains non-GAAP financial measures, such as Adjusted EBITDA, Adjusted Net Income (loss), and Laramie Energy Adjusted EBITDAX. Please see the Appendix for the definitions and reconciliations to GAAP of the non-GAAP financial measures that are based on reconcilable historical information.

Company Highlights

- Owner & operator of essential energy infrastructure in PADD IV and V markets
- 154,000 bpd operating petroleum refining capacity
- Multimodal integrated logistics network with 9 MMbbls of storage, and marine, rail and pipeline assets
- Recently completed logistics system in Tacoma includes unit train and terminaling capabilities for renewable fuels and feedstocks
- 120 fuel retail locations in Hawaii and the Pacific Northwest
- 46% ownership interest in Laramie Energy, a natural gas E&P company
- $1.7 billion in federal tax attributes as of December 31, 2020

Disciplined Focus on Increasing Adjusted EPS and Free Cash Flow

Integrated Downstream Network

Diversified portfolio of downstream systems in attractive markets

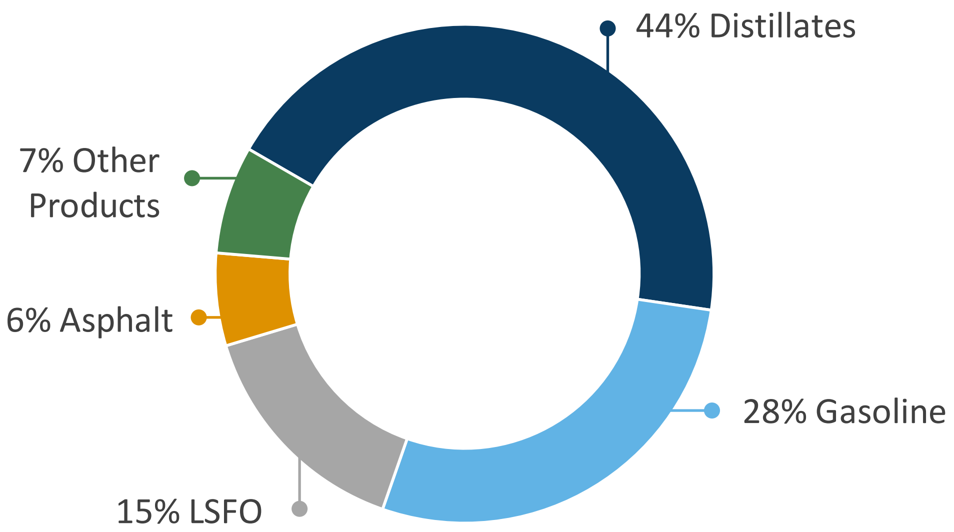
Refining Overview

Refining Segment Highlights

- Focus on process safety, environmental compliance and operational reliability
- 154,000 bpd operating petroleum refining capacity
- Distillate-oriented yield profile
- Throughput and yield optimized to serve local market needs

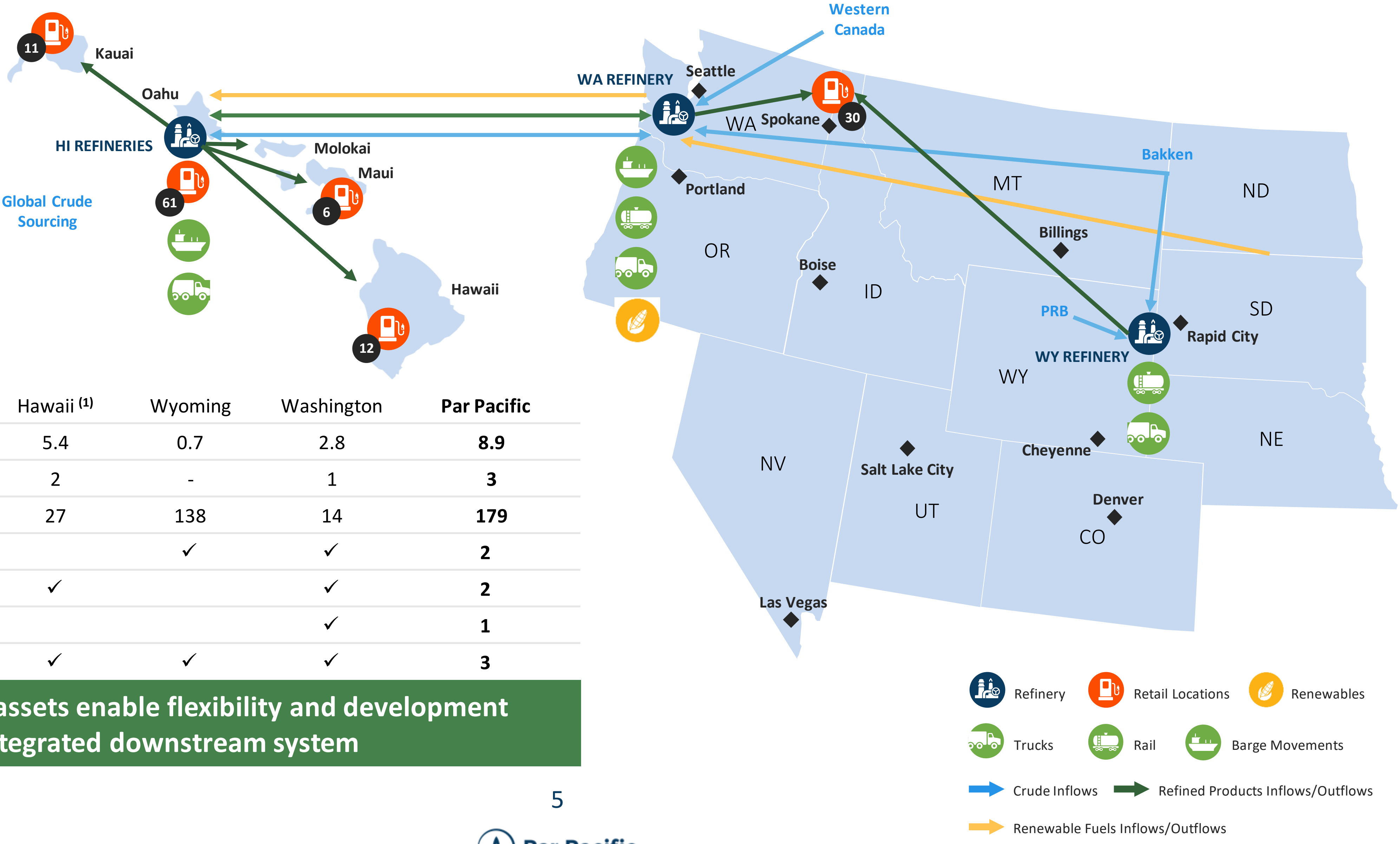
Refinery Crude Capacity [1]	Mbpd
Hawaii East	94
Washington	42
Wyoming	18
Par Pacific System	**154**

Q3 YTD 2021 Combined Product Yield



[1] *As of March 24, 2020, certain refining units at Par Hawaii West have been idled in response to reduced refined product demand in Hawaii resulting from COVID-19.*

Multimodal Logistics System



Asset Detail

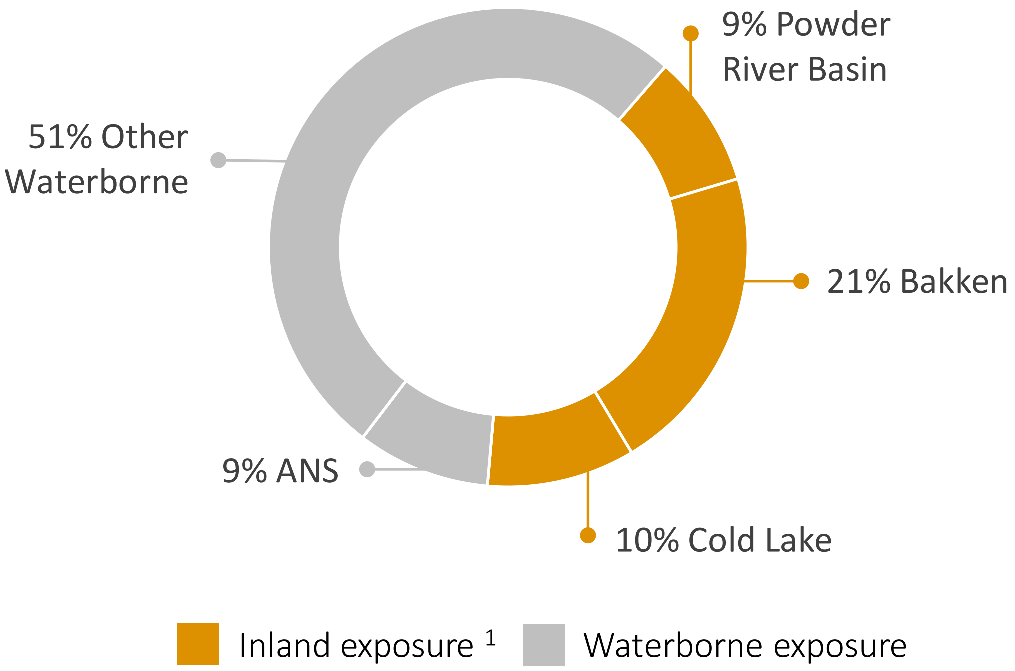
	Hawaii [1]	Wyoming	Washington	**Par Pacific**
Storage Capacity (MMBbls)	5.4	0.7	2.8	**8.9**
Marine Assets [2]	2	-	1	**3**
Miles of Pipeline	27	138	14	**179**
Rail Facility		✓	✓	**2**
Marine Terminal	✓		✓	**2**
Renewables System			✓	**1**
Truck Rack	✓	✓	✓	**3**

Diverse logistics assets enable flexibility and development of integrated downstream system

[1] *Owned storage capacity.*
[2] *Leased marine barges and ships.*

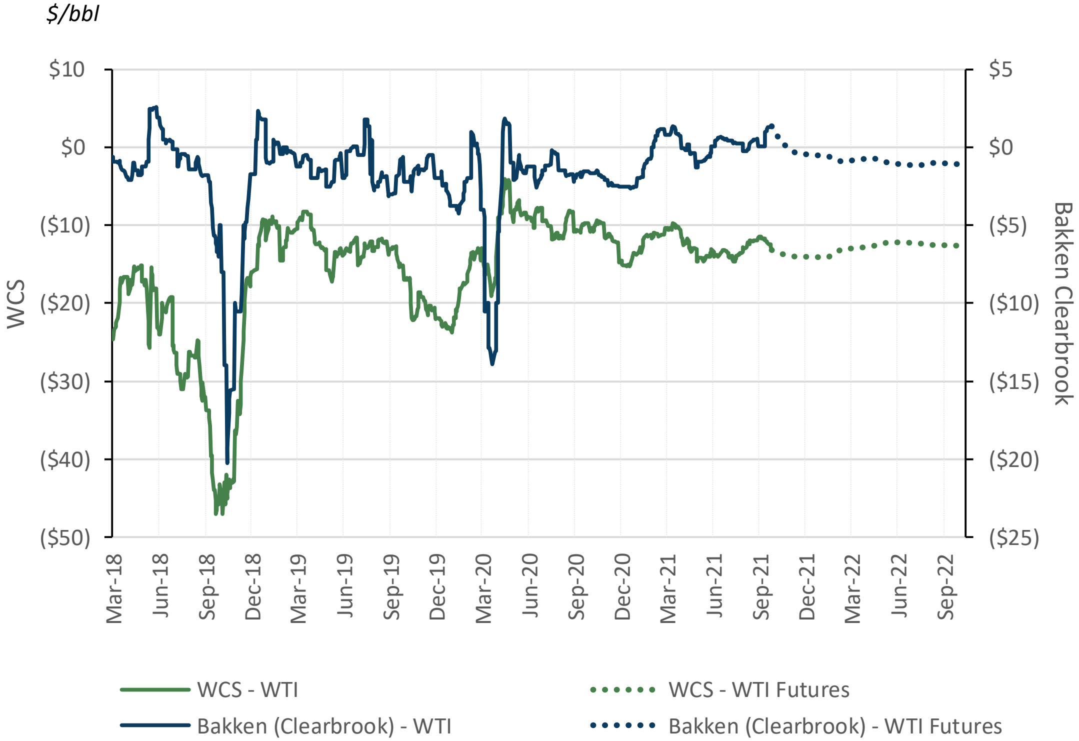
Crude Sourcing

Q3 YTD 2021 Inland vs. Waterborne Crude Exposure



- Access to discounted Western Canadian, Powder River Basin, and Bakken crudes

WCS and Bakken (Clearbrook) Diffs



$/bbl	WCS - WTI	Bakken (Clearbrook) - WTI
Q3 2021	$(12.98)	$0.25
12-Mo Future Avg	$(13.03)	$(0.74)

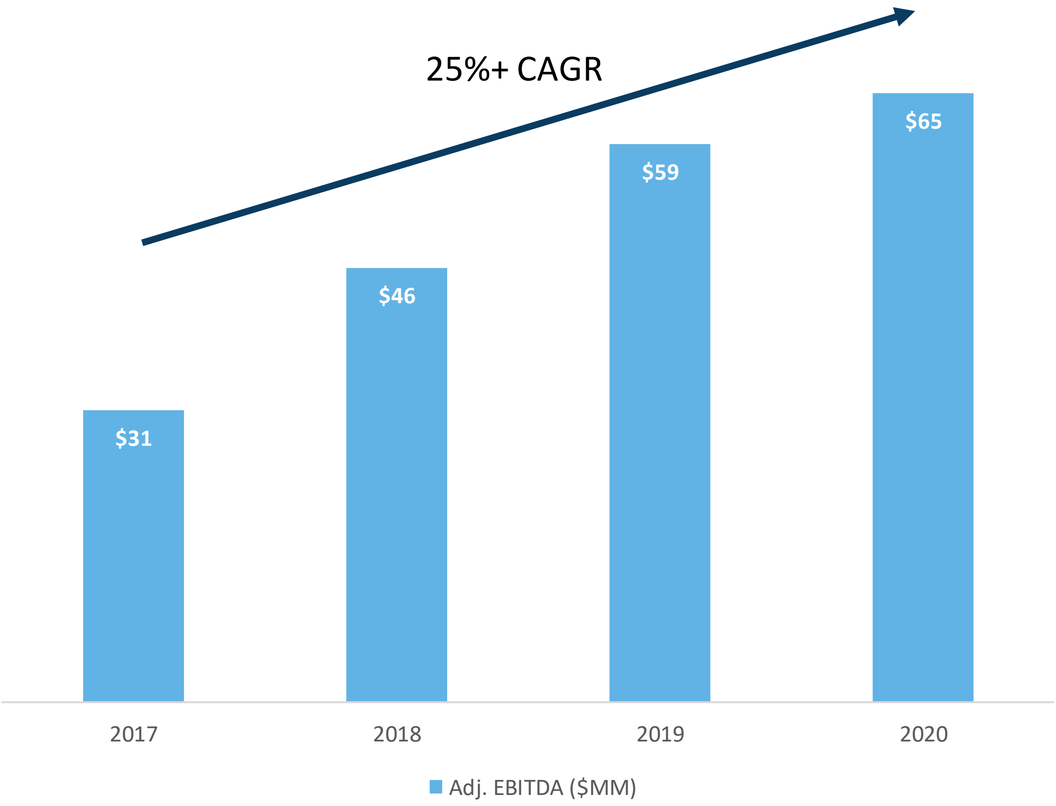
Source: CME & Platts historical data, CalRock forward data (avg. forward prices from 9/17/21 to 10/14/21). 12-month future averages reflect Nov-21 to Nov-22 forward data.

[1] *Q1 2021 inland crude exposure reflects the Washington turnaround.*

Retail Highlights

- 120 fuel retail locations in Hawaii and the Northwest U.S.
- Hele acclaimed as leading Hawaii brand [1] after 2017 launch
- Northwest US store conversion to 'nomnom' completed at the end of Q1 2021
- 64 company-operated convenience stores branded 'nomnom'
- High market share in each region
- 25%+ annual EBITDA growth rate from 2017 to 2020
- Closed sale-leaseback of 22 retail properties in Hawaii for approximately $116 million in Q1 2021

Retail Adjusted EBITDA



1. Named Hawaii's best gas station in 2019-2020 by Star Advertiser, Best Gas Station / Convenience store in 2020 by Honolulu Magazine, Best Gas Station by KITV-4 Island News, National 2019 Top 15 Fuel and Convenience Brand by Gas Buddy.

Leading Retail Position in Attractive Markets

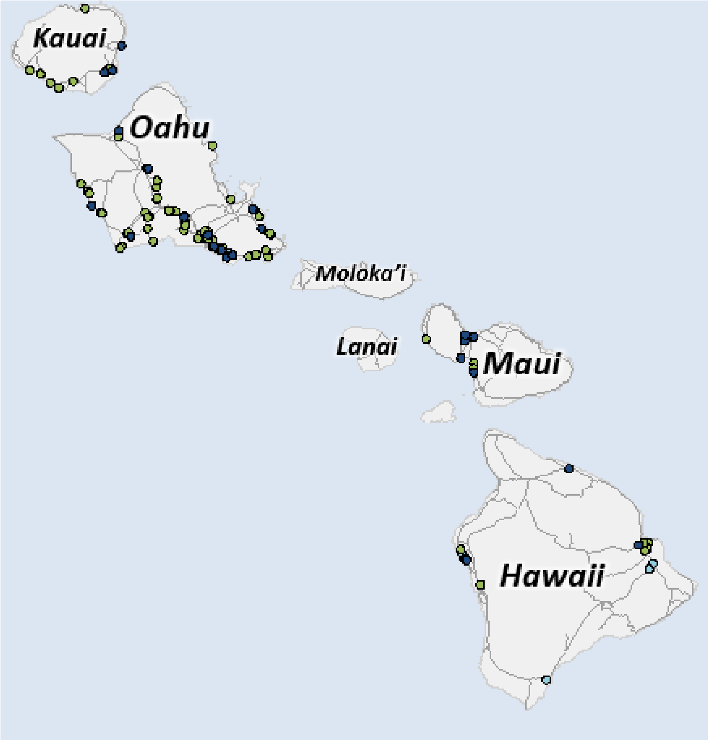
Hawaii Retail

- 90 locations across four islands
- 34 company-operated convenience stores
- High real estate costs, scarcity of land, and logistics complexity strengthen competitive position

Northwest Retail

- 30 company-operated locations in Washington and Idaho
- Attractive fuel supply opportunities enhancing margins
- Expanding merchandising assortment and food offering in conjunction with rebranding

Hawaii Retail Sites



Northwest Retail Sites

Retail Growth Story

2013 – 2015

Establish Hawaii Platform

- Acquisition of downstream assets from Tesoro, including 31 retail sites
- Expanded footprint with 80 fuel retail sites[1] upon acquisition of Mid-Pac Petroleum

2016 – Early 2018

Transition to New Retail Brands

- Successfully launched two brands in Hawaii – highly recognized in marketplace today
- Hele (43 sites) – a proprietary, local value-oriented fuel brand
- ‘*nomnom*’ (34 sites) – a c-store brand known for convenience and cleanliness

Early 2018 – 2020

Expansion into Pacific Northwest

- Acquisition of 33 Cenex/Zip Trip branded retail sites in Washington and Idaho
- Began roll-out of expanded food service concept in Northwest stores to drive traffic
- Explored fuel and store rebranding opportunity

2021

Additional Growth Opportunities

- Conversion of Northwest US locations to ‘nomnom’ brand
- Leverage brand to expand merchandise offering
- Conversion opens fuel supply optionality and enhances fuel margins
- Developing store expansion strategy for existing Hawaii locations

[1] *Includes dealer and reseller fuel locations, which are not included in Retail segment profits.*

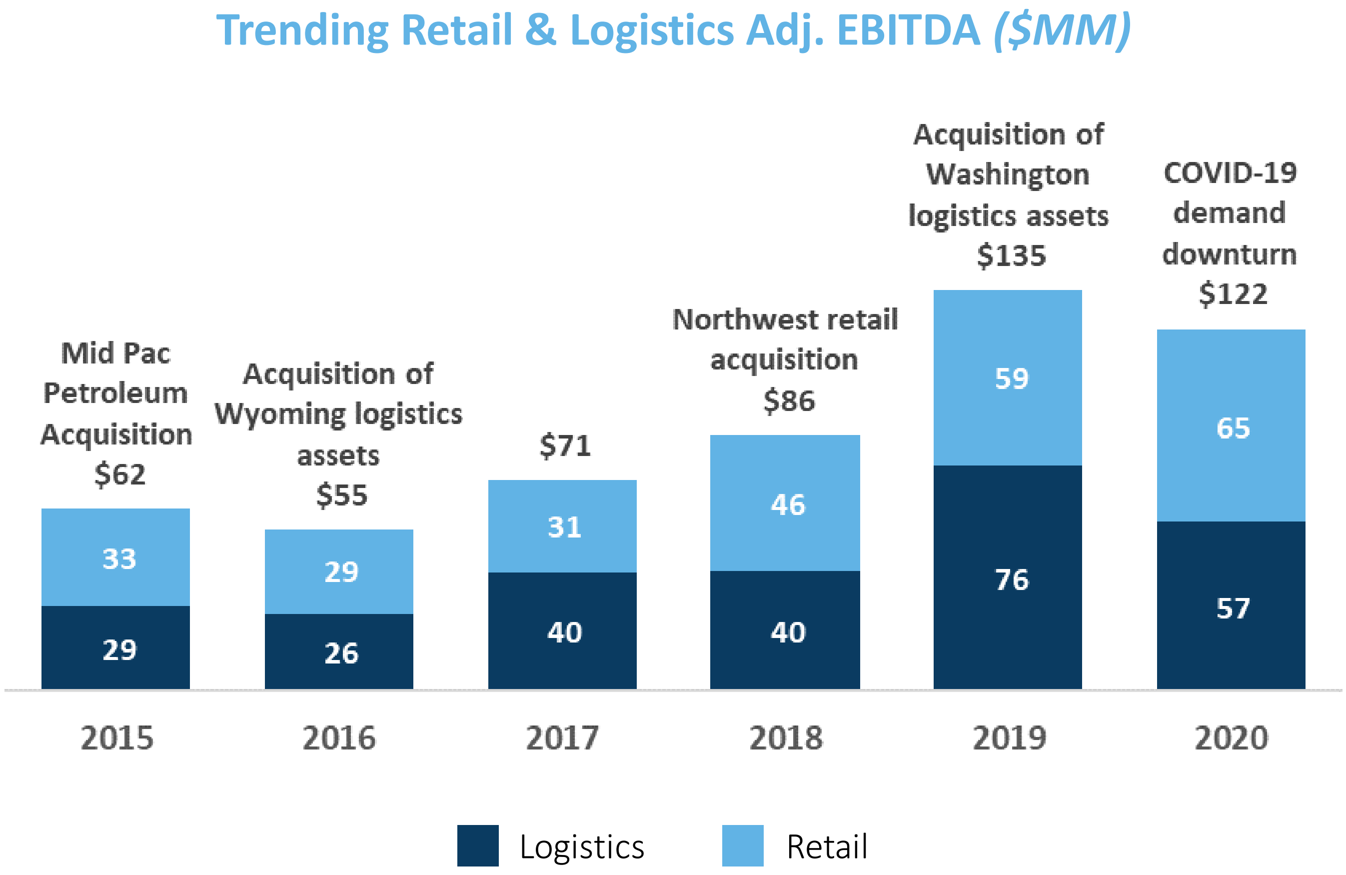
Financial Metrics

	Full Year 2018	Full Year 2019	Full Year 2020	Q3-21 LTM
Adjusted EBITDA *($ millions)*				
Refining	$92	$167	$(168)	$(70)
Logistics	40	76	57	64
Retail	46	59	65	53
Corporate & Other	(46)	(44)	(40)	(46)
Adjusted EBITDA	$132	$259	$(87)	$1
Diluted Adjusted Net Income (Loss) per Share	$1.06	$1.77	$(4.69)	$(2.87)

	As of Sep 30, 2021
Share Price [1]	$15.73
Enterprise Value [1]	$1,329
Net Debt	$382
Liquidity	$277

Note: Adjusted EBITDA totals may not foot due to rounding.
[1] Equity value of approximately $947 MM reflects share price of $15.73 and outstanding share count of approximately 60.2 MM as of October 28, 2021.

Strong Contribution from Retail and Logistics Segments



Totals may not foot due to rounding.

Capital Expenditure and Turnaround Summary

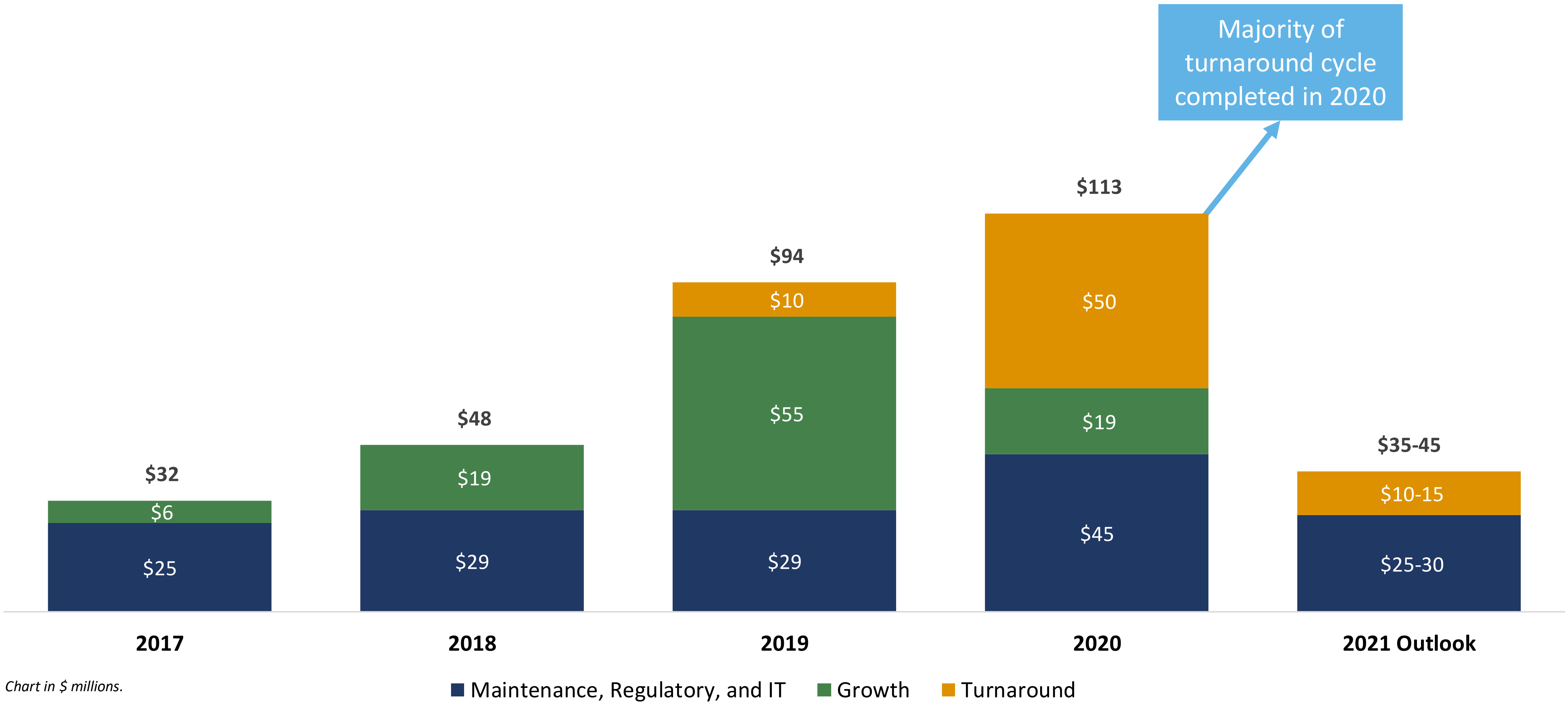


Chart in $ millions.

Turnaround Schedule

2019 · 2020 · 2021 · 2022 · 2023 · 2024 · 2025

Q3-20
Par East
Turnaround
$35 MM
3-4 year cycle

Q4-20
Wyoming
Turnaround
$15 MM
4-5 year cycle

Q1-21
Washington
Turnaround Phase I
$7 MM [1]

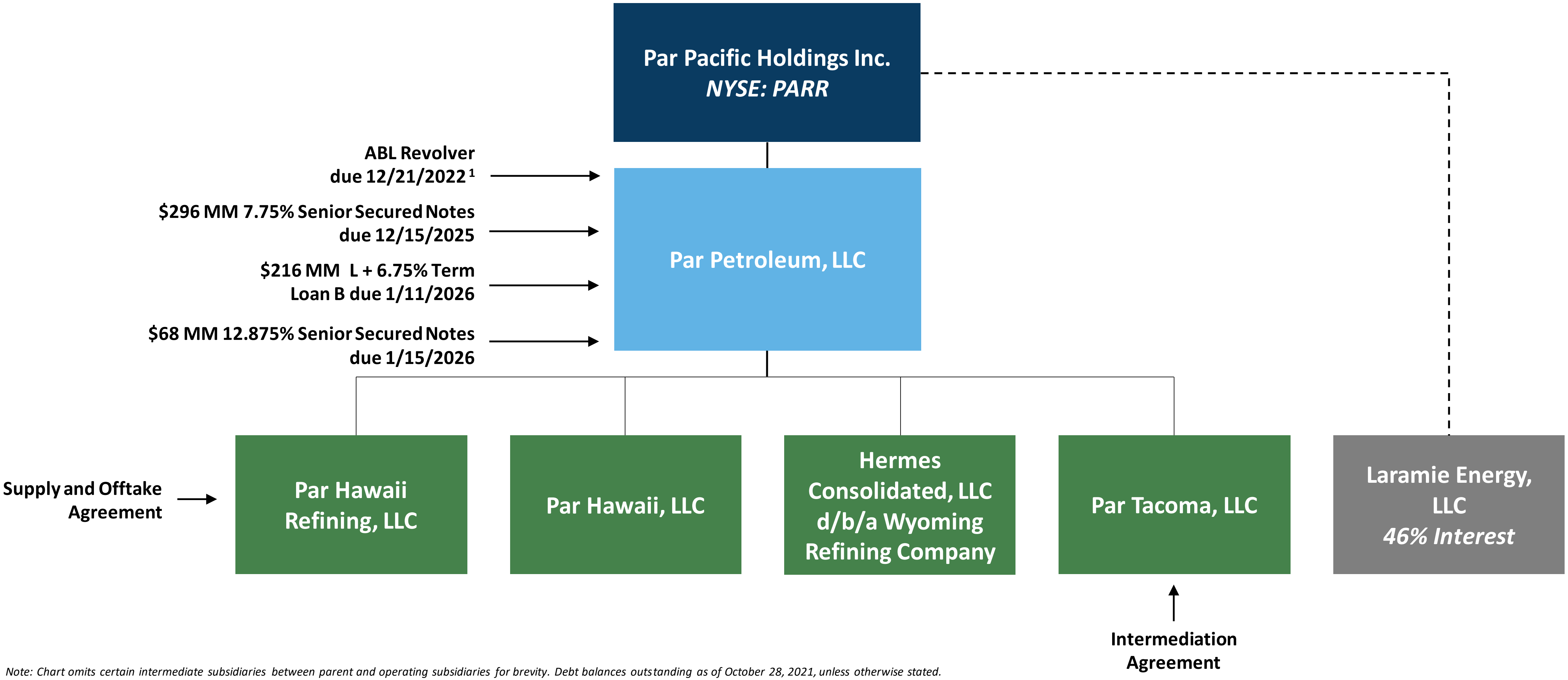
Q1-22
Washington
Turnaround Phase II
$30-35 MM
3-4 year cycle

No anticipated major turnarounds

Our 10 year estimated turnaround outlay is $180-200 million

[1] *Includes Q4 2020 pre-spend related to Washington Turnaround Phase I.*

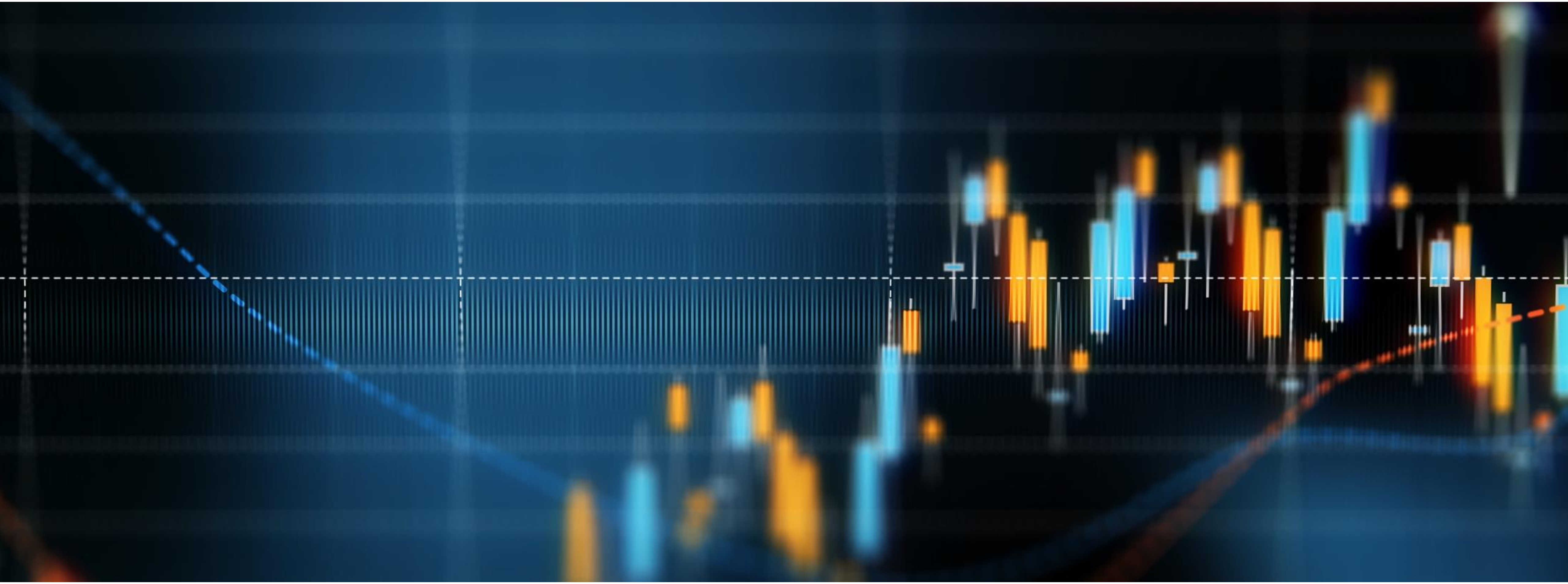
Corporate Structure



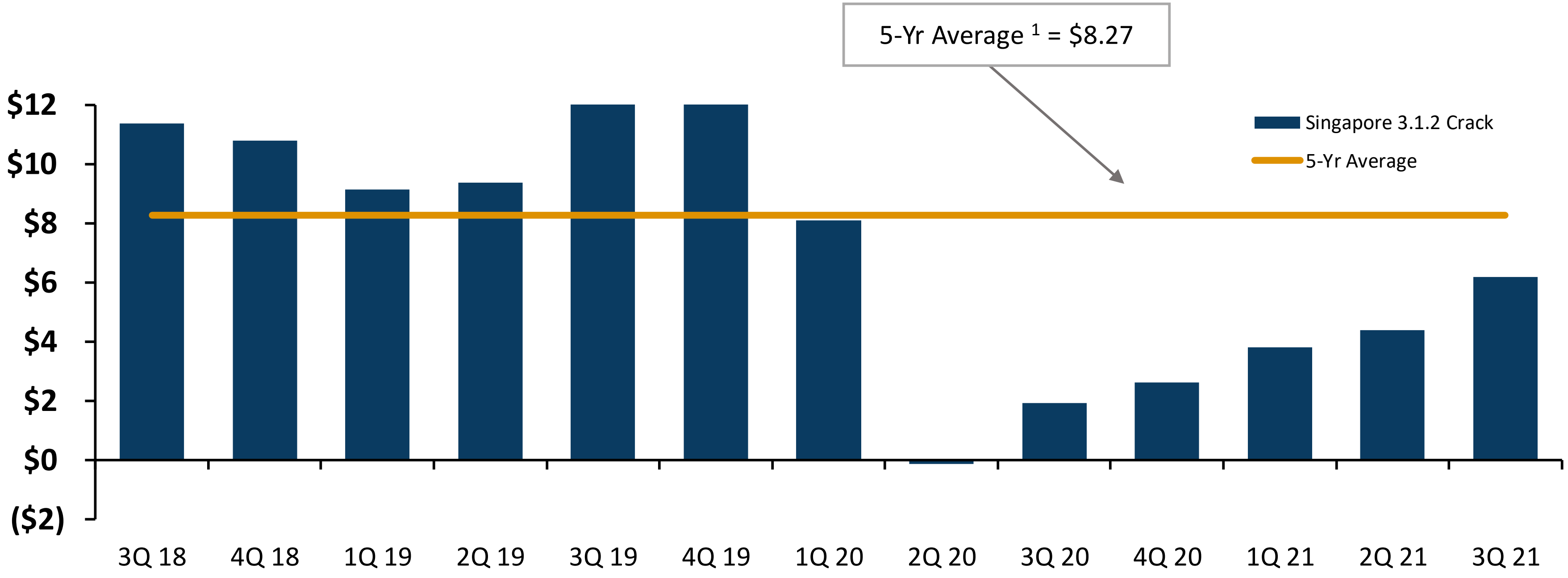
Note: Chart omits certain intermediate subsidiaries between parent and operating subsidiaries for brevity. Debt balances outstanding as of October 28, 2021, unless otherwise stated.

1. *$85 mm ABL Revolver with availability of $58 mm as of September 30, 2021. Co-borrowers are Par Petroleum, LLC, a Delaware limited liability company, Par Hawaii, LLC, a Delaware limited liability company, Hermes Consolidated, LLC (d/b/a Wyoming Refining Company), a Delaware limited liability company, and Wyoming Pipeline Company LLC, a Wyoming limited liability company.*

Appendix



Singapore 3.1.2 Crack Spread

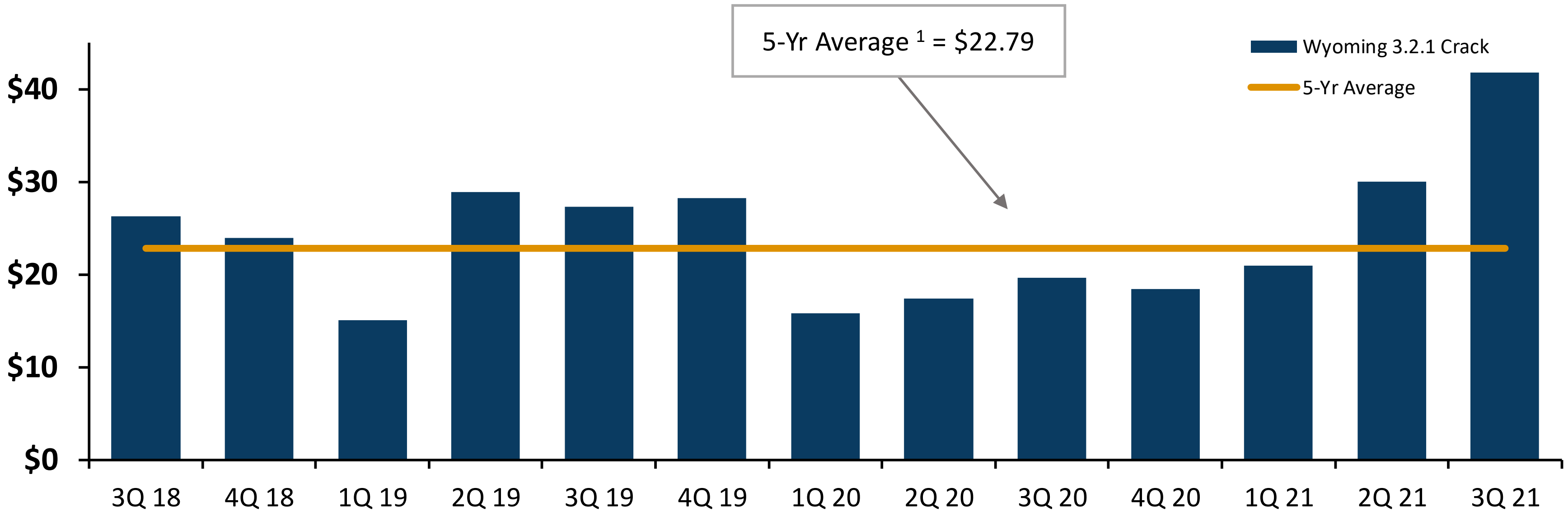


($/bbl)	3Q 18	4Q 18	1Q 19	2Q 19	3Q 19	4Q 19	1Q 20	2Q 20	3Q 20	4Q 20	1Q 21	2Q 21	3Q 21
Singapore 3.1.2 Crack	$11.39	$10.79	$9.15	$9.39	$12.41	$12.12	$8.11	-$0.14	$1.92	$2.63	$3.80	$4.38	$6.20
Average Brent Price	$75.93	$68.60	$63.83	$68.47	$62.03	$62.42	$50.82	$33.39	$43.34	$45.26	$61.32	$69.08	$73.23

[1] Company calculation based on a rolling five-year quarterly average

Singapore 3-1-2 Daily: computed by taking 1 part gasoline (RON 92) and 2 parts middle distillates (Sing Jet & Sing Gasoil) as created from a barrel of Brent Crude.
Month (CMA): computed using all available pricing days for each marker.
Quarter/Year: computed using calendar day weighted CMAs for each marker.

Wyoming 3.2.1 Crack Spread

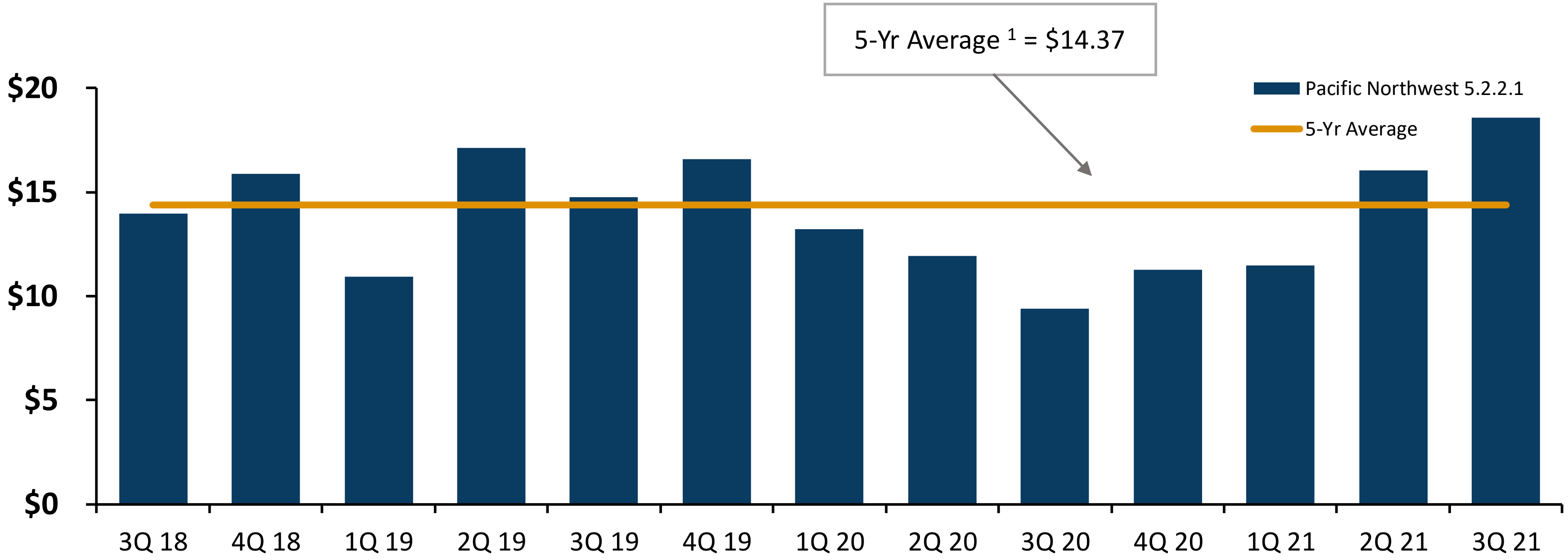


($/bbl)													
Wyoming 3.2.1 Crack	$26.25	$23.97	$15.09	$28.89	$27.32	$28.26	$15.86	$17.39	$19.63	$18.45	$20.97	$30.04	$41.78
Average WTI Price	$69.43	$59.34	$54.90	$59.91	$56.44	$56.87	$45.98	$28.00	$40.92	$42.70	$58.14	$66.17	$70.52

[1] Company calculation based on a rolling five-year quarterly average

Rapid City Daily: Computed by taking 2 parts gasoline and 1 part distillate (ULSD) as created from three barrels of West Texas Intermediate Crude (WTI).
Denver Daily: Computed by taking 2 parts gasoline and 1 part distillate (ULSD) as created from three barrels of WTI.
Wyoming 3-2-1 Daily: computed using a weighted average of 50% Rapid City and 50% Denver.
Month (CMA): computed using all available pricing days for each marker.
Quarter/Year: computed using calendar day weighted CMAs for each marker.

Pacific Northwest 5.2.2.1 Crack Spread



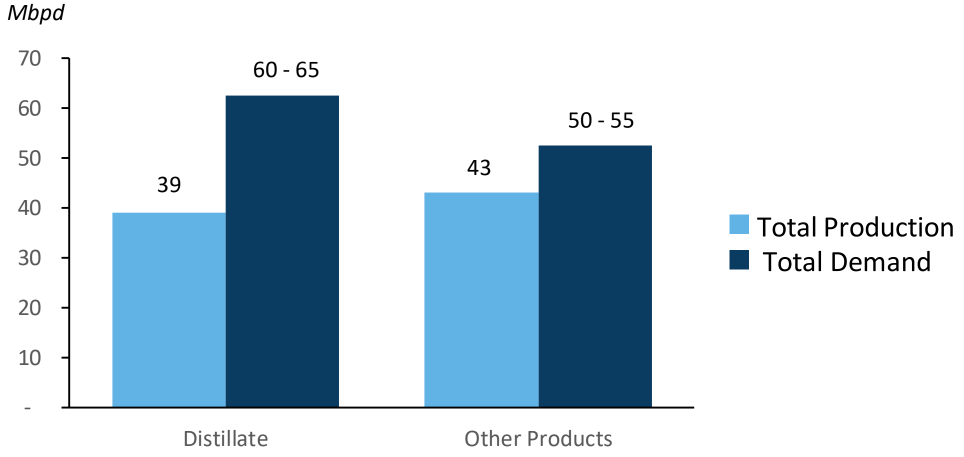
($/bbl)	3Q 18	4Q 18	1Q 19	2Q 19	3Q 19	4Q 19	1Q 20	2Q 20	3Q 20	4Q 20	1Q 21	2Q 21	3Q 21
Pacific Northwest 5.2.2.1	$13.98	$15.88	$10.93	$17.14	$14.76	$16.58	$13.24	$11.92	$9.39	$11.26	$11.46	$16.05	$18.59
Average ANS Price	$75.83	$69.09	$64.15	$69.40	$63.63	$65.51	$52.27	$28.17	$43.11	$43.68	$61.65	$69.44	$73.83

[1] Company calculation based on a rolling five-year quarterly average.

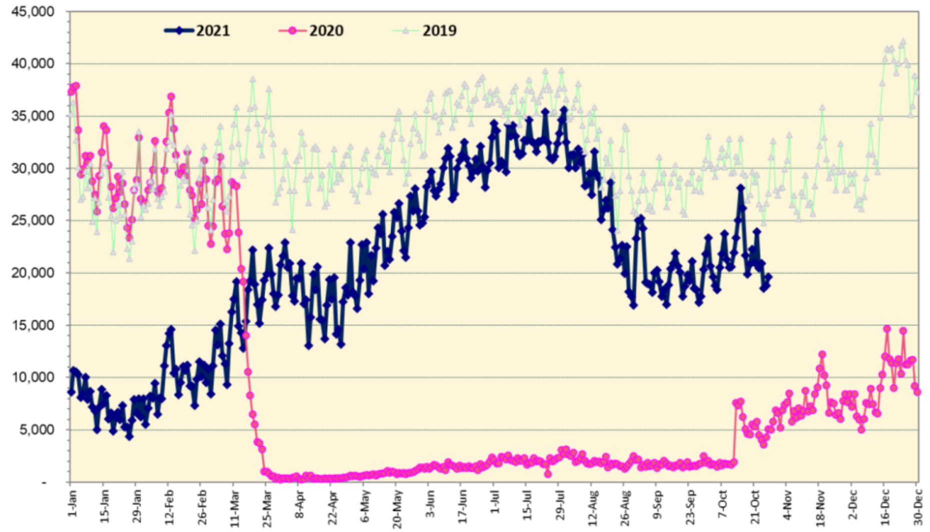
Pacific Northwest 5-2-2-1 Daily: computed by taking 2 parts gasoline (PNW Suboctane), 2 parts middle distillates (PNW ULSD & PNW Jet), and 1 part fuel oil (SF 180 Waterborne) as created from a barrel of Alaskan North Slope Crude.
ANS price: calculated using the Argus ANS-Brent differential beginning in July 2017. Prior to July 2017, a blended Platts and Argus ANS-WTI differential was used.
Month (CMA): computed using all available pricing days for each marker.
Quarter/Year: computed using calendar day weighted CMAs for each marker.

Hawaii Market Fundamentals

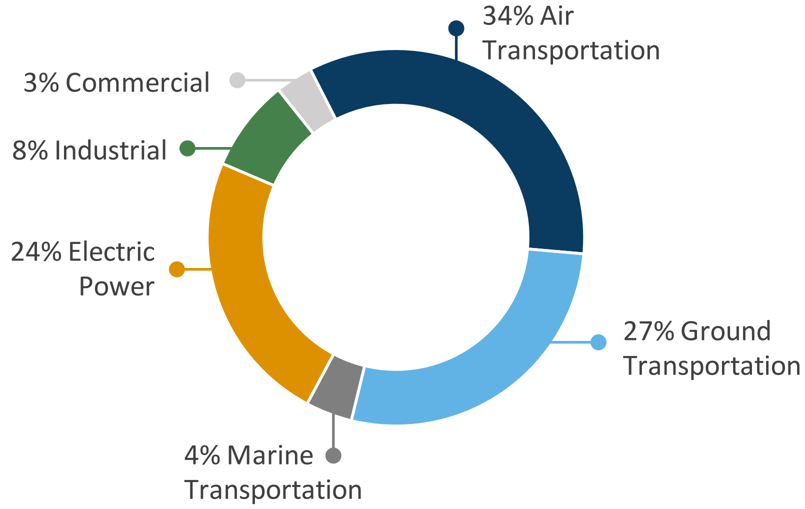
Demand Recovery Volume Balances [1]



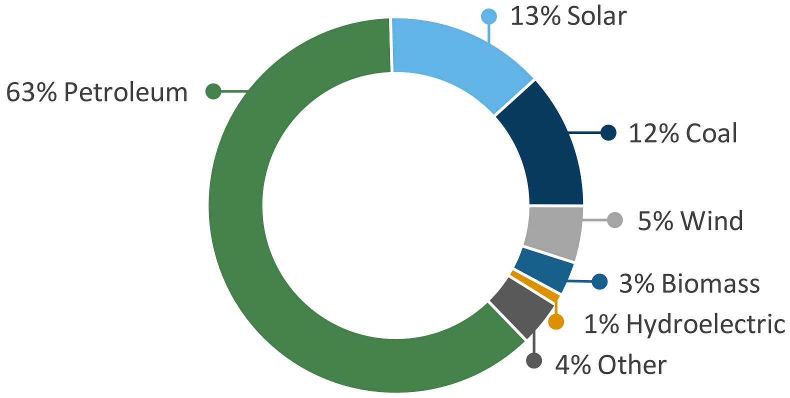
Total Passenger Count [3]



Petroleum Use (2018) [2]



Electricity Production by Source (2019) [2, 4]



[1] Source: Par Pacific internal estimates for the period Apr. 1 - Dec. 31, 2021, assuming Par East throughput of 85 Mbpd.
[2] Source: Hawaii State Energy Office | Hawai'i's Energy Facts & Figures, Nov. 2020. Totals may not foot due to rounding.
[3] Source: DBEDT passenger count data: http://dbedt.hawaii.gov/visitor/daily-passenger-counts/. Excludes flights from Canada.
[4] Includes EIA estimate for small scale solar of 10%.

Trended Capital Structure

	12/31/2017	12/31/2018	12/31/2019	12/31/2020	3/31/2021	6/30/2021	9/30/2021
Debt Balances ($ millions)							
7.75% Senior Secured Notes	$300	$300	$300	$300	$298	$298	$296
12.875% Senior Secured Notes	-	-	-	105	105	68	68
Term Loan B	-	-	241	228	225	222	219
Retail Loans	-	1	45	50	-	-	-
Total Secured Debt	300	301	586	683	628	588	583
5% Convertible Note	115	115	49	49	49	-	-
Total Debt	**415**	**416**	**635**	**732**	**677**	**588**	**583**
Cash	118	75	126	68	215	174	201
Net Debt	**$297**	**$341**	**$509**	**$664**	**$462**	**$414**	**$382**

Laramie Energy

Asset Highlights

- Par Pacific has a 46.0% ownership interest in Laramie Energy
- Par Pacific stated carrying value of Laramie is $0 as of March 2020
- Largely contiguous acreage position with ~190,000 net leasehold acres (~84% NRI) and ~20,000 net fee mineral acres in Western Colorado and 25,000 owned surface acres
- Laramie's Net Debt to Hedged Adjusted EBITDAX reduced from 4.4x at year-end 2020 to 1.0x at September 30, 2021
- Forecasted production is currently hedged 80% in 2022, 69% in 2023, and 61% in 2024

Key Performance Indicators [1]

	2018	2019	2020	Q3-21 LTM
Equivalent Production (Mmcfe/d)	203.9	212.8	164.3	134.2
Financial Performance ($MM)				
Hedged Adjusted EBITDAX	$101	$74	$41	$111
Capital Expenditures	137	65	3	1
Unrealized Derivative Gain (Loss)	(4)	4	(4)	(52)
Net Income (Loss)	6	(25)	(23)	3
Net Debt ($MM)				
Debt	$211	$201	$200	$152
Gross Debt / Hedged Adjusted EBITDAX	*2.1x*	*2.7x*	*4.9x*	*1.4x*
Net Debt	$210	$201	$179	$116
Net Debt / Hedged Adjusted EBITDAX	*2.1x*	*2.7x*	*4.4x*	*1.0x*
Preferred Equity	$40	$45	$52	$58

[1] *See slide 22 for non-GAAP reconciliations.*

Laramie Energy Adjusted EBITDAX

Laramie Energy Net Income (Loss) Reconciliation to Adjusted EBITDAX (1) ($ in thousands)

	Twelve Months Ended			
	12/31/2018	12/31/2019	12/31/2020	9/30/2021
Net income (loss)	$ 6,347	$ (380,474)	$ (22,589)	$ 2,520
Commodity derivative (gain) loss	13,571	1,193	2,201	57,220
Gain (loss) on settled derivative instruments	(9,509)	(5,476)	2,045	(5,578)
Interest expense	9,726	11,879	9,402	14,946
Gain on extinguishment of debt	-	-	-	(695)
Non-cash preferred dividend	4,689	4,115	6,810	7,258
Depreciation, depletion, amortization, and accretion	68,961	85,189	37,960	30,625
Impairment loss	-	355,220	-	-
Exploration and geological and geographical expense	351	330	275	398
Bonus accrual, net	554	(2,154)	436	40
Equity based compensation expense	3,248	122	16	-
(Gain) loss on disposal of assets	(809)	1,478	(102)	(341)
Pipeline deficiency accrual	(11)	(1,162)	-	-
Abandoned property and expired acreage	4,019	3,536	4,099	4,425
Total Adjusted EBITDAX	**$ 101,137**	**$ 73,796**	**$ 40,553**	**$ 110,818**

(1) Laramie Adjusted EBITDAX is defined as net income (loss) excluding commodity derivative (gains)/losses, losses on settled derivative instruments, interest expense, gain on extinguishment of debt, non-cash preferred dividends, depreciation, depletion, amortization, and accretion, impairment loss, exploration and geological and geographical expense, bonus (payment) accrual, net, equity-based compensation expense, loss (gain) on disposal of assets, pipeline (payment) deficiency accrual, and expired acreage (non-cash). We believe Adjusted EBITDAX is a useful supplemental financial measure to evaluate the economic and operational performance of exploration and production companies such as Laramie Energy. Adjusted EBITDAX presented by other companies may not be comparable to our presentation as other companies may define these terms differently.

Non-GAAP Financial Measures

Twelve Months Ended Consolidated Adjusted EBITDA and Adjusted Net Income Reconciliation (1)

($ in thousands)

	2018	2019	2020	Q3 2021
Net income (loss)	$ 39,427	$ 40,809	$ (409,086)	$ (221,301)
Adjustments to Net Income (loss):				
Inventory valuation adjustment	(16,875)	11,938	14,046	57,413
LIFO liquidation inventory adjustment loss	—	—	—	(6,211)
RINs loss (gain) in excess of net obligation	4,544	(3,398)	44,071	37,960
Unrealized loss (gain) on derivatives	(1,497)	8,988	(4,804)	7,323
Acquisition and integration costs	10,319	4,704	614	101
Debt extinguishment and commitment costs	4,224	11,587	—	8,144
Changes in valuation allowance and other deferred tax items (2)	(660)	(68,792)	(20,896)	191
Change in value of common stock warrants	(1,801)	3,199	(4,270)	—
Change in value of contingent consideration	10,500	—	—	—
Severance costs	—	—	512	342
Loss (gain) on sale of assets, net	—	—	—	(64,400)
Impairment expense	—	—	85,806	17,884
Impairments of Laramie Energy, LLC (3)	—	83,152	45,294	—
Par's share of Laramie Energy's unrealized loss (gain) on derivatives	1,158	(1,969)	(1,110)	—
Adjusted Net Income (loss)	49,339	90,218	(249,823)	(162,554)
Depreciation, depletion and amortization	52,642	86,121	90,036	93,850
Interest expense and financing costs, net	39,768	74,839	70,222	68,322
Equity losses (earnings) from Laramie Energy, LLC, excluding Par's share of unrealized loss (gain) on derivatives and impairment losses	(10,622)	8,568	2,721	—
Income tax expense (benefit)	993	(897)	176	1,137
Adjusted EBITDA	**$ 132,120**	**$ 258,849**	**$ (86,668)**	**$ 755**

(1) We believe Adjusted Net Income (Loss) and Adjusted EBITDA are useful supplemental financial measures that allow investors to assess: (1) The financial performance of our assets without regard to financing methods, capital structure or historical cost basis, (2) The ability of our assets to generate cash to pay interest on our indebtedness, and (3) Our operating performance and return on invested capital as compared to other companies without regard to financing methods and capital structure. Adjusted Net Income (Loss) and Adjusted EBITDA should not be considered in isolation or as a substitute for operating income (loss), net income (loss), cash flows provided by operating, investing and financing activities, or other income or cash flow statement data prepared in accordance with GAAP. Adjusted Net Income (Loss) and Adjusted EBITDA presented by other companies may not be comparable to our presentation as other companies may define these terms differently. Beginning in the third quarter of 2020, Adjusted Net Income (Loss) excludes the LIFO layer liquidation impacts associated with our Washington inventory. There was no LIFO liquidation adjustment for the year ended December 31, 2020.

(2) Includes increases in (releases of) our valuation allowance associated with business combinations and changes in deferred tax assets and liabilities that are not offset by a change in the valuation allowance. These tax expenses (benefits) are included in Income tax benefit (expense) on our condensed consolidated statements of operations.

(3) Included in Equity losses from Laramie Energy, LLC on our condensed consolidated statements of operations.

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended September 30, 2021
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ (224,964)	$ 41,507	$ 87,287	$ (49,332)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	58,094	21,993	10,564	3,199
Inventory valuation adjustment	57,413	—	—	—
LIFO liquidation inventory adjustment loss	(6,211)	—	—	—
RINs loss in excess of net obligation	37,960	—	—	—
Unrealized loss (gain) on derivatives	7,323	—	—	—
Acquisition and integration costs	—	—	—	101
Severance costs	277	30	—	35
Loss (gain) on sale of assets, net	(19,595)	(19)	(44,786)	—
Impairment expense	17,884	—	—	—
Gain on curtailment of pension obligation	1,802	228	2	—
Other income/expense	—	—	—	(37)
Adjusted EBITDA	**$ (70,017)**	**$ 63,739**	**$ 53,067**	**$ (46,034)**

(1) Adjusted EBITDA by segment is defined as Operating income (loss) by segment excluding depreciation, depletion, and amortization expense, inventory valuation adjustment (which adjusts for timing differences to reflect the economics of our inventory financing agreements, including lower of cost or net realizable value adjustments, the impact of the embedded derivative repurchase or terminal obligations, contango (gains) and backwardation losses associated with our Washington inventory and intermediation obligation, and purchase price allocation adjustments), the LIFO layer liquidation impacts associated with our Washington inventory, RINs loss (gain) in excess of net obligation, unrealized loss (gain) on derivatives, acquisition and integration costs, severance costs, loss (gain) on sale of assets, and impairment expense. Adjusted EBITDA also includes Gain on curtailment of pension obligation and Other income (expense), net, which are presented below operating income (loss) on our condensed consolidated statements of operations. Adjusted EBITDA by segment presented by other companies may not be comparable to our presentation as other companies may define these terms differently.

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2020
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ (331,826)	$ 35,044	$ 24,211	$ (45,427)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	53,930	21,899	10,692	3,515
Impairment expense	55,989	—	29,817	—
Inventory valuation adjustment	14,046	—	—	—
RINs loss in excess of net obligation	44,071	—	—	—
Unrealized loss (gain) on derivatives	(4,804)	—	—	—
Acquisition and integration costs	—	—	—	614
Severance costs	312	8	—	192
Gain on curtailment of post-retirement medical plan obligation	—	—	—	—
Other income (expense), net	—	—	—	1,049
Adjusted EBITDA	**$ (168,282)**	**$ 56,951**	**$ 64,720**	**$ (40,057)**

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(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein. Beginning in the third quarter of 2020, Adjusted EBITDA by segment excludes the LIFO layer liquidation impacts associated with our Washington inventory. There was no LIFO liquidation adjustment for the twelve months ended December 31, 2020.

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2019
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ 93,781	$ 59,075	$ 49,245	$ (54,121)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	55,832	17,017	10,035	3,237
Impairment expense	—	—	—	—
Inventory valuation adjustment	11,938	—	—	—
RINs loss in excess of net obligation	(3,398)	—	—	—
Unrealized loss (gain) on derivatives	8,988	—	—	—
Acquisition and integration costs	—	—	—	4,704
Severance costs	—	—	—	—
Gain on curtailment of post-retirement medical plan obligation	—	—	—	—
Other income/expense	—	—	—	2,516
Adjusted EBITDA	**$ 167,141**	**$ 76,092**	**$ 59,280**	**$ (43,664)**

(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein.

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2018
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ 73,269	$ 33,389	$ 37,232	$ (61,949)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	32,483	6,860	8,962	4,337
Impairment expense	—	—	—	—
Inventory valuation adjustment	(16,875)	—	—	—
RINs loss in excess of net obligation	4,544	—	—	—
Unrealized loss (gain) on derivatives	(1,497)	—	—	—
Acquisition and integration costs	—	—	—	10,319
Severance costs	—	—	—	—
Gain on curtailment of post-retirement medical plan obligation (2)	—	—	—	—
Other income/expense	—	—	—	1,046
Adjusted EBITDA	**$ 91,924**	**$ 40,249**	**$ 46,194**	**$ (46,247)**

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(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein.
(2) Line item has been added to the Adjusted EBITDA presentation as part of the adoption of ASU 2017-07, *Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2017
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ 86,016	$ 33,993	$ 24,700	$ (50,748)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	29,753	6,166	6,338	3,732
Impairment expense	—	—	—	—
Inventory valuation adjustment	(1,461)	—	—	—
RINs loss in excess of net obligation	—	—	—	—
Unrealized loss (gain) on derivatives	(623)	—	—	—
Acquisition and integration costs	—	—	—	395
Severance costs	395	—	—	1,200
Gain on curtailment of post-retirement medical plan obligation (2)	—	—	—	—
Other income/expense	—	—	—	911
Adjusted EBITDA	**$ 114,080**	**$ 40,159**	**$ 31,038**	**$ (44,510)**

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(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein.
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Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2016
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ (10,934)	$ 21,422	$ 22,194	$ (52,331)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	17,565	4,679	6,372	3,001
Impairment expense	—	—	—	—
Inventory valuation adjustment	29,056	—	—	(3,955)
RINs loss in excess of net obligation	—	—	—	—
Unrealized loss (gain) on derivatives	(12,438)	—	—	404
Acquisition and integration costs	—	—	—	5,294
Severance costs	—	—	—	105
Gain on curtailment of pension obligation (2)	—	—	—	3,067
Other income/expense	—	—	—	(10)
Adjusted EBITDA	**$ 23,249**	**$ 26,101**	**$ 28,566**	**$ (44,425)**

(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein.
(2) Line item has been added to the Adjusted EBITDA presentation as part of the adoption of ASU 2017-07, *Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*

Non-GAAP Financial Measures

Consolidated Adjusted EBITDA by Segment Reconciliation (1)
For the twelve months ended December 31, 2015
($ in thousands)

	Refining	Logistics	Retail	Corporate and Other
Operating income (loss)	$ 66,756	$ 25,170	$ 27,149	$ (63,345)
Adjustments to operating income (loss):				
Depreciation, depletion and amortization	9,522	3,117	5,421	1,858
Impairment expense	—	—	—	9,639
Inventory valuation adjustment	5,178	—	—	1,511
RINs loss in excess of net obligation	—	—	—	—
Unrealized loss (gain) on derivatives	10,284	—	—	612
Acquisition and integration costs	—	—	—	2,006
Severance costs	—	—	—	637
Gain on curtailment of post-retirement medical plan obligation (2)	4,884	280	431	—
Other income/expense	—	—	—	(102)
Adjusted EBITDA	**$ 96,624**	**$ 28,567**	**$ 33,001**	**$ (47,184)**

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(1) Please read slide 24 for the definition of Adjusted EBITDA by segment used herein.

(2) Line item has been added to the Adjusted EBITDA presentation as part of the adoption of ASU 2017-07, *Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*

Non-GAAP Financial Measures

Diluted Adjusted Net Income per Share for the Twelve Months Ended
(in thousands, except per share amounts)

	2018	2019	2020	Q3 2021
Adjusted Net Income (Loss)	$ 49,339	$ 90,218	$ (249,823)	$ (162,554)
Undistributed Adjusted Net Income allocated to participating securities (1)	695	968	—	—
Adjusted Net Income attributable to common stockholders	48,644	89,250	(249,823)	(162,554)
Plus: effect of convertible securities	—	8,978	—	—
Numerator for diluted income per common share	$ 48,644	$ 98,228	$ (249,823)	$ (162,554)
Basic weighted-average common stock shares outstanding	45,726	50,352	53,295	56,622
Add dilutive effects of common stock equivalents (2)	29	5,240	—	—
Diluted weighted-average common stock shares outstanding	45,755	55,592	53,295	56,622
Basic Adjusted Net Income (Loss) per common share	$ 1.06	$ 1.77	$ (4.69)	$ (2.87)
Diluted Adjusted Net Income (Loss) per common share	$ 1.06	$ 1.77	$ (4.69)	$ (2.87)

(1) Participating securities include restricted stock that has been issued but had not yet vested. These shares vested during the year ended December 31, 2019.

(2) Entities with a net loss from continuing operations are prohibited from including potential common shares in the computation of diluted per share amounts. We have utilized the basic shares outstanding to calculate both basic and diluted Adjusted Net Loss per common share for the twelve months ended December 31, 2020 and September 30, 2021.