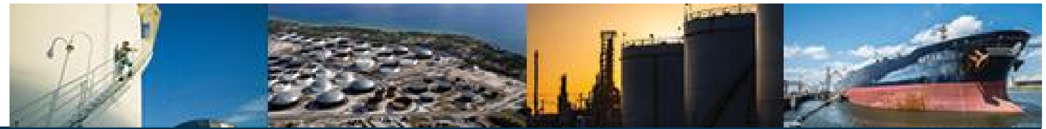
Investor Presentation

Houston, TX
April 9, 2019

BUCKEYE PARTNERS, L.P.

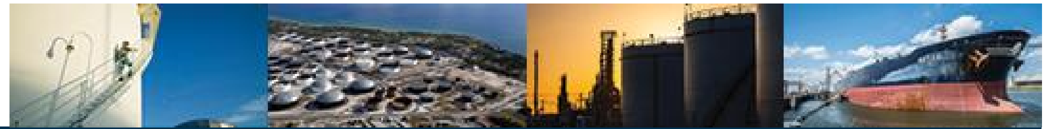
LEGAL NOTICE / FORWARD-LOOKING STATEMENTS



This presentation contains “forward-looking statements” that we believe to be reasonable as of the date of this presentation. These statements, which include any statement that does not relate strictly to historical facts, use terms such as “anticipate,” “assume,” “believe,” “estimate,” “expect,” “forecast,” “intend,” “plan,” “position,” “potential,” “predict,” “project,” or “strategy” or the negative connotation or other variations of such terms or other similar terminology. In particular, statements, expressed or implied, regarding future results of operations or ability to generate sales, income or cash flow, to make acquisitions, to complete divestitures, to achieve target coverage or leverage ratios or to make distributions to unitholders are forward-looking statements. These forward-looking statements are based on management’s current plans, expectations, estimates, assumptions and beliefs concerning future events impacting Buckeye Partners, L.P. (the “Partnership”, “Buckeye” or “BPL”) and therefore involve a number of risks and uncertainties, many of which are beyond management’s control. Although the Partnership believes that its expectations stated in this presentation are based on reasonable assumptions, actual results may differ materially from those expressed or implied in the forward-looking statements. The factors listed in the “Risk Factors” sections of, as well as any other cautionary language in, the Partnership’s public filings with the Securities and Exchange Commission, provide examples of risks, uncertainties and events that may cause the Partnership’s actual results to differ materially from the expectations it describes in its forward-looking statements. Each forward-looking statement speaks only as of the date of this presentation, and the Partnership undertakes no obligation to update or revise any forward-looking statement.

This presentation contains forward looking estimates of Adjusted EBITDA and cash flows related to the Asset Divestitures (as defined herein). We cannot provide a reconciliation of estimated Adjusted EBITDA or cash flows to estimated GAAP net income, which is the GAAP financial measure most directly comparable to each non-GAAP measure, without unreasonable efforts due to the inherent difficulty and impracticality of quantifying certain amounts that would be required to calculate projected GAAP net income, such as unrealized gains and losses on derivatives marked to market and potential changes in estimates for certain contingent liabilities. In addition, interest and debt expense are corporate-level expenses that are not allocated among Buckeye’s individual assets and could not be allocated to the operations of the divested assets without unreasonable effort. These amounts that would require unreasonable effort to quantify could be significant, such that the amount of projected GAAP net income would vary substantially from the amount of projected Adjusted EBITDA or cash flows.

ORGANIZATIONAL OVERVIEW



Buckeye owns and operates a diversified network of integrated assets providing midstream logistic solutions, and is committed to a strong balance sheet with an investment grade credit rating and financial flexibility to fund attractive growth opportunities without accessing public equity

Domestic Pipelines & Terminals[1]

One of the largest independent liquid petroleum products pipeline and terminal operators, with assets located primarily in the northeastern and upper midwestern portions of the United States

- ~6,000 miles of pipeline with over 100 delivery locations
- ~110 active liquid petroleum product terminals
- ~56 million barrels of liquid petroleum product tank capacity

Global Marine Terminals[1]

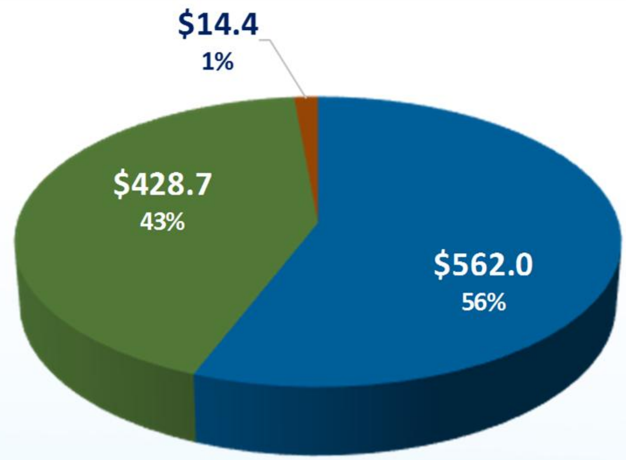
One of the largest networks of marine terminals located primarily in the East Coast and Gulf Coast regions of the United States, as well as in the Caribbean

- 7 liquid petroleum product terminals located in key domestic and global energy hubs
- ~62 million barrels of liquid petroleum product tank capacity

Merchant Services

Markets liquid petroleum products in certain areas served by Domestic Pipelines & Terminals and Global Marine Terminals

LTM Adjusted EBITDA[2] - $1 billion



(Presented in millions)

Market and Financial Highlights

Market Data[3]	
Unit Price	$34.22
Market Capitalization	$5.3 billion
Yield	8.8%
Financial Data[2]	
Adjusted EBITDA	$1 billion
Distribution per Unit (Annualized)	$3.00
Distribution Coverage Ratio - Q4 2018	1.24x

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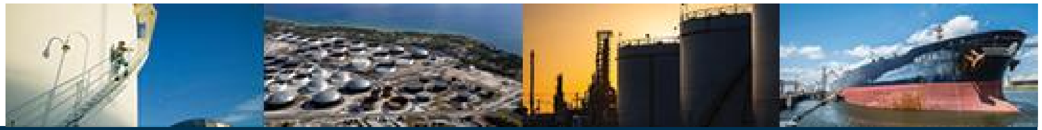
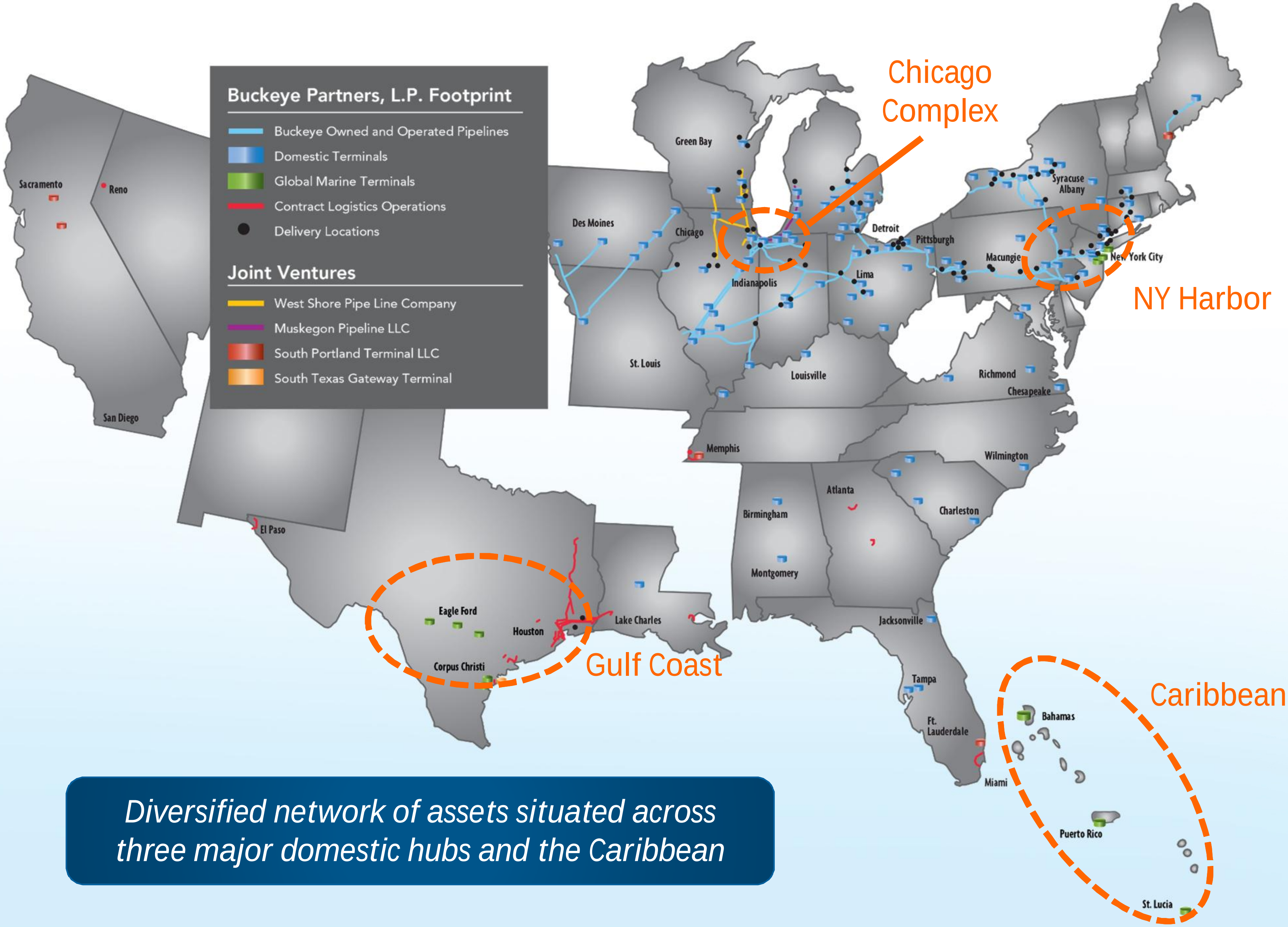
(1) Excludes the non-integrated domestic pipeline and terminal assets divested in December 2018, as well as Buckeye's equity interest in VTTI B.V. which was divested in January 2019 (the "Asset Divestitures").
(2) Last twelve months through December 31, 2018, including contribution from the Asset Divestitures. The fourth quarter of 2018 does not reflect any contributions from VTTI. See Non-GAAP Reconciliations at end of presentation.
(3) As of April 4, 2019.

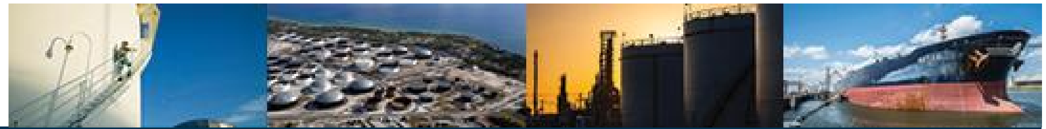
SYSTEM MAP





Diversified network of assets situated across three major domestic hubs and the Caribbean

STRATEGIC REVIEW



On November 2, 2018, Buckeye announced the outcome of its strategic review

Situation Analysis

- Increased need for capital based on attractive investment opportunities
- Dislocated public equity markets
- Equity markets were not rewarding Buckeye for:
  - Level of distribution being paid
  - Cash flows being generated and cash flow growth expected in the future
- Near-term weakness in segregated storage

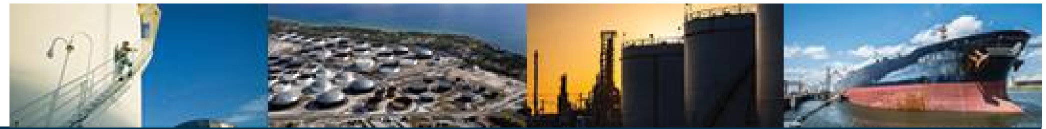
Timing influenced by significant increases in attractive growth capital investments.

Objectives

- Maintain investment grade credit rating by reducing leverage
- Provide increased financial flexibility, eliminating the need to access the public equity markets to fund planned annual growth capital
- Reallocate capital to higher return growth opportunities across remaining assets

Reposition Buckeye to maximize long-term unitholder value

STRATEGIC REVIEW



Actions and Benefits

Sale of Entire Equity Interest in VTTI B.V. for $975 Million

Represents multiple > 12x expected 2019 cash flows

- Given scarcity of reasonably priced capital, sale allows Buckeye to allocate available capital to higher return domestic growth initiatives
- Buckeye avoids any future VTTI capital investment requirements (estimated to be in excess of $100 million annually)
- Eliminates Buckeye share of VTTI debt of approximately $500 million
- Transaction closed in January 2019

Sale of Non-integrated Pipeline and Terminal Assets for $450 Million

Represents multiple of 13x expected 2019 Adjusted EBITDA

- Raise significant capital at attractive multiple for non-integrated assets
- Continue operating these assets for buyer under long-term contract
  - No ownership risk going forward
  - No impact to Buckeye personnel
- Transaction closed in December 2018

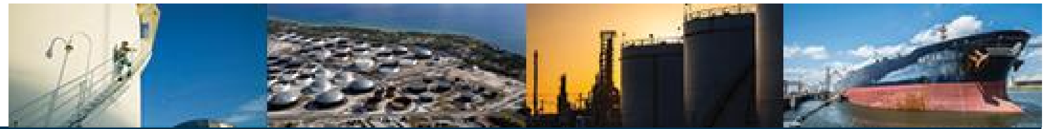
Multiples realized are believed to be more representative of the intrinsic value of Buckeye's asset portfolio

Quarterly Cash Distribution Adjustment to $0.75 per unit (equates to $3.00 per year)

- Buckeye expected to retain nearly $300 million of cash flow
- Fund growth capital without need to access public equity markets
- Significantly improve distribution coverage

Actions expected to solidify investment grade credit rating, improve distribution coverage and eliminate the need to access public equity

DOMESTIC PIPELINES & TERMINALS



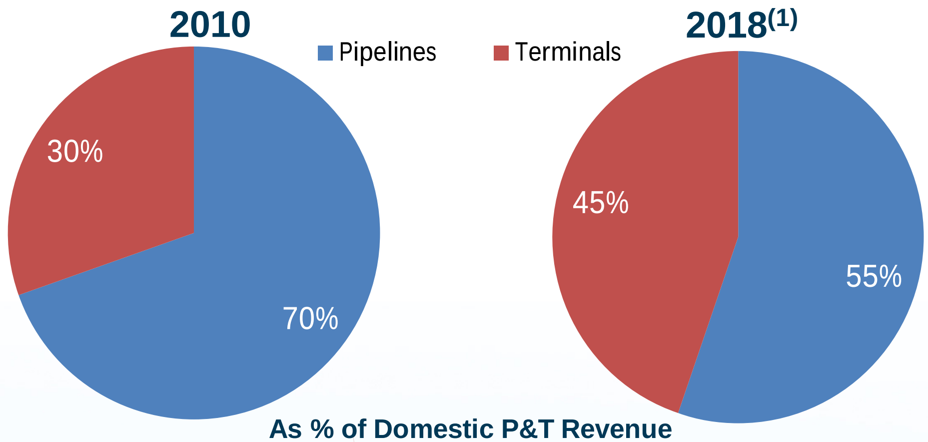
Recent Highlights

- Recognized a $343 million gain upon the closing of the sale of the package of domestic pipeline and terminal assets
- Benefited from record pipeline and terminal throughput volumes due to strong demand on Midwest systems and across expanded Chicago Complex, combined with higher butane blending margins
- Strength was offset by the expiration of a crude-by-rail contract in Q1 2018 and lower petroleum product prices that negatively impacted settlement and storage revenues

Outlook

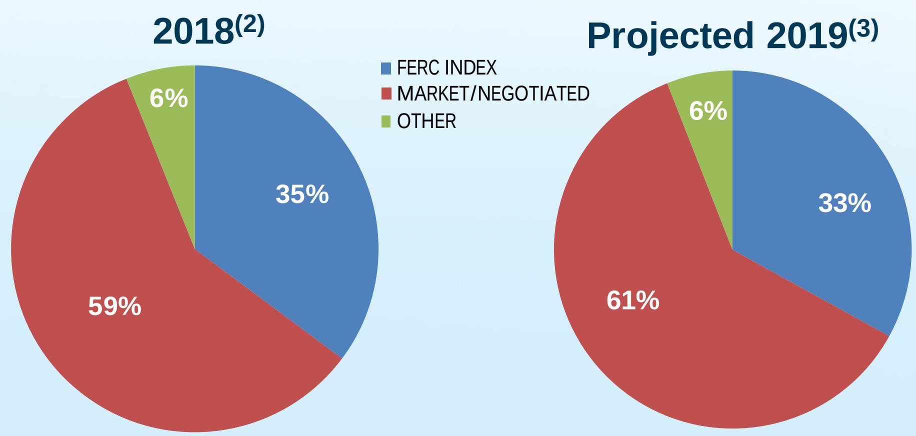
- Expect tariff increases on market-based and FERC index-based tariff pipelines to drive pipeline throughput revenue growth
- Pipeline and terminal throughput revenue growth expected to be driven by completion of growth capital initiatives, including the Michigan/Ohio and Chicago Complex expansion projects
- Butane blending and settlement revenues expected to be negatively impacted by reduced commodity prices
- Forecast continued growth through investments in capital projects and expanded service offerings
  - Continuing to advance on a number of projects with attractive return profiles across our portfolio of assets

Significant growth realized from capital investments across our terminal assets



BPL Pipeline Tariff Mix

Increasing exposure to historically less volatile market/negotiated tariff structures



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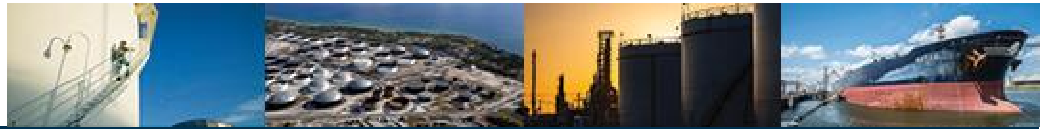
(1) For the twelve months ended December 31, 2018.
(2) Reflects tariff mix through December 31, 2018.
(3) Reflects expected tariff mix for 2019.



GLOBAL MARINE TERMINALS

Recent Highlights

- Fourth quarter of 2018 did not include any contribution from VTTI as a result of the agreement to sell Buckeye's 50% equity interest
- Continued strong operating performance at Buckeye Texas Partners
  - Driven by completion of various optimization projects backed by incremental customer commitments
  - Incremental cash flows generated as a result of April 2018 acquisition of the remaining 20% noncontrolling interest
- Lower capacity utilization and rates as a result of challenging segregated storage market conditions
  - Reported average capacity utilization[1] of 78% for Q4 2018 compared to 82% for Q4 2017
  - Remain focused on shorter-term contracts until market rates rebound from cyclical lows

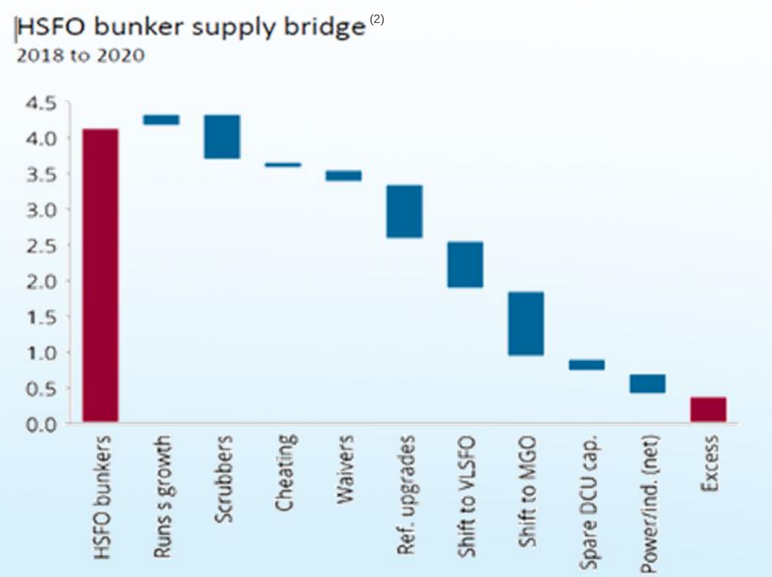
Outlook

- Expect to commence and ramp up operations at the South Texas Gateway Terminal by mid-2020
- Continue to evaluate opportunities to expand, debottleneck and further improve capabilities around Buckeye Texas Partners facilities, and expect to benefit from contractual rate escalations in 2019
- Buckeye's assets are well-positioned to capture value from key emerging trends in the second half of 2019 and into 2020 with minimal capital investment
  - Market conditions are expected to remain challenged for segregated storage through the first half of 2019

Key Emerging Trends

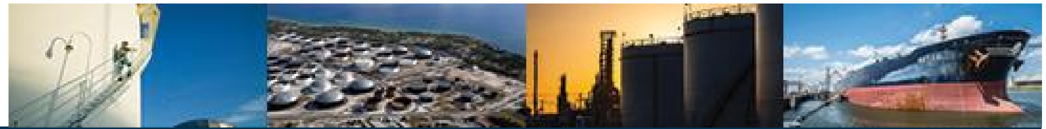
IMO 2020

- IMO change to marine bunker sulfur specification effective January 1, 2020 set to increase demand for high sulfur fuel oil storage with switch to low sulfur and distillates
- Fuel oil contango expected to emerge in late 2019
- Demand for distillate storage also expected to increase
- Increased need for segregated storage for blending
- Expect uplift in splitter economics based on improved crack margin for lighter barrels



(1) Represents the ratio of contracted capacity to total capacity.
(2) Sourced from Energy Aspects.

GROWTH CAPITAL PROJECTS
ADVANCING LAST-MILE SOLUTIONS



- Buckeye formed a joint venture with Phillips 66 Partners LP and Marathon to develop the South Texas Gateway Terminal, which is positioned to serve as the primary outlet for crude oil and condensate volumes delivered from the Gray Oak pipeline
  - Continuing to secure additional long-term minimum volumes throughput and storage commitments from customers
    - Current plan is to increase scope of the project from 3.4 million barrels of storage capacity to 6.8 million barrels
    - Potential for expansion of up to 10 million barrels of tank capacity and up to 800,000 bpd of throughput capacity
  - 2 deepwater vessel docks capable of handling Suezmax and VLCC tankers
  - Estimated capital required of approximately $500 million on 100% basis
  - Assessing opportunities for increased pipeline connectivity
- BTP and South Texas Gateway Terminal are expected to provide premier connectivity to both Permian and Eagle Ford production growth
  - Connections to two of the major Permian takeaway pipelines announced - Plains' Cactus I and II (BTP) and Gray Oak (South Texas Gateway Terminal)
  - Unique combination of open-access (South Texas Gateway) and proprietary assets (BTP) provides the ability to service all of the leading market participants
  - Positions Buckeye to capture a leading market share of volume growth and asset expansion in Corpus Christi
- Continuing to optimize infrastructure at BTP facilities to improve efficiency and increase the scale of operations
  - Added incremental crude oil storage capacity at Buckeye Texas Processing to facilitate more pipeline deliveries
  - Assessing opportunity to expand the processing capabilities of condensate splitters by up to 30,000 bpd
  - Potential to expand LPG handling and export capabilities through further development of the existing facilities at Buckeye Texas Hub or through the construction of a new greenfield facility, which would serve as a new aggregation and distribution center for LPG and crude volumes

Premier Advantaged Positions in Corpus Christi

Buckeye is well-positioned to capitalize on incremental Permian Basin production as customers seek the most economic export solution

Chicago Complex Expansion

- $80 million expansion project backed by a long-term agreement with BP Products North America, Inc., with approximately 600,000 additional barrels of product blending tankage and the build-out of an existing truck rack
- Enhances liquidity of the Chicago Complex and further solidifies our position as the premier storage and trading facility in the area
- Expected completion in mid-2019
  - Project is ahead of schedule and all necessary permits have been obtained
- Expect this expansion to be the first phase of additional growth, as the Midwestern refining industry is materially cost-advantaged to certain of its competitors in other parts of the country and poised for continued growth and investment

Buckeye Chicago Complex Expansion

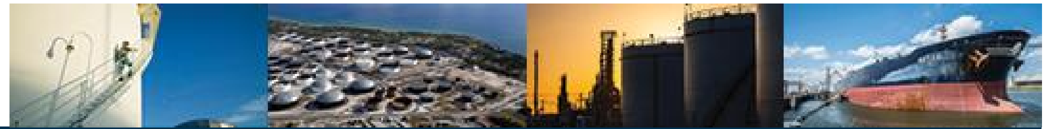
Michigan/Ohio Expansion – Phase Two

- Extends Midwest supplies from Pittsburgh to Central Pennsylvania using Buckeye's Laurel Pipeline
- Provides bi-directional service between Pittsburgh and Altoona in response to shipper desire for optionality to supply from Midwest or East coast
- Adds approximately 40,000 barrels per day of new capacity from Midwest while maintaining historic volume capacity from the east
- Backed by 10-year shipper commitments
- Buckeye is moving forward with planned bi-directional service while FERC continues to review a petition for a declaratory order filed in April 2018
- Hydrotesting has been scheduled, and bi-directional service is expected to commence by mid-2019

Michigan/Ohio Expansion Benefits

- Driven by the clear long-term trend of increasing availability of lower-cost North American crudes
- For over a decade, Midwest refiners have been increasing production of lower-cost fuels made from these advantaged crudes
- Provides safe and reliable pipeline option for Midwestern refiners to move these fuels eastward to meet consumer demand
- Increases Pennsylvania consumers' access to lower-cost domestically produced fuels, decreasing dependence on more costly imports

GROWTH CAPITAL PROJECTS



Smaller Organic Growth Projects

Consistently average $75 million to $125 million annual spend

- Expansion of Jacksonville, FL terminal to increase throughput capacity and provide ethanol and butane by rail capabilities
- Recently completed build-out of gasoline and ULSD railcar loading capabilities at our Woodhaven, MI terminal
- Expanding connectivity and building a butane rail facility within our Tampa, FL terminal facility
- Creating an integrated and expanded complex in Pittsburgh between our Pittsburgh, Coraopolis and Indianola terminal, which will provide customers with improved connectivity and incremental services
- Reconfiguring the Albany, NY terminal to support a refined products rail and truck rack business
- Butane blending services and onshore storage at Buckeye Bahamas Hub
- Projects to further our capability to handle specialty crude in the Caribbean

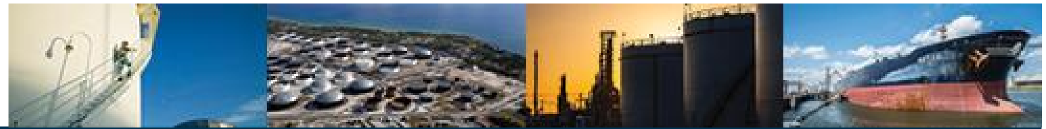
Growth Capital Funding

- Moving toward a “self-funding” business model in order to strengthen balance sheet, solidify investment grade rating and improve distribution coverage
- Well-positioned to fund currently planned growth capital without accessing the public equity markets or senior debt markets
  - Funding is expected to come from excess operating cash flow and borrowings on revolver
  - Available liquidity on revolver[1] ~$975 million
- Overall, expect 2019 growth capital expenditures to be in the range of $250 million – $350 million.
  - Includes contribution to fund our 50% portion of capital expenditures at the South Texas Gateway joint venture
- Focused on disciplined allocation of capital and diligent evaluation of investment opportunities

Our strategy is focused on maintaining and growing Buckeye's core business to offer the highest potential returns for unitholders

(1) As of December 31, 2018.

INVESTMENT SUMMARY



Diverse portfolio of assets with strong balance sheet, solid investment grade rating and financial flexibility, poised to take advantage of strategic growth opportunities

- Predominantly fee-based cash flows from our transportation, terminal throughput, storage and processing activities
- Significant geographic and product diversity, broader product service capabilities and significant near-term growth projects
- Premier Corpus Christi assets well-positioned to capitalize on growing U.S. exports of crude oil from Gulf Coast
- No GP IDRs and C Corp governance
- Committed to maintaining an investment grade credit rating
- Ample financial flexibility eliminates the need to access public equity markets to fund annual growth capital
- Focused on the reallocation of capital to higher return growth opportunities
- Targeted annual financial metrics:
    - Leverage less than 4.5x
    - Distribution coverage greater than 1.2x
- Empowered, commercially focused and team-oriented employees accountable and incentivized to deliver results

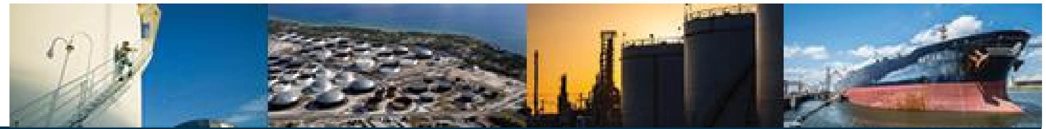
Buckeye Bayonne Terminal

Buckeye Texas Partners condensate splitters

NON-GAAP RECONCILIATIONS

BUCKEYE PARTNERS, L.P.

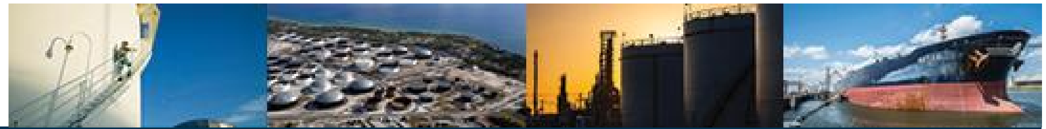
NON-GAAP FINANCIAL MEASURES



Adjusted EBITDA and distributable cash flow are not measures defined by accounting principles generally accepted in the United States of America (“GAAP”). We define Adjusted EBITDA as earnings before interest expense, income taxes, depreciation and amortization, further adjusted to exclude certain non-cash items, such as non-cash compensation expense; transaction, transition, and integration costs associated with acquisitions; certain unrealized gains and losses on foreign currency transactions and foreign currency derivative financial instruments, as applicable; and certain other operating expense or income items, reflected in net income, that we do not believe are indicative of our core operating performance results and business outlook, such as hurricane-related costs, gains and losses on property damage recoveries, non-cash impairment charges, and gains and losses on asset sales. We define distributable cash flow as Adjusted EBITDA less cash interest expense, cash income tax expense, and maintenance capital expenditures incurred to maintain the operating, safety and/or earnings capacity of our existing assets, plus or minus realized gains or losses on certain foreign currency derivative financial instruments, as applicable. These definitions of Adjusted EBITDA and distributable cash flow are also applied to our proportionate share in the Adjusted EBITDA of significant equity method investments, such as that in VTTI, B.V. (“VTTI”), and are not applied to our less significant equity method investments. The calculation of our proportionate share of the reconciling items used to derive Adjusted EBITDA was based upon our 50% equity interest in VTTI, prior to adjustments related to noncontrolling interests in several of its subsidiaries and partnerships, which are immaterial. Due to certain terms of the definitive agreement regarding the divestiture of our equity interest in VTTI, we determined we no longer had the ability to exercise significant influence over the operating and financial policies of VTTI and therefore, accounted for our investment at fair value. Accordingly, beginning in the fourth quarter of 2018 and prospectively, we no longer applied the definition of Adjusted EBITDA to our investment in VTTI. Adjusted EBITDA and distributable cash flow are non-GAAP financial measures that are used by our senior management, including our Chief Executive Officer, to assess the operating performance of our business and optimize resource allocation. We use Adjusted EBITDA as a primary measure to: (i) evaluate our consolidated operating performance and the operating performance of our business segments; (ii) allocate resources and capital to business segments; (iii) evaluate the viability of proposed projects; and (iv) determine overall rates of return on alternative investment opportunities. We use distributable cash flow as a performance metric to compare cash-generating performance of Buckeye from period to period and to compare the cash-generating performance for specific periods to the cash distributions (if any) that are expected to be paid to our unitholders. Distributable cash flow is not intended to be a liquidity measure.

We believe that investors benefit from having access to the same financial measures used by management and that these measures are useful to investors because they aid in comparing our operating performance with that of other companies with similar operations. The Adjusted EBITDA and distributable cash flow data presented by us may not be comparable to similarly titled measures at other companies because these items may be defined differently by other companies. Please see the attached reconciliations of each of Adjusted EBITDA and distributable cash flow to net income.

NON-GAAP RECONCILIATIONS[1]
In millions, except ratios



	4Q18	LTM[2]
Adjusted EBITDA:		
Domestic Pipelines & Terminals	$148.3	$562.0
Global Marine Terminals	78.8	428.7
Merchant Services	7.6	14.4
Adjusted EBITDA	$234.7	$1,005.0
Reconciliation of Net Income to Adjusted EBITDA and Distributable Cash Flow:		
Net income (loss)	$483.0	($51.9)
Less: Net income attributable to noncontrolling interests	(0.5)	(7.1)
Net income (loss) attributable to Buckeye Partners, L.P.	482.5	(59.0)
Add: Interest and debt expense	11.2	190.2
Income tax expense	1.8	3.7
Depreciation and amortization	70.3	269.4
Non-cash unit-based compensation expense	0.2	21.8
Acquisition and transition expense	10.9	11.3
Hurricane-related costs, net of recoveries[3]	0.9	0.1
Proportionate share of Adjusted EBITDA for the equity method investment in VTTI[4]	-	101.4
Goodwill impairment	-	537.0
Loss from the equity method investment in VTTI[4]	-	286.6
Less: Gains on property damage recoveries[5]	-	(14.5)
Less: Gain on sale of DPTS Asset Package	(343.0)	(343.0)
Adjusted EBITDA	$234.7	$1,005.0
Less: Interest and debt expense, excluding amortization of deferred financing costs, debt discounts and other	(58.3)	
Income tax expense, excluding non-cash taxes	(0.6)	
Maintenance capital expenditures	(32.3)	
Add: Hurricane-related maintenance capital expenditures	0.1	
Distributable cash flow	$143.6	
Distributions for coverage ratio[6]	$115.9	
Coverage Ratio	**1.24x**	

1) Amounts may not recalculate due to rounding.
2) Last twelve months through December 31, 2018.
3) Represents costs incurred at our BBH facility in the Bahamas, Yabucoa Terminal in Puerto Rico, Corpus Christi facilities in Texas, and certain terminals in Florida, as a result of hurricanes which occurred in 2017 and 2016, consisting of operating expenses and write-offs of damaged long-lived assets, net of insurance recoveries.
4) Due to the significance of our equity method investment in VTTI, effective January 1, 2017, we applied the definitions of Adjusted EBITDA and distributable cash flow, covered in our description of non-GAAP financial measures, with respect to our proportionate share of VTTI's Adjusted EBITDA and distributable cash flow. The calculation of our proportionate share of the reconciling items used to derive these VTTI performance metrics is based upon our 50% equity interest in VTTI, prior to adjustments related to noncontrolling interests in several of its subsidiaries and partnerships, which are immaterial. Included in the twelve months ended December 31, 2018 is a $300.3 million non-cash loss on the sale of our investment in VTTI. Due to certain terms of the definitive agreement regarding the divestiture of our equity interest in VTTI, we discontinued the equity method of accounting and recorded our interest at fair value. Accordingly, beginning in the fourth quarter of 2018 and prospectively, we no longer recorded any equity earnings or reflected any contributions from VTTI to our Adjusted EBITDA or distributable cash flow.
5) Represents gains on recoveries of property damages caused by third parties, primarily related to a settlement in connection with a 2012 vessel allision with a jetty at our BBH facility in the Bahamas.
6) Represents cash distributions declared for LP Units and for distribution equivalent rights with respect to certain unit-based compensation awards ("DERs") outstanding for the quarter ended December 31, 2018.