GOING BEYOND

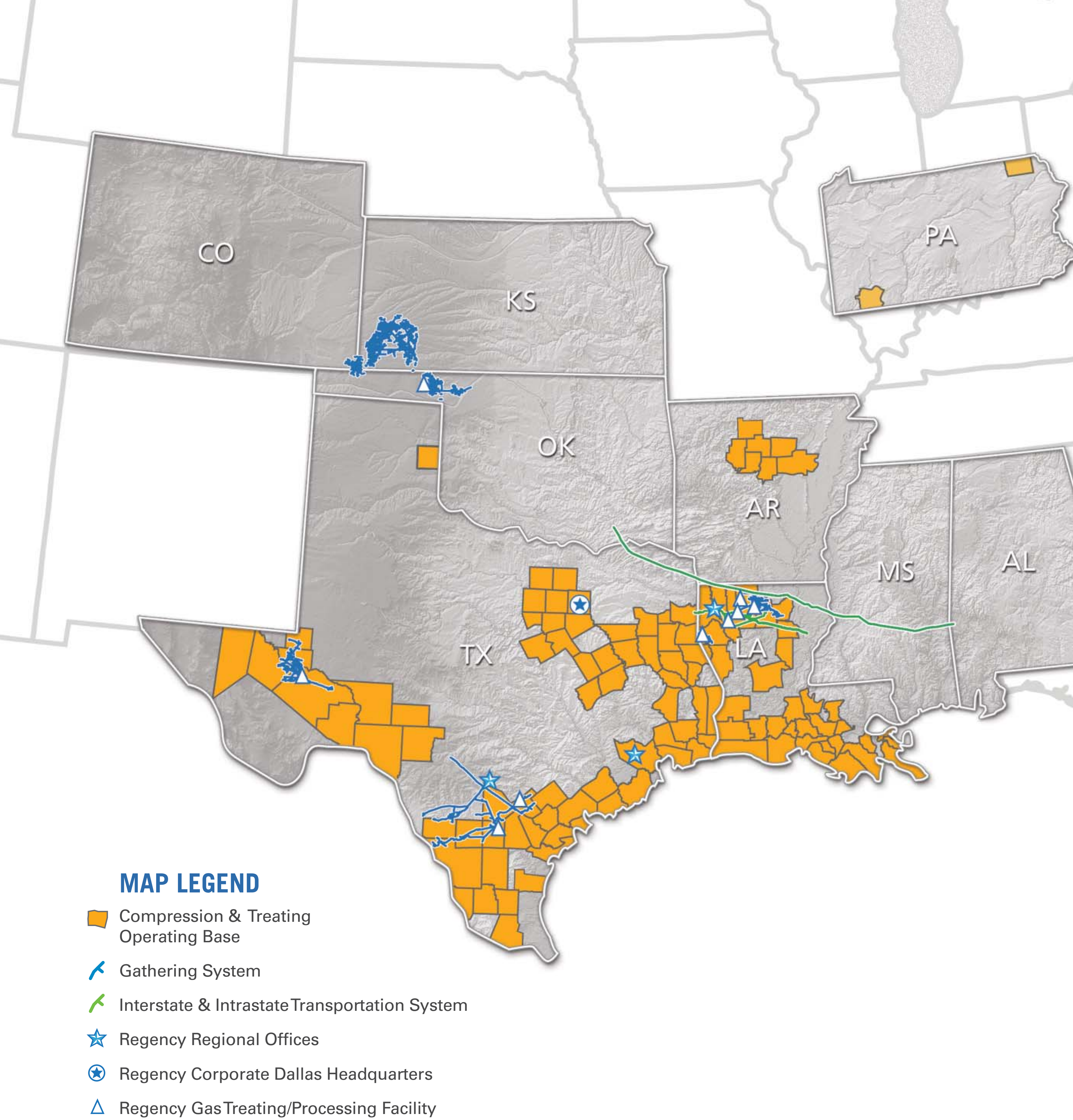
REGENCY ENERGY PARTNERS ANNUAL REPORT 2010

REGENCY
ENERGY PARTNERS

COMPANY PROFILE

Based in Dallas, Regency Energy Partners LP (NASDAQ: RGNC) is a growth-oriented Master Limited Partnership that specializes in the gathering and processing, treating, compression and transportation of natural gas and natural gas liquids. Regency focuses on providing midstream services in several of the most prolific shale plays and rich gas producing formations, primarily in the south-central portion of the United States.

Regency's transportation operations include an operated 49.99% general partner interest in the Regency Intrastate Gas System (RIGS) and a non-operated 49.9% interest in the Midcontinent Express Pipeline (MEP).



GATHERING & PROCESSING

Regency's gathering & processing assets are primarily located in south and west Texas, north Louisiana, Oklahoma and Kansas. These assets include nine active treating and processing plants and 5,259 miles of gathering pipeline.

TRANSPORTATION

Regency's transportation segment is comprised of partnership interests in two joint ventures — an operated 49.99% general partner interest in RIGS, a 450-mile intrastate pipeline in north Louisiana with 2.1 Bcf/d of transportation capacity; and a non-operated 49.9% interest in MEP, a 500-mile interstate pipeline stretching from Oklahoma to Alabama, with the ability to transport up to 1.8 Bcf/d of transportation capacity.

CONTRACT COMPRESSION

Regency provides customers with turn-key, natural gas contract compression services with guaranteed run times and unmatched customer service. This segment operates more than 844,000 horsepower of compression for third-party producers in Texas, Louisiana, Arkansas and Pennsylvania, and more than 114,000 horsepower for Regency's gathering & processing segment.

CONTRACT TREATING

With the acquisition of Zephyr Gas Services in September 2010, Regency expanded our contract service portfolio to include natural gas treating services. These assets include more than 3,000 revenue generating gallons per minute of amine treating capacity for third-party producers and are located in some of the fastest growing production areas in the United States, including south Texas and north Louisiana.

CORPORATE SNAPSHOT*

Ticker	NASDAQ: RGNC
Fiscal Year End	Dec. 31
52-week High	$27.50
52-week Low	$19.60
Total Units Outstanding	137.3 million**
Yield Percentage	6.53%***
Market Capitalization	$3.7 billion
Annual Distribution Per Unit	$1.78***
Total Assets	$4.8 billion

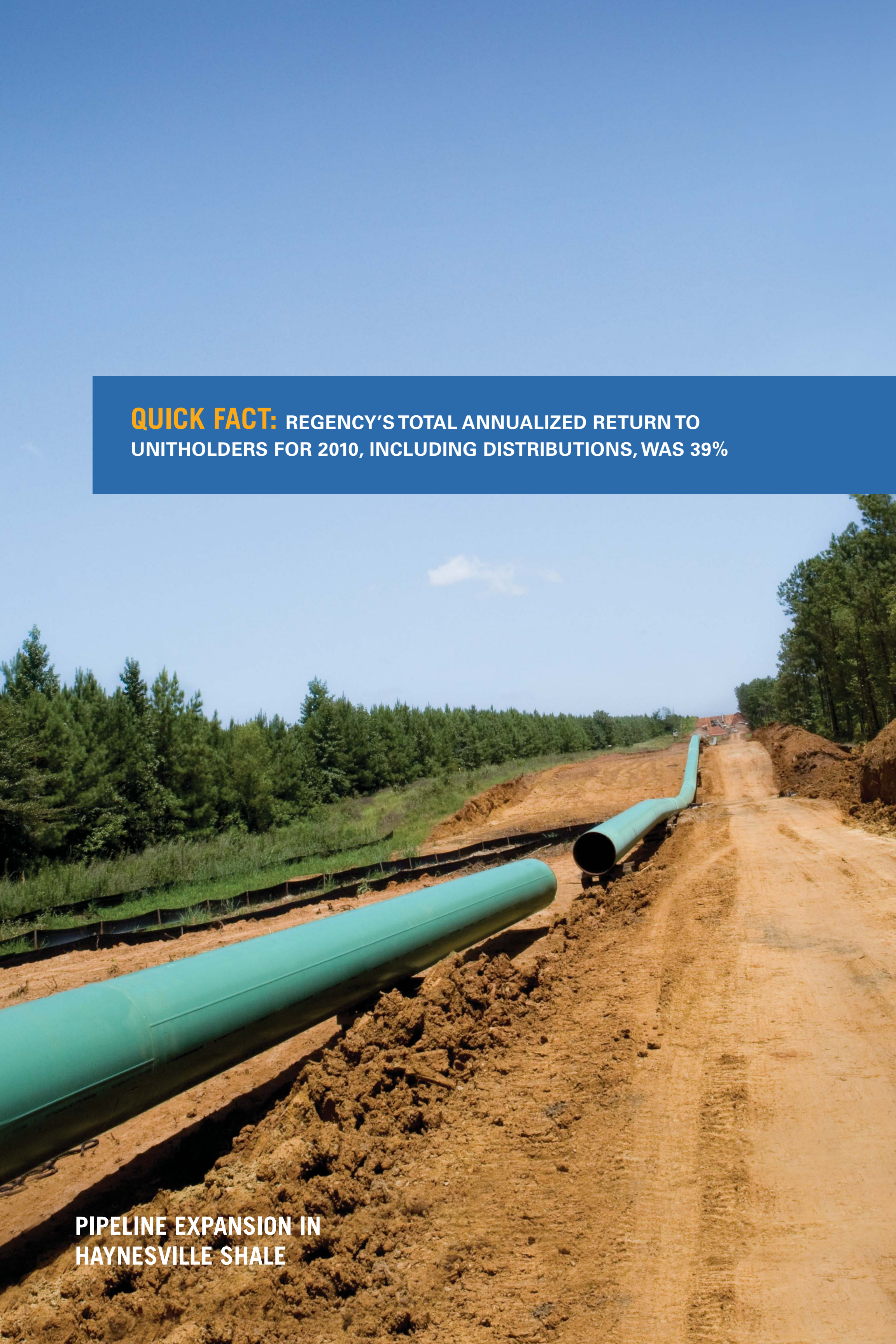
**As of 12/31/10*
***Excludes 4.37 million of outstanding Series A Preferred Units*
****Based on an annualized fourth-quarter 2010 distribution of $0.445 per common unit and the closing common unit price on December 31, 2010*

QUICK FACT: OUR GATHERING & PROCESSING VOLUMES IN SOUTH TEXAS GREW 45% FROM 2009 TO 2010 PRIMARILY DUE TO INCREASED EAGLE FORD SHALE PRODUCTION

ASSET PORTFOLIO

Regency's diversified portfolio of midstream assets is strategically positioned in some of the top gas-producing regions in the United States, including the Eagle Ford, Haynesville, Barnett, Fayetteville and Marcellus shales, as well as the west Texas and mid-continent regions.

Together, Regency's business segments provide customers with a full array of midstream services from wellhead to market.

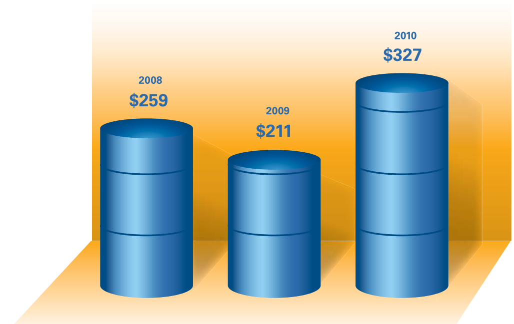


QUICK FACT: **REGENCY'S TOTAL ANNUALIZED RETURN TO UNITHOLDERS FOR 2010, INCLUDING DISTRIBUTIONS, WAS 39%**

PIPELINE EXPANSION IN HAYNESVILLE SHALE

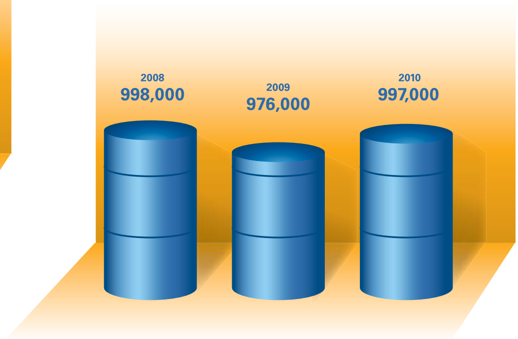
HISTORICAL PERFORMANCE

ADJUSTED EBITDA* ($ in millions)

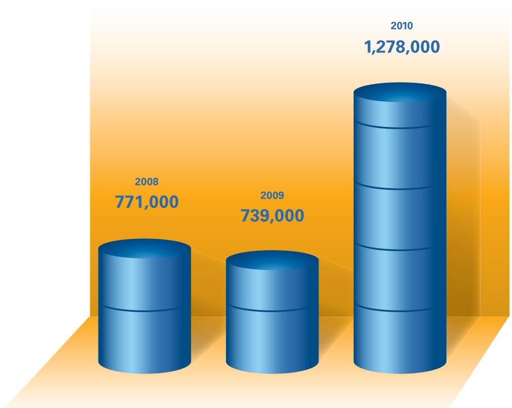


*See reconciliation on page 19

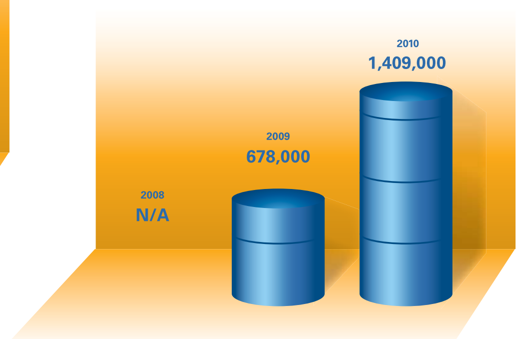
G&P THROUGHPUT (MMbtu/d)



RIGS THROUGHPUT (MMbtu/d)



MEP THROUGHPUT (MMbtu/d)



UNIT PERFORMANCE

Price History (12/31/09 - 12/31/10)

UNITHOLDER LETTER

Since our initial public offering in 2006, Regency has evolved from primarily a gathering and processing company into a broadly diversified midstream service provider. In 2010, our evolution accelerated with the acquisitions of our general partner by Energy Transfer Equity, an interest in an interstate pipeline and a contract treating entity. In addition, we raised more than a billion dollars of capital. These changes provide a strong and flexible foundation for continued growth opportunities in 2011.

Our most notable highlight of 2010 was Energy Transfer Equity, L.P.'s (NYSE: ETE), acquisition of 100 percent of the general partner of Regency. Energy Transfer brings significant expertise in the midstream sector and the potential to leverage growth opportunities between our two companies.

This past year, Regency invested nearly $193 million in organic growth projects. Significant expansions to our transportation and gathering and processing assets in the Haynesville shale, and to our gathering and processing assets in south Texas, enhanced our core service offerings.

In 2010, our $584-million acquisition of a joint venture interest in the Midcontinent Express Pipeline and $193-million acquisition of Zephyr Gas Services expanded our footprint by adding interstate pipeline and contract treating services to our value chain. In addition, a $408-million equity offering and a $600-million senior notes offering and debt restructuring, along with an extension of our credit facility, strengthened our liquidity position and increased our financial flexibility.

Our operations and environmental, health and safety teams have also done an excellent job making safety and environmental compliance a top priority. In 2010, these efforts resulted in lower total reportable incident rates and preventable vehicle accidents year-over-year.

These events contributed to year-over-year improved financial performance and a stronger balance sheet at the end of 2010. When compared to 2009, adjusted EBITDA for 2010 increased 55% to $327 million. Throughout 2010, Regency maintained cash distributions of 44.5 cents per common and Series A preferred unit per quarter; our unit price steadily increased; and our total annualized return to unitholders, including distributions, was 39%.

Larger and more diverse, Regency is well positioned to capitalize on the growth opportunities we see for all of our businesses in 2011.

In particular, three key areas – the Eagle Ford shale in south Texas, the Permian basin in west Texas and the Haynesville shale in north Louisiana – offer promising opportunities for several of our business segments. Geographically, Regency's assets are strategically positioned in the heart of these plays, allowing us to service producers' needs and grow with them.

TREATING PLANT
IN SOUTH TEXAS

We established strategic objectives to place us in a position to continue to increase unitholder value. In 2011, our primary goals are to grow distributable cash flow and continue to progress toward investment grade metrics.

With Energy Transfer's support, Regency will focus on optimizing the financial performance of our assets, evaluating organic growth projects and pursuing strategic acquisitions that could enhance our portfolio. In addition, we intend to leverage our existing assets and service offerings with Energy Transfer to create economies of scale. The bottom-line result will be superior service for producers, which we believe will help us increase unitholder value.

We have a strong foundation upon which to write the next chapter of Regency's history. Our team is among the best in the industry, and we are committed to propelling Regency forward through a disciplined approach to the business: investing our growth capital in opportunities with strong returns, maintaining a focus on safety and integrity, and providing best-in-class customer service.

We are confident in our team's ability to deliver in 2011 and beyond.

Thank you, our investors, for your continued support as the Regency story continues to evolve.

Sincerely,

John D. Harkey, Jr.
Chairman

Michael J. Bradley
President and Chief Executive Officer

NEW FACILITY INSTALLATION
IN NORTH LOUISIANA

2010 – A YEAR OF GROWTH

Reflecting on 2010, the year was characterized by steady growth that changed the landscape of Regency. The acquisition of our general partner by Energy Transfer Equity, L.P., coupled with our other acquisitions, contributed to our evolution into a more robust midstream service provider.

Throughout the year, Regency capitalized on these opportunities to grow the business through prudent decision making and responsible financing.

QUICK FACT: THE HAYNESVILLE EXPANSION PROJECT, IN CONJUNCTION WITH THE RED RIVER LATERAL EXTENSION, MORE THAN DOUBLED CAPACITY OF THE RIGS SYSTEM BY ADDING APPROXIMATELY 1.2 Bcf/d OF INCREMENTAL CAPACITY

ADDITIONALLY, EACH OF OUR ACTIONS MET ONE OR MORE OF OUR 2010 OBJECTIVES:

- ✓ Increase scale and expand our geographic reach
- ✓ Improve our business mix
- ✓ Enhance our financial strength

2010 TIMELINE

JANUARY 2010

Action: Completed the $641-million Haynesville and Red River Lateral Expansion Projects nearly $60 million under budget

Impact: Addresses producers' needs for additional takeaway capacity, giving us a stronger footprint in the Haynesville shale

APRIL 2010

Action: Acquired an additional 6.99% interest in RIGS from an affiliate of GE Energy Financial Services for approximately $92 million

Impact: We now own a 49.99% general partner interest in RIGS, positioning us to capitalize on additional expansions to meet producer demand for years to come

MAY 2010

Action: Energy Transfer Equity, L.P., acquired 100% of Regency's general partner from an affiliate of GE Energy Financial Services

Impact: Energy Transfer's support and midstream expertise provides us with an excellent foundation to reach our long-term objectives by leveraging relationships, sharing best practices and capitalizing on strategic growth opportunities

MAY 2010

Action: Acquired a non-operated 49.9% interest in MEP from ETE, representing our first major investment in an interstate pipeline

Impact: We now hold a significant portion of critical infrastructure that moves supply from newly developed areas in the Woodford, Barnett and Fayetteville shales to interstate pipelines that serve high-demand markets in the eastern United States

JULY 2010

Action: Sold our east Texas gathering & processing assets to an affiliate of Tristream Energy LLC for approximately $70 million

Impact: Asset sale reduced our commodity exposure and enabled us to focus capital investments on expanding core assets in higher-growth regions

AUGUST 2010

Action: Completed two expansions of the Logansport Gathering System located in north Louisiana

Impact: The expansions contribute fee-based cash flows and further strengthen our position in the Haynesville shale

AUGUST 2010

Action: Raised $408 million through a public offering of limited partner units

Impact: Improved our balance sheet by using net proceeds from the offering to repay outstanding indebtedness under our revolving credit facility

SEPTEMBER 2010

Action: Completed a $193-million acquisition of Zephyr Gas Services, a natural gas treating company based in Houston

Impact: Added a high-quality treating platform to our existing value chain, providing producers with an unmatched set of high-quality services throughout the life cycle of a well

OCTOBER 2010

Action: Completed a $600-million senior notes offering in conjunction with a tender offer

Impact: Refinanced debt at a lower rate increasing our financial flexibility and better positioning us to take advantage of growth opportunities

DECEMBER 2010

Action: Announced a series of expansion projects along our rich gas gathering system in the Eagle Ford shale in south Texas

Impact: By expanding our presence in the prolific Eagle Ford shale, we will be equipped with more robust gathering services to meet increasing producer demand in this rich gas play

John S. Bosholm, Shannon A. Ming, Paul M. Jolas, Michael J. Bradley, Thomas E. Long, Jim S. Holotik, Glen A. Wind

GROWTH PLATFORM

Regency has assembled a senior management team of seasoned industry experts. This team is focused on leading Regency through our next chapter of growth as a premier, full-service midstream provider.

Based on the successful execution of our growth strategy in 2010, our 2011 goals are as follows:

- **Grow our cash distributions to unitholders**
- **Achieve investment grade metrics**[1]

[1] *Investment grade ratings and the applicable criteria are solely determined by the rating agencies*

IN ORDER TO ACHIEVE THESE GOALS, WE ARE COMMITTED TO EXECUTING ON THE FOLLOWING FOUR STRATEGIC OBJECTIVES:

MAXIMIZE ASSETS

- Optimize the returns of core assets, improve operational efficiencies and leverage synergies across business segments
- Strategically pursue organic growth projects and joint ventures that meet producer needs, complement core assets and provide a strategic platform for additional growth

EXPAND AND ENHANCE PORTFOLIO

- Expand into new businesses and basins through accretive joint ventures and acquisitions that complement our core value chain and geographic footprint, and provide attractive rates of return
- Maintain a comprehensive hedging program to mitigate the impact of commodity price fluctuations

MANAGE CAPITAL

- Remain focused on achieving investment grade metrics and maintaining a solid balance sheet
- Proactively access the capital markets, as necessary, to fund acquisitions and large growth projects

LEVERAGE RELATIONSHIPS

- Build on existing relationships with Energy Transfer Equity and key customers to align interests, share expertise and capitalize on strategic growth opportunities
- Provide services tailored to producers' needs, positioning us to grow together

QUICK FACT: CDM, OUR CONTRACT COMPRESSION BUSINESS, INCREASED REVENUE GENERATING HORSEPOWER 12% FROM YEAR END 2009 TO YEAR END 2010

BOARD OF DIRECTORS

John D. Harkey, Jr. – Chairman
Michael J. Bradley
James W. Bryant
Rodney L. Gray
John W. McReynolds

EXECUTIVE OFFICERS

Michael J. Bradley – President & Chief Executive Officer
Thomas E. Long – Executive Vice President & Chief Financial Officer
Paul M. Jolas – Executive Vice President, Chief Legal Officer & Secretary
Jim S. Holotik – Executive Vice President & Chief Commercial Officer
A. Troy Sturrock – Vice President, Controller & Principal Accounting Officer

CORPORATE & OPERATING OFFICERS

Glen A. Wind – President, Contract Treating
John S. Bosholm – Chief Operating Officer, Contract Compression
Shannon A. Ming – Senior Vice President, Finance & Investor Relations
Bret M. Allan – Vice President, Treasury & Risk
J. Martin Anthony – Vice President, Gas Supply & Business Development
Jacque L. Wolf – Vice President, Producer Services

Reconciliation of Non-GAAP Measures to GAAP Measures	Year Ended December 31, 2008	2009 ($ in thousands)	2010
Net (loss) income	$101,328	$140,489	$(10,918)
Add (deduct):			
Interest expense, net	63,243	77,996	82,971
Depreciation and amortization	102,566	109,893	122,725
Income tax expense (benefit)	(266)	(1,095)	956
EBITDA (1) (2)	$266,871	$327,283	$195,734
Add (deduct):			
Non-cash loss (gain) from derivatives	(14,708)	5,163	42,613
Non-cash unit based compensation (3)	4,318	5,834	13,727
Loss (gain) on asset sales, net	472	(133,284)	591
Income from unconsolidated subsidiaries	-	(7,886)	(69,365)
Partnership's ownership interest in Haynesville Joint Venture's adjusted EBITDA (4)	-	11,398	67,014
Partnership's ownership interest in MEP Joint Venture's adjusted EBITDA (5)	-	-	55,682
Loss on debt refinancing, net	-	-	17,528
Other expense, net	2,374	2,486	3,432
Adjusted EBITDA (6)	**$259,327**	**$210,994**	**$326,956**
(1) Earnings before interest, taxes, depreciation and amortization			
(2) EBITDA varies from previously disclosed amounts as a result of new accounting pronouncement that requires disclosing non-controlling interest in income separately on the face of the income statement			
(3) The Partnership added non-cash unit based compensation as a reconciling item from EBITDA to adjusted EBITDA. Previous comparative periods have been restated			
(4) 100% of Haynesville Joint Venture's Adjusted EBITDA is calculated as follows: Net income Haynesville Joint Venture	-	$19,734	$106,737
Add:			
Depreciation and amortization	-	8,514	31,797
Interest expense	-	158	526
Gain on insurance settlement	-	-	(242)
Loss on sale of asset, net	-	-	105
Other expense, net	-	50	14
Haynesville Joint Venture's Adjusted EBITDA	-	**$28,456**	**$138,937**
(5) 100% of MEP Joint Venture's Adjusted EBITDA is calculated as follows and represents the period from May 26, 2010, to December 31, 2010, as the Partnership acquired its 49.9 percent ownership interest on May 26, 2010: Net income MEP Joint Venture	-	-	$42,529
Add:			
Depreciation and amortization	-	-	40,104
Total other income (expense)	-	-	28,954
MEP Joint Venture's Adjusted EBITDA	-	-	**$111,587**
(6) Adjusted EBITDA differs from previously disclosed amounts as a result of the inclusion of income from unconsolidated subsidiary to account for Regency's income from the Haynesville Joint Venture and the inclusion of non-cash unit based compensation as a reconciling item to Adjusted EBITDA			

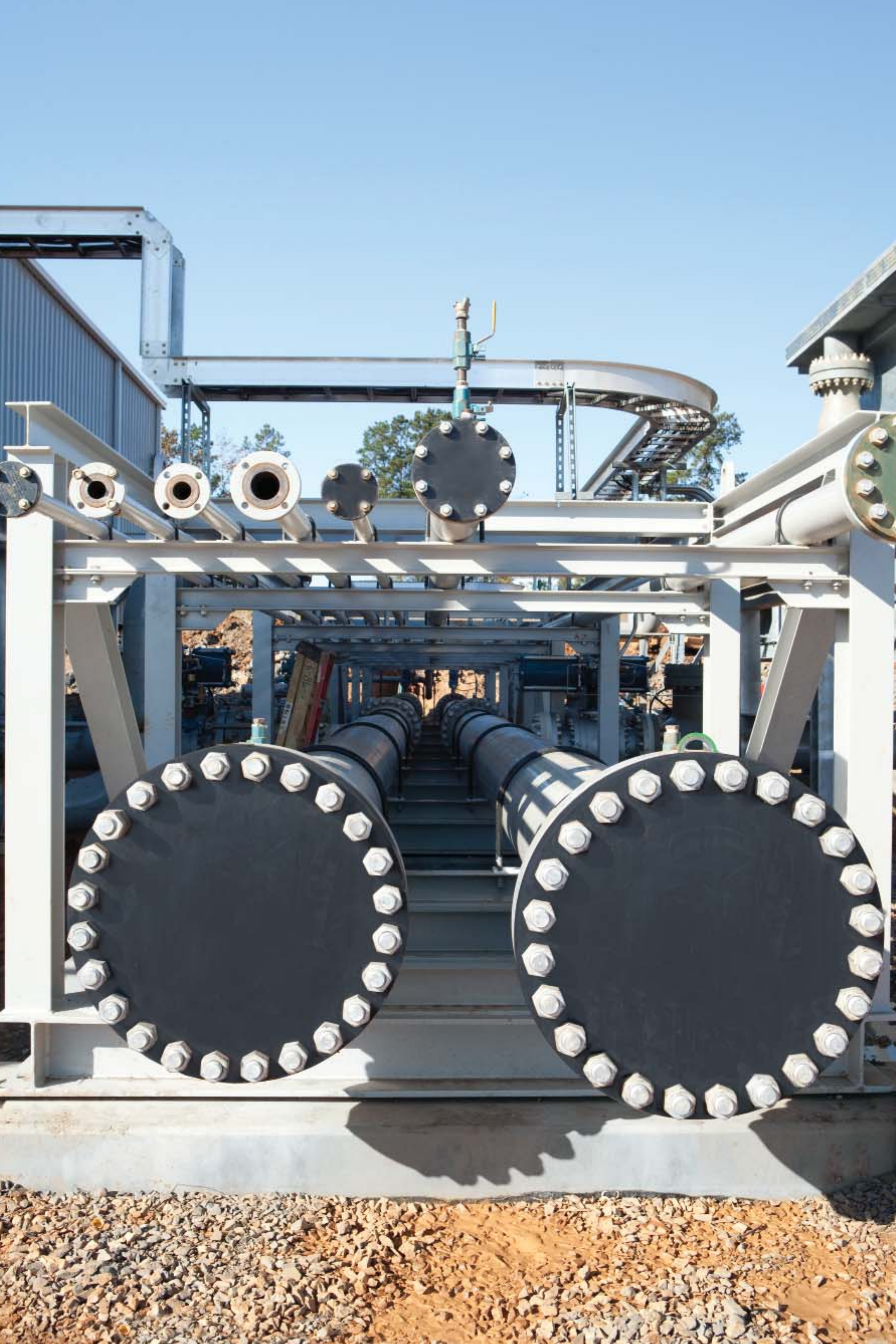
DRS STATEMENT

What is DRS? The Direct Registration System is a form of electronic registration enabling unitholders to be directly registered on our transfer records maintained by our transfer agent with no need for physical certificates. This system eliminates your worry regarding maintenance of unit certificates. One of the primary features of DRS is that it allows units to be transferred electronically to and from your "street name" brokerage account. For information on how to include your Regency units in DRS, please contact Regency Investor Relations.

FORWARD-LOOKING STATEMENTS

This annual report contains "forward-looking" statements, which are any statements that do not relate strictly to historical facts. The words "anticipate," "believe," "continue," "estimate," "expect," "forecast," "goal," "intend," "may," "plan," "project," "will" or similar expressions help identify forward-looking statements. Forward-looking statements are subject to a variety of risks, uncertainties and assumptions, which include, but are not limited to, the risks, uncertainties and assumptions enumerated in our Forms 10-Q and 10-K as filed with the Securities and Exchange Commission. Although we believe our forward-looking statements are based on reasonable assumptions, current expectations and projections about future events, we cannot give assurances that such assumptions, expectations and projections will prove to be correct. Therefore, actual results and outcomes may differ materially from those expressed in such forward-looking statements. We undertake no obligation to update publicly or to revise any forward-looking statements, whether as a result of new information, future events or otherwise.

TO REQUEST ADDITIONAL INFORMATION, PLEASE CONTACT REGENCY INVESTOR RELATIONS AT 214.840.5477 OR IR@REGENCYGAS.COM



REGENCY CORPORATE OFFICE

2001 Bryan Street
Suite 3700
Dallas, Texas 75201
214.750.1771
www.regencyenergy.com

INVESTOR RELATIONS

214.840.5477
IR@regencygas.com

TRANSFER AGENT

American Stock Transfer
& Trust Company
6201 15th Avenue
Brooklyn, New York 11219
800.937.5449
www.amstock.com

INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS

KPMG
717 North Harwood Street
Suite 3100
Dallas, Texas 75201
www.kpmg.com