

**CLIENT SEMINAR 2015** 

# Investing in US Energy Independence

## **Energy Quiz**



- True or False? The United States is the world's largest combined producer of crude oil, natural gas and natural gas liquids.<sup>1</sup>
- Which state has the lowest unemployment rate in the country?<sup>2</sup>
- \_\_\_\_\_% of the products we use on a daily basis contain components made with natural gas.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> US Energy Information Administration (EIA), 2014. (True)

<sup>&</sup>lt;sup>2</sup> Source: Bureau of Labor Statistics, January 2015. (North Dakota: 2.7%)

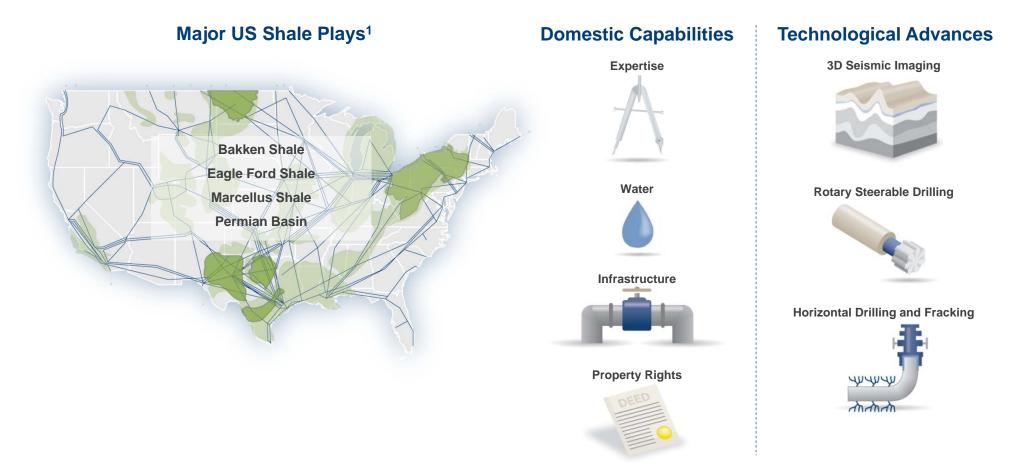
<sup>&</sup>lt;sup>3</sup> Source: Benefits of Fracking, http://www.energyfromshale.org/americas-energy/economy, December 2014. (96%)

## Agenda

- 1 The Growth of US Energy Production
- 2 US Energy's Impact on the Economy
- 3 How Investors Can Participate in US Energy Growth

# The Growth of US Energy Production

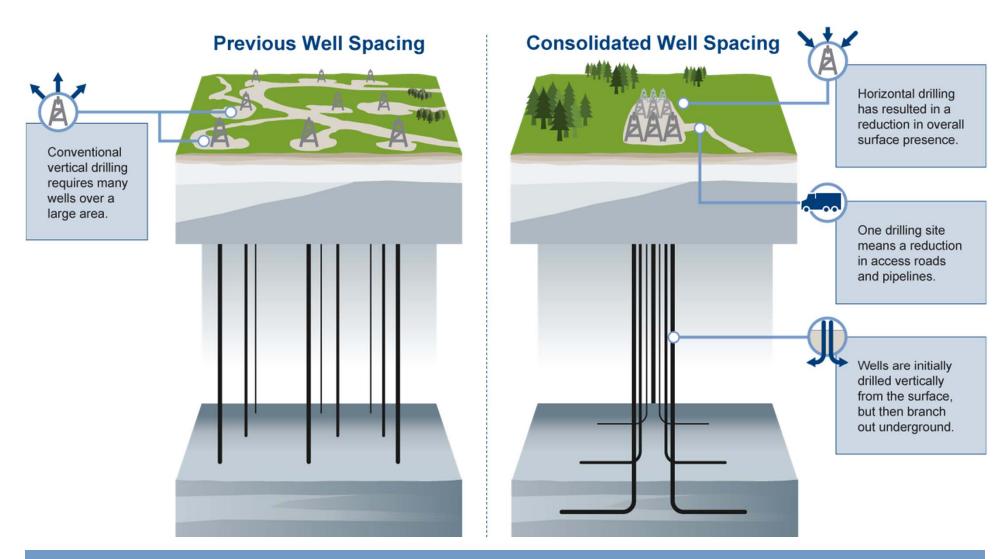
## Three Catalysts for a US Energy Revolution



### North American Energy Independence May Become a Reality

<sup>1</sup> Source of Map Data: Energy Information Administration based on data from various published studies. Green shading represents the approximate location of the current US shale plays, while all shaded areas represent US basins. Basins are geographic features that may or may not contain shale.

## Technology Has Helped Unearth New Energy Opportunities



Technological Advances Have Resulted in Greater Access and Efficient Drilling

## New Drilling Techniques Have Led to New and Emerging Shale Plays



<sup>&</sup>lt;sup>1</sup> Source: 2013 US Geological Survey

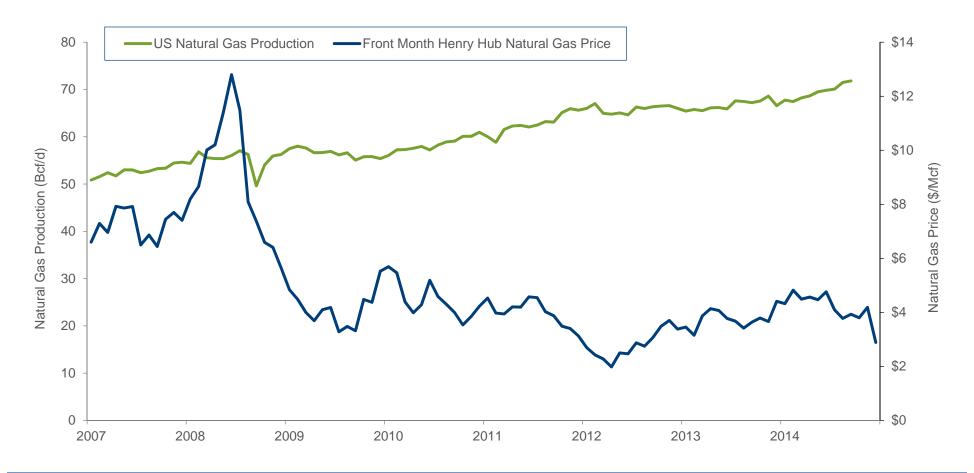
<sup>&</sup>lt;sup>2</sup> Source: www.Energyfrom shale.com , January 2015

<sup>&</sup>lt;sup>3</sup> Source: <u>www.Eaglefordshale.com</u>, January 2015

<sup>&</sup>lt;sup>4</sup> Source: Permian Basin in Texas to Drive Down Oil Prices, The Wall Street Journal, September 1, 2014.

<sup>&</sup>lt;sup>5</sup> Source: <u>www.Energyfromshale.com</u>, January 2015.

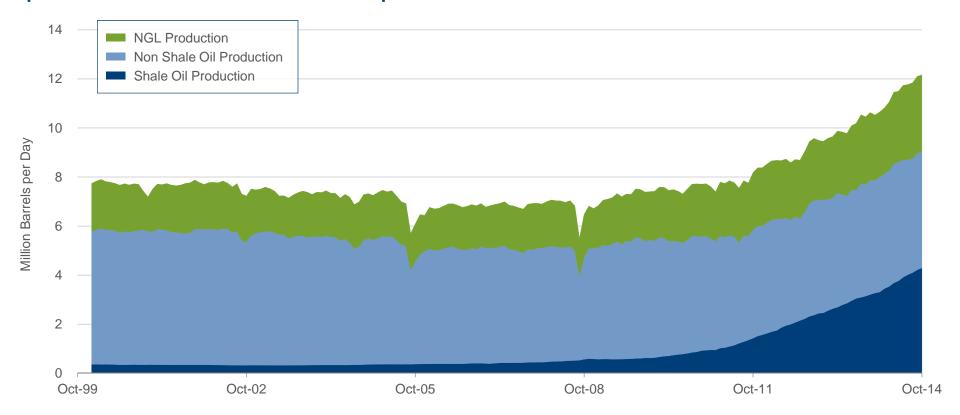
## Efficiencies Have Made it Possible to Extract Energy in the US at a Reduced Cost



Since January 2007, natural gas production in the US has increased 41% despite gas prices falling 40%

## **US Energy Production**

#### **Expansion of Shale Oil and Natural Gas Liquids Production...**



Despite lower crude oil prices, US crude production is expected to grow in 2015.1

Chart Source: US Energy Information Administration, as of October 31, 2014. The economic and market forecasts presented herein are based on proprietary models for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

1 US Energy Information Administration, December 2014.

## **US Potential Recoverable Resources**

### Technologically & Economically Feasible to Extract

#### **Recoverable Shale Gas Resources**

(Trillion Cubic Feet)

1	US		1,161
2	China		1,115
3	Argentina		802
4	Algeria		707
5	Canada		573
6	Mexico		545
7	Australia		437
8	South Africa		390
9	Russia		285
10	Brazil		245
11	Others		1535
		TOTAL	7,795

#### **Recoverable Shale Oil Resources**

(Billion Barrels)

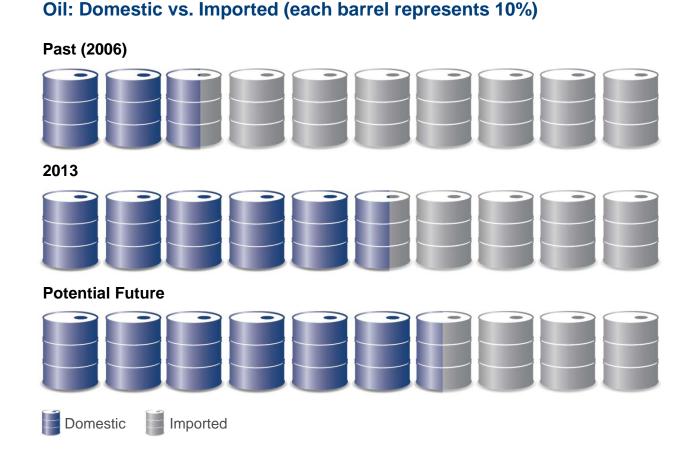
		TOTAL	335
11	Others		65
10	Canada		9
9	Pakistan		9
8	Mexico		13
7	Venezuela		13
6	Australia		18
5	Libya		26
4	Argentina		27
3	China		32
2	US		48
1	Russia		75

Projected US Resources suggests the Energy Revolution may be in its early stages

# US Energy's Impact on the Economy

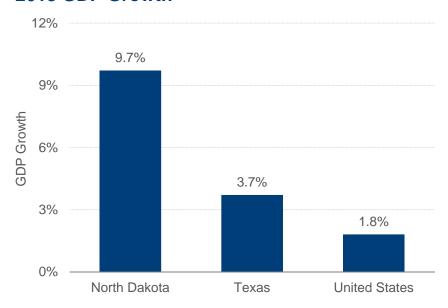
## Increased Production Has Resulted in a Shift from Imported to Domestic Energy Consumption

- Key driver today US-based energy users are shifting towards US produced energy.
- Key driver in the future Greater ability to export US-produced energy.



## Economic Beneficiaries of the US Energy Revolution

#### 2013 GDP Growth



Source: Bureau of Economic Analysis and GSAM as of December 31, 2014. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

#### Infrastructure

An estimated \$1.2 trillion will be spent on energy infrastructure through 2025.1



#### **Employment**

In the past decade, growth of jobs in oil and natural gas extraction, drilling, and support activities has outpaced the national average of private sector job gains.<sup>2</sup>



#### **Power Generation**

Transformation from coal to natural gas has created an economic wave, which is fostering the next-generation of energy jobs while also helping to clear the air.<sup>3</sup>



#### Manufacturing

Cheaper oil may lead to a net addition of one percentage point to annual G.D.P.<sup>4</sup> For every \$1.00 spent in Manufacturing, another \$1.37 is added to the economy. <sup>5</sup>



#### **Household Income**

The average US household may spend about \$550 less on gasoline in 2015, compared to 2014<sup>6</sup>

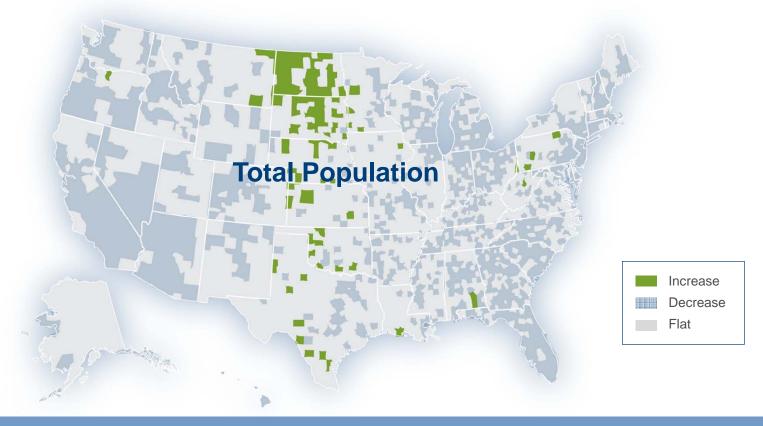
#### The Energy Value Chain has contributed to many facets of US economic growth

- <sup>1</sup> Source: IHS, Global Inc., June 30, 2014.
- <sup>2</sup> Source: US Energy Information Administration, November 5, 2014.
- <sup>3</sup> Source: Coal To Gas Moves Are Generating Economic Waves, Forbes, January 16, 2015.
- <sup>4</sup> Source: Cheaper Oil, Fatter Wallets and a National Opportunity, The New York Times, December 20, 2014.
- <sup>5</sup> Source: National Association of Manufacturers.com
- <sup>6</sup> Source: US Energy Information Administration, December 16, 2014.

## Household Income Has Benefited from the Energy Revolution<sup>1</sup>

#### Changes in Median Household Income by County: 2007 – 2013

US median household income is \$52,250



### Those states with exposure to the Energy Evolution have benefited the most

Model-Based Estimates – The data provided are indirect estimates produced by statistical model-based methods using sample survey, decennial census, and administrative data sources. The estimates contain error stemming from model error, sampling error, and nonsampling error. Note: A highlighted color for a given county indicates that individual county was statistically significant at the 90% confidence level.

<sup>&</sup>lt;sup>1</sup> Source: US Department of Commerce Economic and Statistics Administration US CENSUS BUREAU and US Census Bureau, Small area Income and Poverty Estimates (SAIPE) Program, December 2014.

## Case Studies: Economic Growth by State<sup>1</sup>



- Bakken Shale is estimated to contain 11.4 billion barrels of oil a twofold increase over previous estimates.²
- The industry is supporting 64,000 jobs statewide, or 12% of the state's total employment.
- Revenue from oil production has contributed \$6.6 billion to the state's economy.



- The Marcellus Shale play is estimated to contain more than 410 trillion cubic feet of natural gas
- Energy has contributed more than \$34 billion to the state's economy
- Natural Gas drilling at the Pittsburgh airport is expected to provide investment of over \$1 billion to the region<sup>3</sup>

US shale energy will save the average American household \$3,500 per year by 2025

<sup>1.</sup> Source of Slide Data: www.energyfromshale.com, December 2014.

<sup>2.</sup> Source: 2013 US Geological Survey

<sup>3.</sup> Source: www.pitairport.com, January 2015.

Consider a Strategic Mix of Stocks that May Be Tied to the Energy Revolution



Stocks directly and indirectly exposed to the Energy Evolution may benefit from its growth

Source: GSAM, 2014.

## Case Studies: Industries That May Directly/Indirectly Benefit from the Energy Revolution



#### Case Study: Sand<sup>1</sup>

- Sand is a key component of hydraulic fracturing
- Natural gas shale sites were expected to use nearly 95 billion pounds of sand in 2014
- Sand-demand is expected to grow by 22% by 2017



#### Case Study: Railroads

- Railroads ship 11% of the total oil pumped in the United States<sup>2</sup>
- Railroad revenue from hauling crude jumped from \$25.8 million in 2008 to \$2.15 billion in 2013.2
- Freight rail supports more than a million jobs and adds \$265 billion in annual economic activity³

Sand and railroads are just two industries that have benefited from the US Energy Evolution

<sup>&</sup>lt;sup>1</sup> Source: Small Firm Strikes it Rich with Fracking Sand, Wall Street Journal, September 15, 2014.

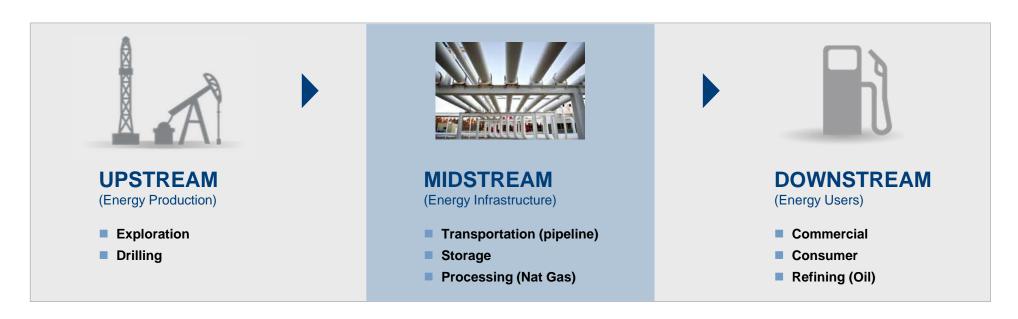
<sup>&</sup>lt;sup>2</sup> Source: Dangers Aside, Railways Reshape Crude Market, Wall Street Journal, September 21, 2014.

<sup>&</sup>lt;sup>3</sup> Source: <u>www.frieghtrailworks.org</u>

# How Investors Can Participate in US Energy Growth

## What are Master Limited Partnerships (MLPs)?

- Publicly traded partnerships.
- Partnership structure doesn't expose MLPs to corporate taxes (as they're passed through to the Limited Partner units).<sup>1</sup>
- The majority of MLPs are engaged in businesses tied to natural gas.<sup>2</sup>
- Deficiencies in Midstream infrastructure assets may offer the greatest opportunities.



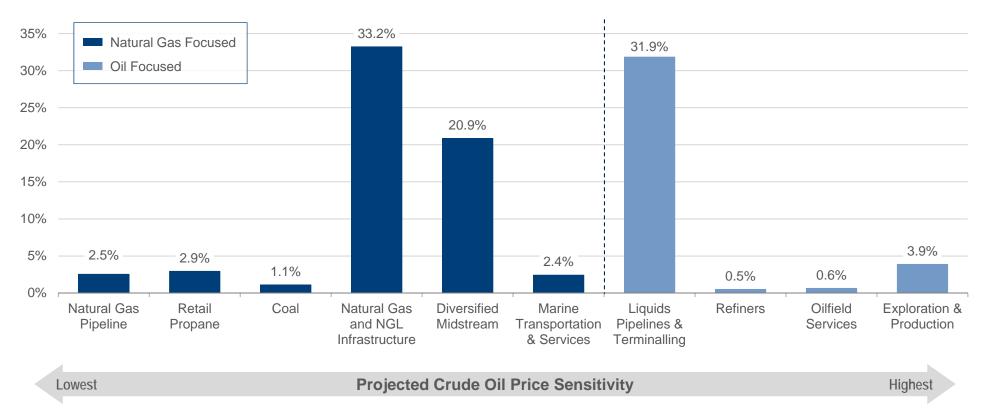
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<sup>1</sup> GS MLP Energy Infrastructure Fund is treated as a "C" corporation for US federal income tax purposes, and is therefore subject to US federal income tax on its taxable income at the graduated rates applicable to corporations (currently 35%), as well as state and local income taxes.

<sup>&</sup>lt;sup>2</sup> Source: Bloomberg; GSAM. As of 1/16/2014.

## The Relationship between MLPs and Crude Oil

#### **Sub-sector Allocation of the Alerian MLP Index (AMZ)**

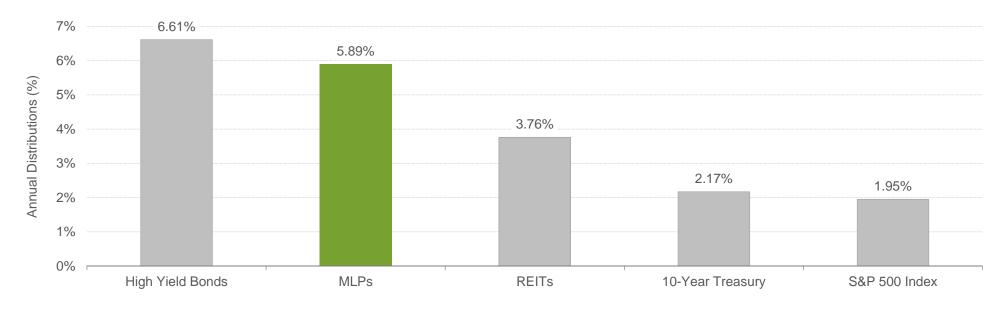


#### Approximately two-thirds of MLPs in the Alerian Index are not in the crude oil business

Source: Bloomberg; GSAM. As of 1/16/2014. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

## MLPs May Provide an Attractive Source of Potential Distributions

#### **Annual Distributions (as of December 31, 2014)**



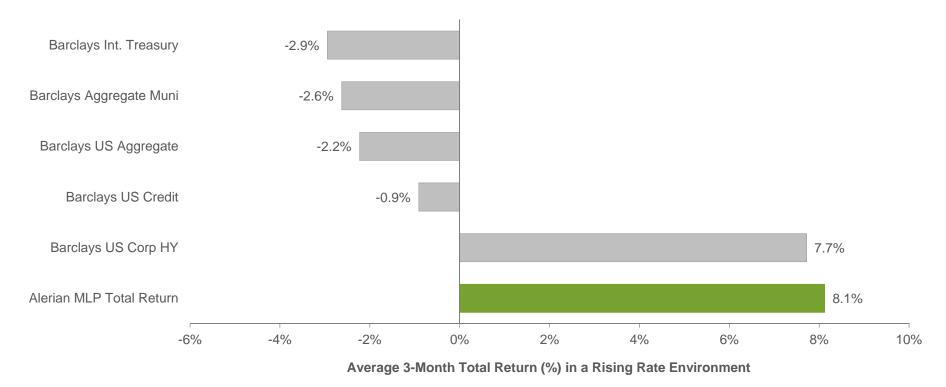
MLP distributions consist largely of return of capital and not of current income. The ultimate composition of these distributions may vary due to a variety of factors including projected income and expenses, depreciation and depletion, and any tax elections made by the MLP. The final characterization of such distribution will be made when an MLP can determine each investor's share of the MLP's income, expenses, gains and losses. The final tax status of the distribution may differ substantially from this information.

Source: Bloomberg, Factset, December 31, 2013. The Alerian MLP TR Index represents MLPs. FTSE NAREIT North America Index represents REITs. Barclays High Yield Index represents high yield bonds. S&P 500 Index represents US stocks. Federal Reserve US H.15 T Note Treasury Constant Maturity 10 represents the US 10-Year Treasury. Fixed income investing involves interest rate risk. When interest rates rise, bond prices generally fall. Below investment grade (high yield) bonds are more at risk of default and are subject to liquidity risk. Stock investments are subject to market risk, which means that the value of the securities may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions. Investments in real estate companies, including REITs or similar structures are subject to volatility and additional risk, including loss in value due to poor management, lowered credit ratings and other factors. Investments in MLPs are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner's right to force sales at undesirable times or prices. A 10-Year Treasury is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes. Please see additional disclosures. Investors cannot invest directly in an index. The chart above does not represent the past or current performance for the Goldman Sachs MLP Energy Infrastructure Fund. **Performance data quoted represents past performance. Past performance does not guarantee future results, which may vary.** 

## MLPs Have Offered a Hedge Against Rising Rates...

#### **Historical performance**

(June 1, 2006 – December 31, 2014)

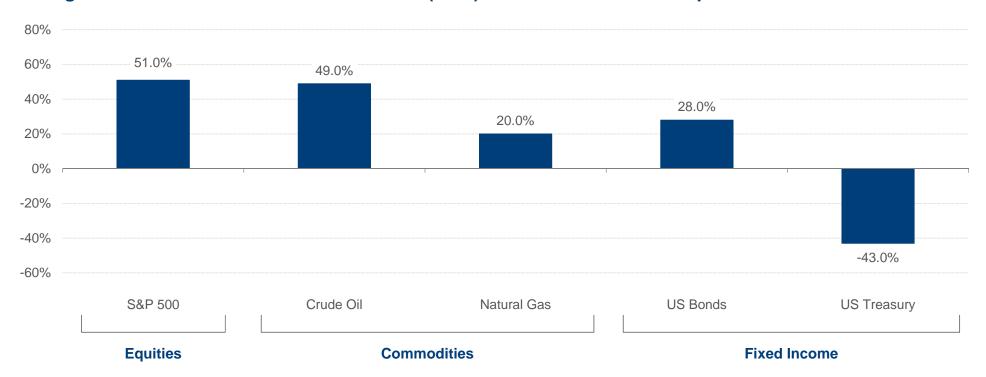


#### Historically, MLPs have experienced limited interest rate sensitivity<sup>1</sup>

Sources: Bloomberg, Barclays and GSAM as of December 31, 2014. Analysis is based on three month periods of time in which the 10-Year Treasury rose at least 100 basis points, beginning in June 2006. The time period analyzed is the since inception period for the Alerian MLP Total Returns Index. **Past performance does not guarantee future results which may vary.** Please see additional disclosures on page 24. Diversification does not protect an investor from market risk and does not ensure a profit.

## ... And Low Long-Term Correlations to Traditional Asset Classes

#### Average Correlations to the Alerian MLP Index (AMZ) since its June 2006 Inception

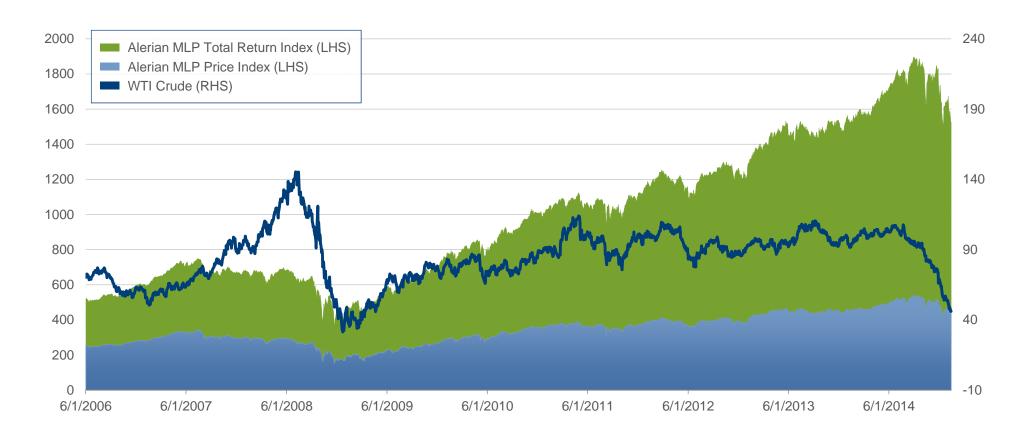


As noted above, MLPs have been historically less correlated to bonds than equities<sup>1</sup>

<sup>1.</sup> Correlation data as of December 31, 2014. Source Factset. S&P 500 defined as the S&P 500 Total Return Index. US Bonds are defined as the Barclays US Aggregate Credit – Corporate – Investment Grade. US Treasury defined as BofA Merrill Lynch US Treasuries (10Y). MLPs defined as the Alerian MLP Index. Crude Oil defined as Dow Jones-UBS Crude Oil Sub-Index 3 Month Forward. Natural Gas defined as Dow Jones-UBS Natural Gas Sub-Index. Past correlations are not indicative of future correlations, which may vary. Correlation is a statistical measure of how two securities move in relation to each other. No representation is made that a client will achieve results similar to those shown. Please see additional disclosures. Past performance does not guarantee future results, which may vary.

## MLPs Have Offered Long-term Growth

(June 1, 2006 – December 31, 2014)

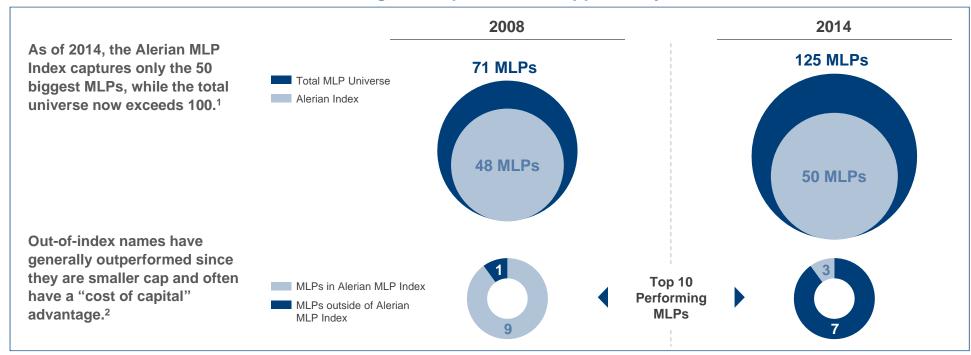


Historically, MLPs have weathered volatility in oil prices

Chart Source: Bloomberg, December 31, 2014. The Alerian MLP Index is the leading gauge of large- and mid-cap energy Master Limited Partnerships (MLPs). The float-adjusted, capitalization-weighted index, which includes 50 prominent companies and captures approximately 75% of available market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis (AMZX). Past performance does not guarantee future results which may vary.

## Portfolio Implementation: Consider an MLP Fund That Goes Beyond the Index

#### Growth in the out-of-index universe through IPOs presents an opportunity within MLPs



#### We believe not all MLP investments are created equal

<sup>&</sup>lt;sup>1</sup> Source: Alerian MLP, based on data as of June 30, 2008 and December 31, 2014. These periods were chosen as most representative of the change in % of names captured previously to where it stands today. During the period between 2008 and 2013, two additional MLP securities were added to the Alerian Index. However, the Alerian Index still does not include the entire universe of MLPs. The entire MLP universe was obtained through the National Association of Publicly Traded Partnerships (NAPTP) as of December 31, 2013. **Past performance does not guarantee future results, which may vary.** <sup>2</sup> Source: Alerian MLP as of December 31, 2012. These performance results do not reflect the performance of any GSAM product and are being shown for informational purposes only. No representation is made that a client will achieve results similar to those shown. Cost of capital is defined as the cost of funds used for financing a business. Please see additional disclosures. **Past performance does not guarantee future results, which may vary.** 

## How to Get Started in the US Energy Revolution

- Review your exposure to the US Energy Revolution with your advisor.
- Consider a measured exposure to MLPs (direct or managed).
- Review your equity & bond investments for companies that may indirectly benefit from the US Energy Revolution.

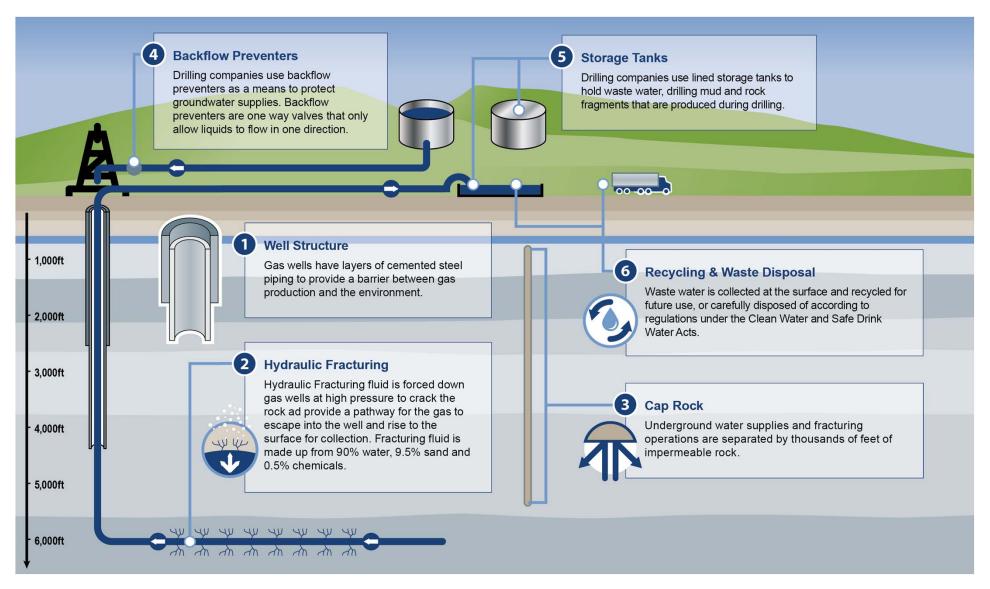
**Financial Advisor Name** 

**Financial Advisor Phone Number** 

**Financial Advisor Email Address** 

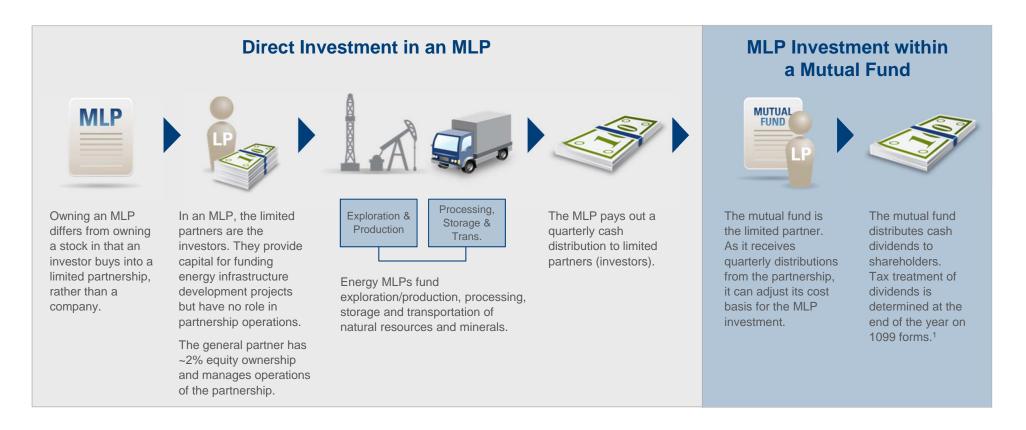
## Appendix

## Protecting the Environment During Hydraulic Fracturing



Source: www.energyfromshale.org

## How Investments in MLPs Work



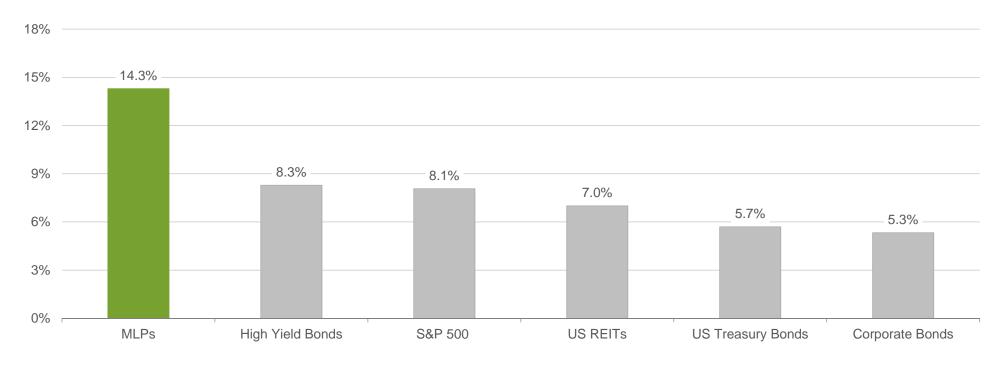
MLPs in the framework of a mutual fund can offer professionally managed portfolios, simplified 1099 tax reporting and lower investment minimums

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1 GS MLP Energy Infrastructure Fund is treated as a "C" corporation for US federal income tax purposes, and is therefore subject to US federal income tax on its taxable income at the graduated rates applicable to corporations (currently 35%), as well as state and local income taxes.

## MLPs Have Historically Outperformed

#### **Average Annual Total Return (June 2006 – December 2014)**



Source: Morningstar, Inc. as of 12/31/14.

MLPs defined as the Alerian MLP Index. The Alerian MLP Index inception is June 2006. US Bonds are defined as the Barclays US Aggregate Index. US Treasury defined as the Barclays US Return Index. High Yield Bonds defined as the Barclays US Aggregate Credit – Corporate High Yield Bond Index. US REITS defined as FTSE EPRA/NAREIT USA Index. US Treasury Bonds defined as 7y-10y US Treasuries Index. The returns are gross and assume reinvestment of all distributions at net asset value. They do not reflect the deduction of investment advisory fees, which will reduce returns. Fixed income investing involves interest rate risk. When interest rates rise, bond prices generally fall. Below investment grade (high yield) bonds are more at risk of default and are subject to liquidity risk. Stock investments are subject to market risk, which means that the value of the securities may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions. Investments in real estate companies, including REITs or similar structures are subject to volatility and additional risk, including loss in value due to poor management, lowered credit ratings and other factors. Investments in MLPs are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner's right to force sales at undesirable times or prices. A 10-Year Treasury is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes. **Past performance does not guarantee future results, which may vary.** Please see additional disclosures.

## Risk Disclosures

#### **Risk Considerations**

Master Limited Partnerships ("MLPs") may be generally less liquid than other publicly traded securities and as such can be more volatile and involve higher risk. Investments in securities of an MLP involve risks that differ from investments in common stocks, including risks related limited control and limited rights to vote on matters affecting the MLP, risks related to potential conflicts of interest between the MLP and the MLP's general partner, cash flow risks, dilution risks and risks related to the general partner's right to require unit holders to sell their common units at an undesirable time or price. MLPs are also generally considered interest-rate sensitive investments. During periods of interest rate volatility, these investments may not provide attractive returns.

MLPs may also involve substantially different tax treatment than other equity-type investments, and such tax treatment could be disadvantageous to certain types of investors, such as retirement plans, mutual funds, charitable accounts, foreign investors, retirement accounts or charitable entities. In addition, investments in MLPs may trigger state tax reporting requirements. Generally, a master limited partnership ("MLP") is treated as a partnership for Federal income tax purposes. Therefore, investors in an MLP may be subject to certain taxes in addition to Federal income taxes, including state and local income taxes imposed by the various jurisdictions in which the MLP conducts business or owns property. In addition, certain tax-exempt investors in an MLP, such as tax-exempt foundations and charitable lead trusts, may incur unrelated business taxable income ("UBTI") with respect to their investment. UBTI may result in increased Federal, and possibly state and local, tax costs, and may also result in additional filing requirements for tax exempt investors. Non-U.S. investors may be subject to U.S. taxation on a net income basis and have U.S. filing obligations as a result of investing in MLPs. The tax reporting information for MLPs generally is provided to investors on an annual IRS Schedule K-1, rather than an IRS Form 1099. To the extent the Schedule K-1 is delivered after April 15, you may be required to request an extension to file your tax returns.

### General Disclosures

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The Cushing ® Royalty Trust and Upstream MLP Indices (CRTY and CRTYTR) are market capitalization weighted indices that (respectively) reflect the Price and Total Return performance of Royalty Trusts and MLPs (Master Limited Partnerships) involved in the following main business segments: Exploration & Production and Natural Resources. This includes Royalty Trusts that are structured as MLPs.

The S&P 500 Index is an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of US equities and is meant to reflect the risk/return characteristics of the large cap universe.

The Barclays Capital Aggregate Bond Index represents an unmanaged diversified portfolio of fixed-income securities, including US Treasuries, investment-grade corporate bonds, and mortgage-backed and asset-backed securities. The Index figures do not reflect any deduction for fees, expenses or taxes. It is not possible to invest directly in an unmanaged index.

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FTSE /NAREIT North America Index gauges the performance of companies that develop and own real estate in North America.

iBoxx \$ Liquid High Yield Index is a rules-based index consisting of the most liquid and tradable US dollar-denominated, high yield corporate bonds for sale in the

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