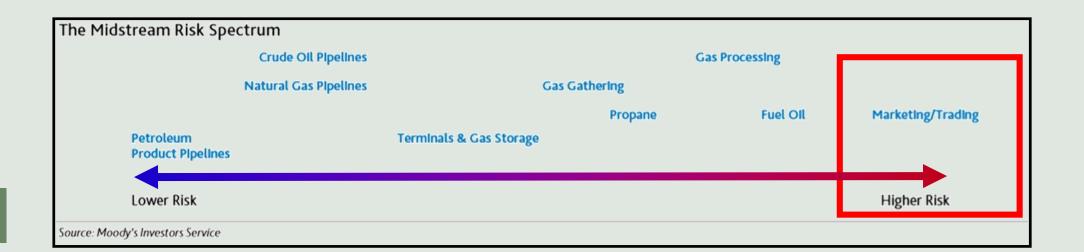


Energy Marketing – Risk Management and Optimizing Assets

Joseph Hartz, President, Energy Services



Energy Marketing - Perceived Risk



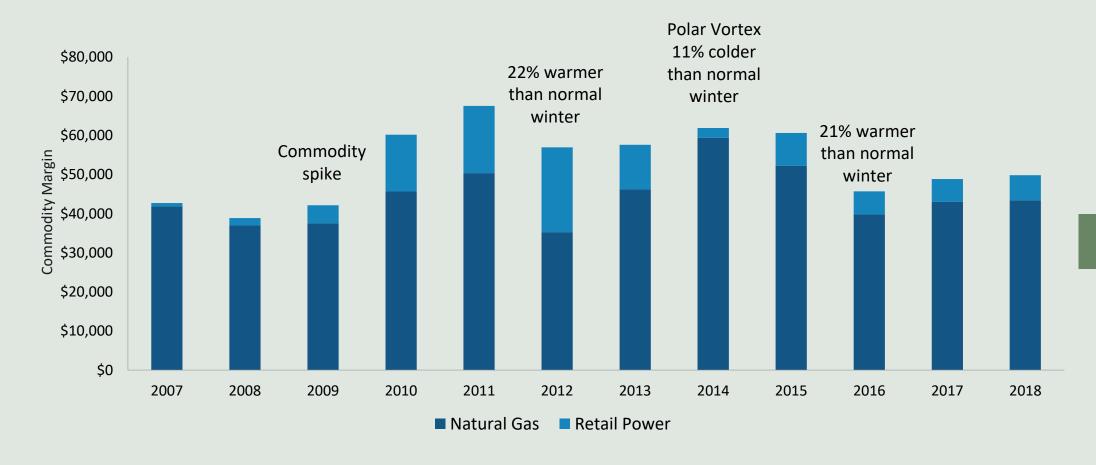
ENERGY SERVICES

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ENERGY SERVICES

Minimizing Commodity Risk – Proven Results



Disciplined approach results in steady margin through numerous disruptive events

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How We Manage Risk

- Thorough Counterparty Credit Review
- Vendor/Customer Limits and Insurance
- Supplier Diversity
- Contracts
 - Hedging
 - Take or Pay
 - Weather Volatility Surcharges
- Diverse Asset Base
- Customer Mix



Energy Marketing - Risk Management and Optimizing Assets

Joseph Hartz, President, Energy Services

Counterparty Management

- Thorough Credit Review and Internal Risk Model Analysis
 - Credit approval required for all new customers, previous customers not currently served, and current customers adding a location or product
 - Utilize credit reporting agency reports, financial statements, trade and bank references, payment terms, peak exposure, and credit insurance carrier reports
- Vendor/Customer Limits and Insurance
 - Credit insurance is obtained for all larger customers
 - Third party monitoring service is used for customers with exposure greater than \$100k
- Supplier diversity
 - Energy Services contracts with over 100 different suppliers

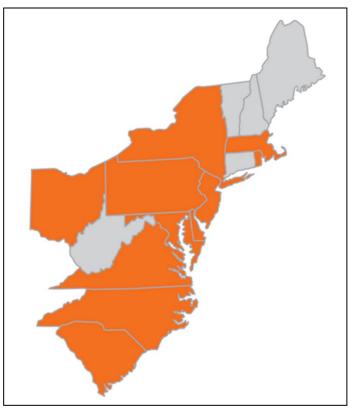


Contract Management

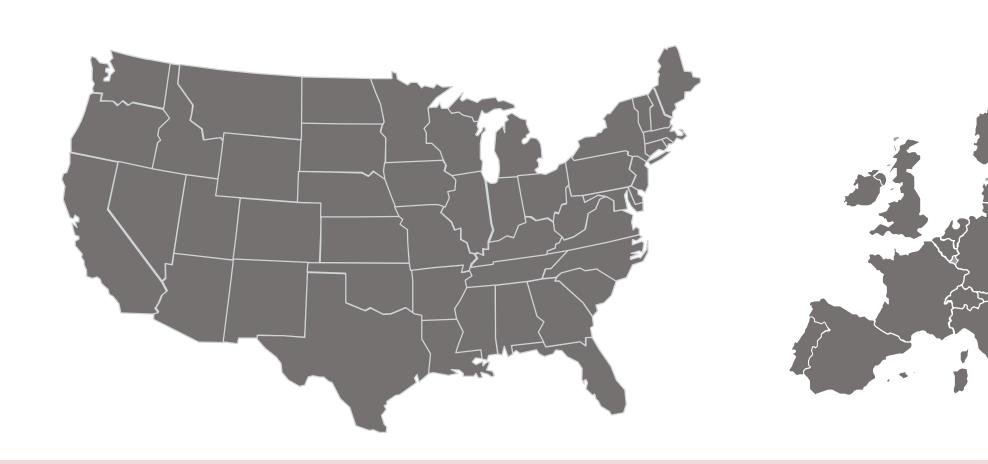
- Energy Services hedges contracts <u>back-to-back</u> to avoid commodity price fluctuations and risk, <u>no speculative trading</u>; experienced sales team with strong market knowledge
- Incremental/Remarket Customers take or pay contracts, the customer is responsible for the gas volumes that are contracted and hedged
- Requirements Customers hedged back-to-back and a surcharge is added to account for weather volatility

Gas Delivery

- Unique asset portfolio
 - Pipeline, peaking, storage assets form a complementary portfolio that allows for strategic supply to retail sales
 - LNG and propane-air peak shaving supplies limit financial risks of retail price spikes







Global LPG - Leveraging Scale

Roger Perreault, Executive Vice President, Global LPG Hugh Gallagher, President and Chief Executive Officer, AmeriGas Paul Ladner, Chief Operating Officer, UGI International





Best Practice Implementation

M&A

Shared Growth Strategy Modeling, Negotiation and Integration Process

Industrial Management and Safety

- Drive Cam, Cylinder Filling Plants
- KPIs & Benchmarking

Commercial Programs

- Non-LPG Revenue
- AmeriGuard Program
- Pricing Effectiveness
- Cylinder Vending Machines
- Cylinder Home Delivery

Non-LPG Procurement

- Leverage scale
 - Companies invest over \$200MM annually in maintenance and growth capital



Supply Opportunities

Connecting the U.S. to Europe

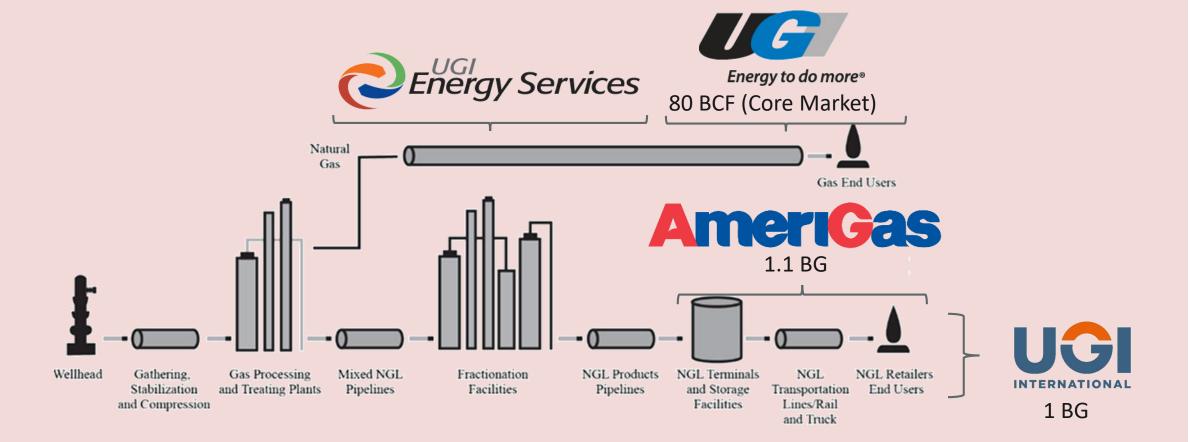
- Increasing U.S. product flowing to Europe via import terminals
- Leverage AmeriGas and UGI International scale

Supply team centralized in Europe and one team in U.S.

Best practice sharing



Supply Strategy Development







Global LPG - Leveraging Scale

Roger Perreault, Executive Vice President, Global LPG Hugh Gallagher, President and Chief Executive Officer, AmeriGas Paul Ladner, Chief Operating Officer, UGI International

Best Practice Implementation

- M&A
 - Shared Growth Strategy
 - Common Modeling, Negotiation, Integration Processes
- Industrial Management & HSSE
 - Drive Cam for safer logistics
 - European Cylinder Filling Plant experience instilled at AmeriGas
 - Common KPIs and benchmarking to drive improvement
- Commercial Programs
 - AmeriGuard AmeriGas fixed monthly payment program for residential bulk customers introduced in most European countries
 - Cylinder Vending developed by AmeriGas, technology and learnings introduced in France, Denmark,
 Poland, Hungary
 - Cylinder Home Delivery



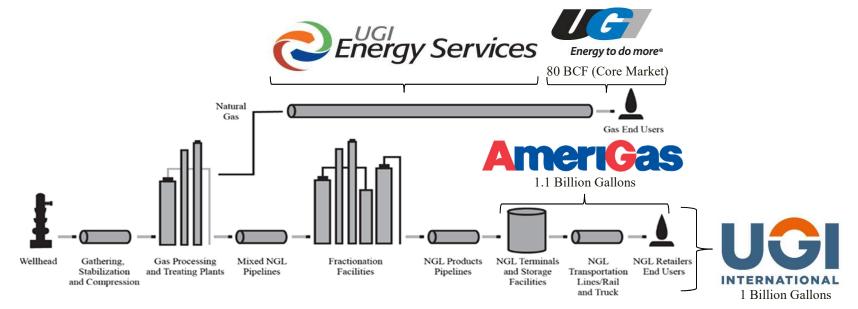
 Pricing Effectiveness – shared development of effective price management tools for residential bulk customers

Non-LPG Procurement

- Leverage scale
 - AmeriGas and UGI International collectively invest over \$200MM annually in maintenance and growth capital

Supply

- Connecting the U.S. to Europe
 - Increased import infrastructure would allow UGI to manage more of its own supply
 - Europe importing more LPG from the U.S. and less by rail from the East
 - Leverage AmeriGas and UGI International scale
 - Move upstream in the midstream value chain to better utilize our purchasing scale to minimize costs and capture margin





Natural Gas – Meeting the Infrastructure Challenge

Robert Beard, Executive Vice President, Natural Gas





UGI Geographic Position and Growing Asset Base

- Eastern edge of Marcellus
- Assets include: LNG facilities / LNG trucking, storage, and pipeline capacity
- Consistent track record of successful execution of Marcellus-based projects
- \$1.25 billion invested over the past ten years (Energy Services)
- Successfully executed \$675 capital program at the Utility over the past two years; \$1.6B in planned capital spend FY19-FY22

Growth in End-User

Since 2008 UGI Utilities converted

- Over 70,000 households and businesses
- Over 75 Large Commercial & Industrial Facilities

\$60+ million 2018 Growth Capital Budget

14,000 to 18,000 new customers added annually since 2012

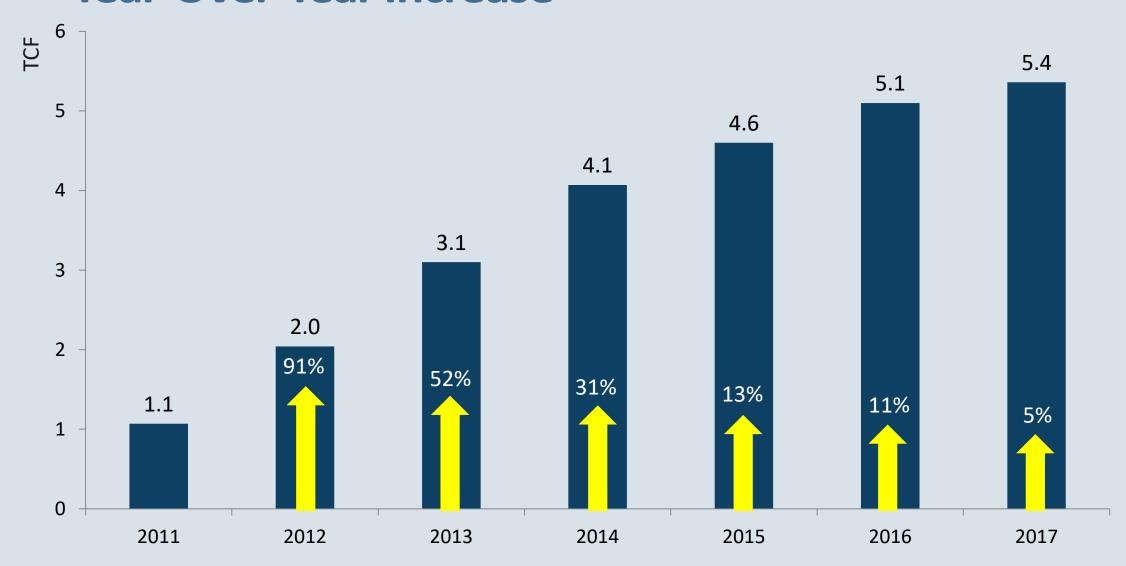
New Technologies

- 11 CHP installations, Eight CNG installations over last five years
- 2019 Six CHP and three CNG projects forecasted

Regulatory Programs Encouraging Natural Gas Use

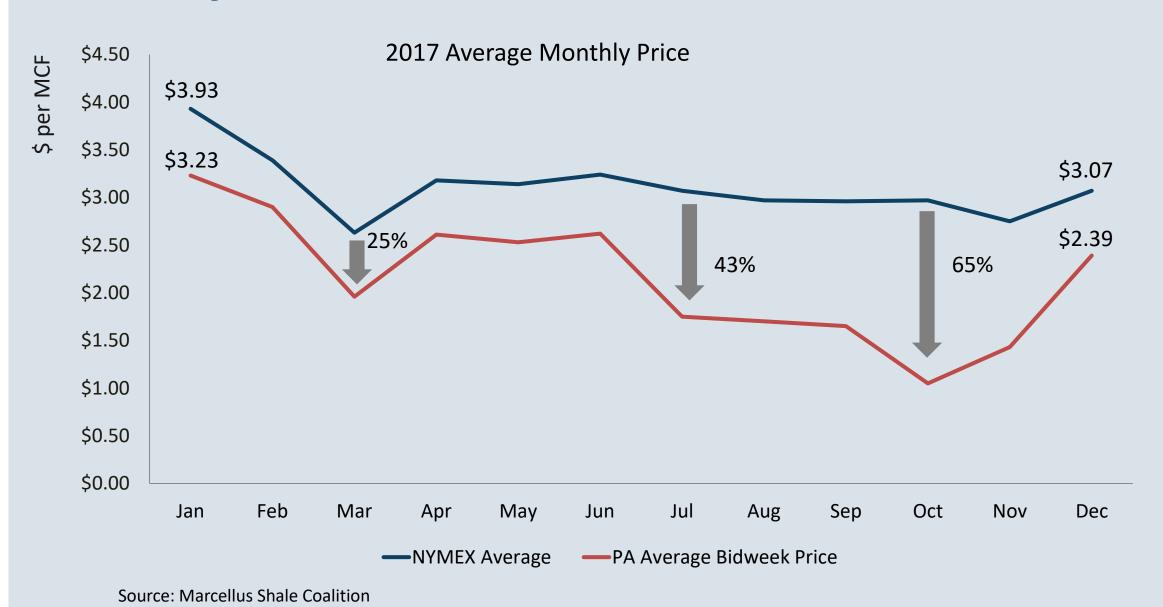
Flexible Rates and Programs

PA Unconventional Shale Gas Production Year-Over-Year Increase



Source: Marcellus Shale Coalition

Pennsylvania Natural Gas Price Differential



Pennsylvania Electricity Price Differential



Source: Energy Information Agency



Natural Gas - Meeting the Infrastructure Challenge

Robert Beard – Executive Vice President, Natural Gas

What problems does the infrastructure gap create? In 2017:1

- Northeast residents paid 23% more for their natural gas than the U.S. average, and 51% more for their electricity.
- Out of the 10 states with the highest electricity prices in the country, 6 were in New England
- Industrial users in the Northeast paid 73% more for their natural gas than the U.S. average, and 83% more for electricity

What can Pennsylvania and the Marcellus offer?²

- 2nd largest natural gas producer in U.S.
- 20% of total U.S. natural gas production
- 17+ billion cubic ft/day

How have customers who are connected to the Marcellus benefitted?²

- Wholesale electric prices down 41% since 2008 for the PJM
- Natural gas prices for end-use customers down 51% 78% since 2008
- Average annual savings >\$1,100 \$2,200 per household



¹ Source: Energy Information Agency

² Source: Marcellus Shale Coalition

UGI's geographic location and growing asset base positions us uniquely to meet the challenge

- Assets located at the eastern edge of the Marcellus
- Unique asset portfolio provides flexibility and allows us to extend our reach in a capacity constrained environment
 positioned well to capitalize in varying market conditions
 - LNG facilities / LNG trucking, storage, and pipeline capacity
- Consistent track record of successful execution of Marcellus-based projects
 - \$1.25 billion invested over the past ten years (Energy Services)

Successfully executed \$675 million capital program at UGI Utilities over the past two years; \$1.6B in planned

capital spend FY19-FY22

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