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2016 Deloitte Oil & Gas Conference

Resilient, resourceful, and rising to the challenge

Retrospective

Deloitte Center *for* Energy Solutions

Welcome + state of the industry

The Deloitte Center for Energy Solutions hosted the 2016 Deloitte Oil & Gas Conference at the Hilton Americas in Houston, Texas, on September 21, 2016. The conference theme of resilient, resourceful, and rising to the challenge tied together the many threads of finance, technology, and innovation that will turn the industry's challenges into opportunities both today and in the future.

When John England stepped on stage, he noted despite the low oil price environment, more people sat in the audience in 2016 than in 2014. This is recognition that it is more important now for the industry to step up and prepare for the future. Since 2014, the industry has lost over 30 percent of its market value,[1] endured over 90 bankruptcies,[2] and experienced 350,000 layoffs.[3] Companies have focused on cutting costs, refocusing on core assets, and right-sizing their portfolios. As supply and demand comes into balance over the next few years, the world will need even more energy, including oil and natural gas. By successfully adapting to the challenges today, companies are setting the stage for robust growth in both production and profitability.

Click on the navigation tabs below to get started.

"This is uncharted water, and when you are in uncharted water, you need guidance, which is what today's conference can help provide. The innovative approaches oil and gas companies have taken to reduce costs has been nothing short of remarkable. What I love about this industry is the people—we are resilient, resourceful, and we will rise to the challenge."

John W. England, Vice Chairman,
US and Americas Oil & Gas Leader,
Deloitte LLP

John W. England, Vice Chairman, US and Americas Oil & Gas Leader, Deloitte LLP

Resilient, resourceful, and rising to the challenge

Conference themes

Oil, gas, and geopolitics

A global rebalancing in the oil market continues. Prices might remain lower for longer, but some signs of cautious optimism are emerging.

Delivering value in a challenging upstream environment

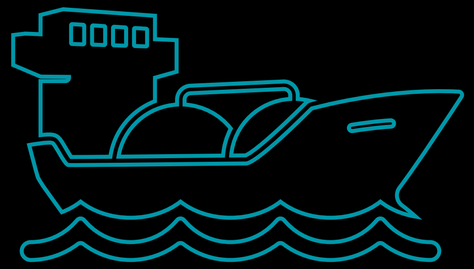
Economic growth is powered by energy, and despite incredible improvements in energy efficiency, the world still needs a tremendous amount for the foreseeable future.

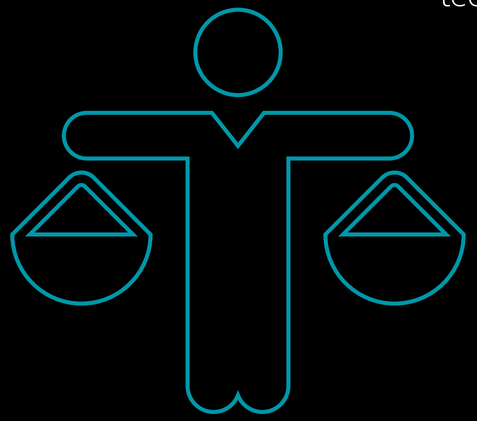
The upstream story

Continued emphasis on operational efficiency and new technology in the US has resulted in reduced spending and a growth in production.

The outlook on LNG exports

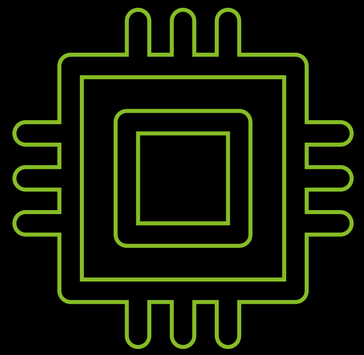
LNG is evolving, presenting an opportunity to export the US shale gas renaissance while introducing new business models to the world.





Balancing growth and sustainability

Building a portfolio that balances growth with sustainability will be key to meeting future oil and gas demand.



Innovative technologies are driving the future of oil and gas

Innovation is not just for technology; fit-for-purpose financing also plays an important role.

Conference sessions

Click on session titles to go to the highlights.

Oil, gas, and geopolitics: The current dynamics impacting the industry

The conference kicked off with a discussion of the market's future direction. Part of the story is clearly, "lower for longer and longer and longer." As we move past the oversupply in short-to-medium term, demand will continue to grow, prices will still fluctuate, and oil and gas will play a major role in the global economy.

So what caused the price to drop in the last couple of years, and what will drive the industry in the future? David Knapp noted the oil price downturn was caused by incredible growth of US shale. And while hydraulic fracturing was important, the shale revolution actually stems from the realization that "source rock matters." Extraordinary growth in production in the US and OPEC's decision to continue producing at record levels basically flooded the market.

But while it is key to keep an eye on Saudi Arabia in the short term, demand growth will be the largest driver in the future. Showing a picture of the globe at night, Kenneth Medlock highlighted that oil demand will not be from the 1.3 billion people in the brightly lit countries of the developed world, but rather from the 6.1 billion people in developing areas where there is little or no light.

David Knapp, Chief Energy Economist and Senior Editor for Global Oil Market Analysis, Energy Intelligence Group

Kenneth B. Medlock III, James A. Baker, III, and Susan G. Baker Fellow in Energy and Resource Economics | Senior Director, Center for Energy Studies, Rice University

Moderated by Andrew Slaughter, Executive Director, Deloitte Center for Energy Solutions, Deloitte Services LP

ExxonMobil energy outlook

The energy landscape in 2040 will look much different from today. But how? Rob Gardner outlined ExxonMobil's view of fundamentals for the next 25 years, emphasizing how important the developing world will be in defining our energy future. Citing the global middle class is expected to double to over five billion people by 2030, Gardner demonstrated how economic and demographic growth (including in underserved markets) will more than double demand for energy around the world. In stark contrast to the robust demand growth in places like China and India, demand in the western world is expected to remain almost flat over the same period in time.

Why is this? In countries like the United States, energy efficiency, regulatory changes, and consumer preferences will lead to lower energy intensity, even as the economy continues to grow. But the developing world is a different story. Currently, one billion people in the world do not have electricity, and over two billion people do not use modern cooking or heating tools. Rapid economic expansion and industrialization will connect new customers to global energy markets. These consumers will not just be turning on their lights or heating homes, they will be riding in cars. In 2040, we will have more efficient economies, but we will still need a tremendous amount of energy to power our world, including not just oil and gas, but also coal, nuclear, and renewables.

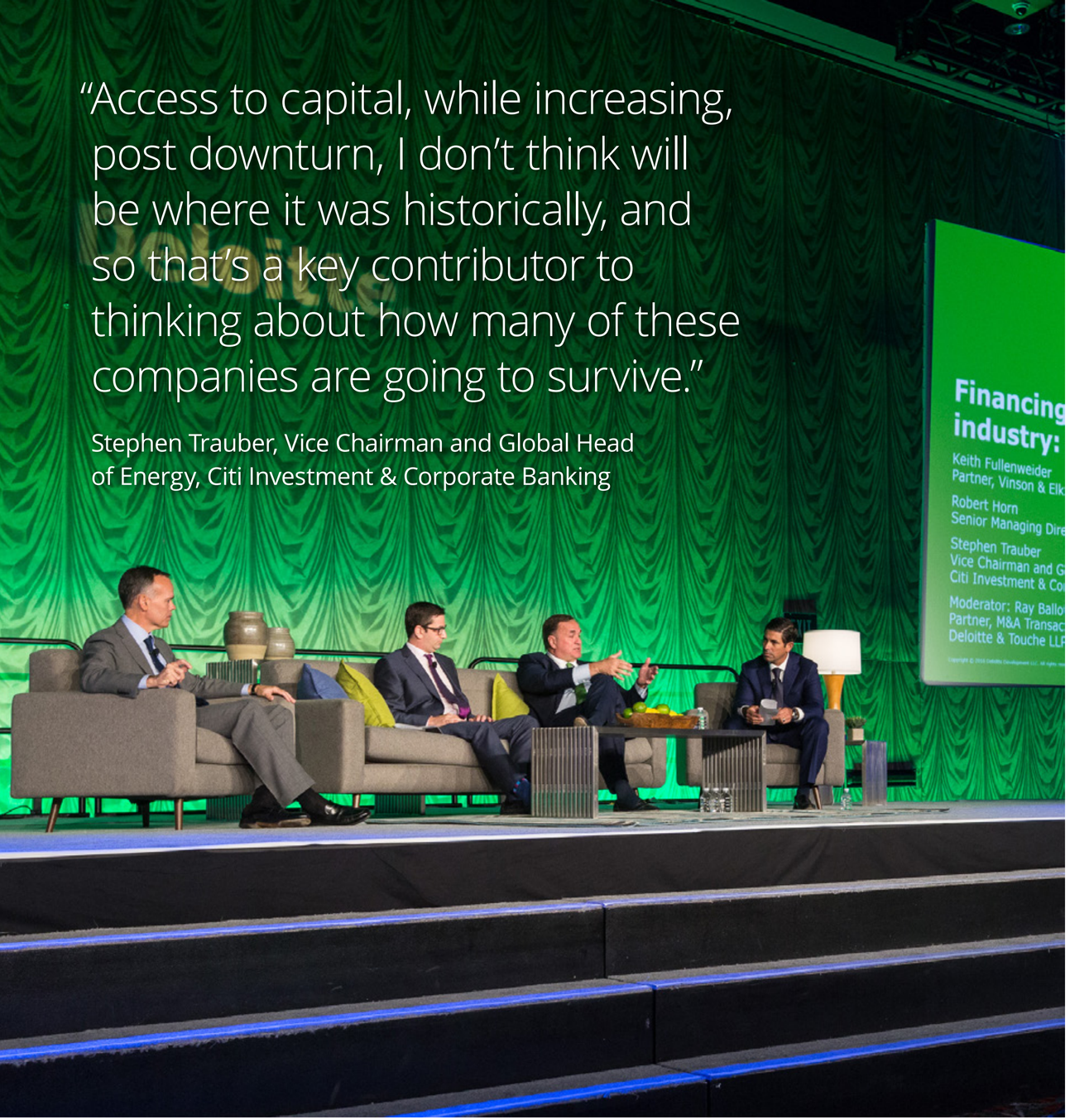
Rob Gardner, Manager, Economics and Energy Division,
Corporate Strategic Planning Department, Exxon Mobil Corporation

The upstream story: Resilient, resourceful, and rising to the challenge

Pioneer Natural Resource's Scott Sheffield took stock of his 30 plus year career in the industry and illustrated what has made his company so successful—focus. The company has grown its production dramatically, even as it divested non-core assets around the world, including in Alaska, South America, and Africa. By focusing on its most productive acreage in the Permian, it has used technology and discipline to exploit the regions' unique geology, driving its breakeven costs below $30 per barrel. Part of the story is drilling and completing wells faster, and part is that the stacked plays in the Permian basin provide operators with a lot of running room.

But the key to success is more than simply the rocks or the technology. Sheffield highlighted that it is also important to keep the business model simple, while protecting the balance sheet by hedging to maintain the capex program and keeping leverage low. Possibly even more important, companies need to build and maintain a strong corporate culture and a great management team to remain resilient while facing challenges.

Scott D. Sheffield, Chairman and Chief Executive Officer, Pioneer Natural Resources



"Access to capital, while increasing, post downturn, I don't think will be where it was historically, and so that's a key contributor to thinking about how many of these companies are going to survive."

Stephen Trauber, Vice Chairman and Global Head of Energy, Citi Investment & Corporate Banking

Financing and M&A in the oil and gas industry: Current trends and considerations

Alternative financing like mezzanine debt and private equity can shore up balance sheets or enable a company's growth. Of course, in light of low prices, many operators might find financing either costly or difficult, but there is still opportunity in the markets, particularly if there is a good story. For example, a strong focus and high performance stands out. Deal activity and acreage prices remain high in the Permian, with cost efficiencies generating near-term value and stacked plays providing long-term potential. With continued improvement in drilling and completions, other unconventional plays like the SCOOP or the Marcellus will also attract attention.

While we do not have as clear a picture outside of upstream, consolidation will likely be a key driver for new deal activity. For midstream companies, M&A has become a more appealing alternative to building new infrastructure as the regulatory environment remains challenging. In oilfield services, the larger companies have already become fairly consolidated, but cost synergy opportunities and diversification could generate interest. Nevertheless, as oil prices stabilize or even rise, M&A activity will likely pick up. Having the right financing or using the most appropriate deal structure will set the stage for success.

Keith Fullenweider, Partner, Vinson & Elkins LLP

Robert Horn, Senior Managing Director, GSO Capital Partners

Stephen Trauber, Vice Chairman and Global Head of Energy, Citi Investment & Corporate Banking

Moderated by Ray Ballotta, Partner, M&A Transaction Services, Deloitte & Touche LLP

The changing regulatory environment: How will change affect your business?

Many times when the energy industry thinks about government, the first thing that comes to mind is increasing regulations. Christopher A. Smith discussed how the government plays a much broader and more nuanced role. The Department of Energy is actually not just a maker of regulations but also a taker and influencer of them.

So while the DOE does regulate some aspects of LNG exports, state and local regulations impact the department's work with corporations, including carbon capture and storage projects. Moreover, it can influence regulations by developing research to frame policy questions and develop technology to meet the needs of both government and industry.

That being said, Sarah Ladislaw highlighted how a confluence of factors has led to a large amount of new regulations. Part of it is simply a backlog of oil, gas, power, and utility industry regulations from the previous administration that Environmental Protection Agency and other agencies are moving through the regulatory process. But new features of the US energy landscape and international agreements like the 2015 Paris Climate Conference require a fresh approach to regulation. Although frustrating, regulations play a role in our energy environment and will continue to do so as the industry continues to grow.

Sarah Ladislaw, Director and Senior Fellow, CSIS Energy and National Security Program
Christopher A. Smith, Assistant Secretary for Fossil Energy, US Department of Energy
Moderated by John McCue, Vice Chairman and US Energy & Resources Leader, Deloitte LLP

"I think you will see even more regulation going forward, even if there is a change of administration... and likely a great deal of litigation to go with it."

Sarah Ladislaw, Director and Senior Fellow, CSIS Energy and National Security Program

Political outlook: Potential impacts of the presidential election on the oil and gas industry

What makes the 2016 presidential election so fascinating? What makes it so contentious? David Wasserman of the Cook Political Report discussed how the US electoral map has changed since 2012 and how that has driven a surprising primary and general election season. It is essential to go beyond the traditional Democrat versus Republican debate and consider the rural versus urban and elite versus anti-elite divide. As Wasserman noted, the American voters have become more segregated so that there are fewer swing states, fewer swing voters, and ultimately fewer swing votes. The gridlock seen in Congress is just a symptom of these shifts. Today, it is harder for Congress to reach across the aisle and push bipartisan legislation.

These changes could have large implications on the energy industry. There are roughly five competitive seats in the Senate and five competitive states in the presidential election. A Democratic win in November would likely lead to a continuation of the status quo. A Republican victory could indicate significant changes in regulations directly impacting the oil and gas industry. Either way, a sustained dialogue about the political system will be needed to incentivize bipartisanship, smart legislation and appropriate regulation to drive economic growth and the energy industry that fuels it.

David Wasserman, House Editor, *The Cook Political Report*

Looking up: Delivering value in a challenging upstream environment

A lower-for-longer price environment has taken a toll on the oil and gas industry, leading to dramatic cuts in spending. Actual and announced capital expenditure cuts have dropped below the minimum required levels to offset reserves depletion, and the industry will be challenged to grow production to meet future demand. To avoid supply shocks in the medium term and maintain the health of the industry in the long term, it is critical that companies build a portfolio geared towards sustainable growth. The panelists highlighted five key principles to guide decision making:

- Have a strong portfolio of assets and healthy balance sheet
- Remain focused on long-term developments and use short-cycled assets to fill the supply gap
- Preserve core capabilities, especially talent and relations with service providers
- Leverage big data and analytics to maximize resource recovery
- Sustain cost and productivity gains beyond the downturn through innovation and partnerships

Alex Archila, Asset President Shale, BHP Billiton
Greg Hill, President and Chief Operating Officer, Hess Corporation
Moderated by Coleman Rowland, Advisory Partner, Deloitte & Touche LLP

"Play the long game (deepwater), but balance with short cycle (shale)."

Greg Hill, President and Chief Operating Officer, Hess Corporation

"The midstream business is like a movie script—the hero starts off well and then faces challenges, threats, and unforeseen events until the happy ending comes along. And then the script starts again."

Greg L. Armstrong, Chairman and CEO,
Plains All American Pipeline L.P.

Outlook and opportunities for the North American midstream sector

Representing three different types of midstream business, the panel gave a timely reminder that this piece of the oil and gas value chain is far from homogenous. The balance of opportunity versus challenge, of growth versus stability, of risk versus reward, looks different depending on where a company operates and what product it moves. No matter what, each piece of the midstream business fulfills a vital, if underappreciated, role in connecting supply sources with markets and customers.

Like oil companies, the current price downturn has challenged midstream companies, but there are clearly growth opportunities. Thanks to the tremendous growth of shale gas and oil, the growth of the US petrochemical feedstocks can out-compete alternatives, generating demand for NGLs that make the plastics and composites that support lifestyles around the globe. Similar opportunities exist in the crude and natural gas space as well. So while the midstream sector is grappling with more complex and unpredictable regulation, increased activist opposition and more complex commercial challenges, each of the panelists found grounds for optimism in the future of their businesses and their sector by building the links between supply and demand.

Greg L. Armstrong, Chairman and CEO, Plains All American Pipeline, L.P.
Jim Teague, Director and Chief Executive Officer, Enterprise Products Partners, L.P.
William Yardley, President, US Transmission and Storage, Spectra Energy
Moderated by Kevin Siblik, Partner, Assurance and Enterprise Risk Services, Deloitte & Touche LLP

Exporting the American renaissance: The outlook on LNG

Ten years ago, the United States was considered a large growth opportunity for liquefied natural gas (LNG) importers. As of March of this year, the country shipped its first commercial cargo from the Lower 48, a major milestone in the journey to export the natural gas renaissance that has led to higher production and lower prices. Cheniere Energy and Texas LNG represent two sides of the same coin, both with the goal to provide liquefaction to buyers around the world. The main difference is scale—each of Cheniere's six potential trains at its Sabine Pass has a capacity of 4.5 million tonnes per annum (mtpa), compared to only two planned trains at Texas LNG's project, each capable of producing two mtpa.

That difference in scale reflects the differences in buyers. Historically, large utilities across the world comprised much the buyer's landscape, mainly consuming natural gas as part of their power generation mix. However, with tremendous growth in liquefaction capacity in the US and Australia, along with the adoption of new technologies, like floating regasification and storage units (FSRU), has started to democratize the LNG industry, allowing small or intermittent buyers access to the global gas market. In this new world, LNG companies will need to become more agile with the business model that Cheniere pioneered and Texas LNG is building upon with its smaller, more modular design.

Langtry Meyer, Founder and Chief Operating Officer, Texas LNG

Oliver Tuckerman, Director, Strategy & Analytics, Cheniere Energy, Inc.

Moderated by Andrew Slaughter, Executive Director, Deloitte Center for Energy Solutions, Deloitte Services LP

"Technology is blurring lines between industries, providing new solutions to oil and gas."

Greg Powers, Vice President of Technology, Halliburton

Innovative technologies: Driving the future of oil and gas

Despite the depictions on TV or in the news, the oil and gas industry is powered by more than just heavy equipment and a lot of manpower. It is driven by innovations, both big and small, to drive down costs and increase production.

Today, technology is playing a big role in optimizing drilling, creating supply chain and surface efficiencies, developing a deeper understanding of reservoirs, and customizing chemistry. To get results, the innovation process must be reliable and repeatable. Greg Powers highlighted three ways to bring new innovation and technologies to the industry:

- Import existing technologies from other industries, including aerospace, manufacturing, life sciences, and health care
- Develop novel technologies that save money, lower risk, and deliver unique solutions in real-time through joint innovation
- Take lessons from nature by leveraging materials derived from natural sources, like using natural polymers to make crosslinking gel

In many cases, necessity is the mother of invention. With oil prices low and operators focusing on capital restraint, this is the time to invest in new technologies to make the industry more efficient.

Greg Powers, Vice President of Technology, Halliburton
Bill Briggs, Chief Technology Officer, Deloitte Consulting LLP
Moderated by Jeff Walker, Vice Chairman and Tax Partner, Deloitte Tax LLP

Concluding perspectives

John England ended the conference highlighting the key themes underlying all of the speakers' messages—while the industry remains under tremendous pressure to deleverage and rebalance supply and demand, there is opportunity through smart finance, smarter technology, and a relentless focus on constant improvement. Ultimately, even with low oil prices and increasing regulatory scrutiny, the industry and the people that make it work are resilient, resourceful, and continue to rise to the challenge.

"We care about Saudi Arabia because that's where the oil is."

David Knapp, Chief Energy Economist and Senior Editor for Global Oil Market Analysis, Energy Intelligence Group

"Leverage is bad, focus is good."

Scott D. Sheffield, Chairman and Chief Executive Officer, Pioneer Natural Resources

"New equity capital may be in short supply when the market turns up, so early movers in tapping equity markets will have an advantage."

Stephen Trauber, Vice Chairman and Global Head of Energy, Citi Investment & Corporate Banking

John W. England, Vice Chairman, US and Americas Oil & Gas Leader, Deloitte LLP

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