



ENERGY DIALOGUES SUMMARY

Final report prepared by

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Kenneth B. Medlock III, Ph.D.
“Houston Energy Dialogues: Executive Summary”

This executive summary was prepared from multiple sets of meeting notes by scholars from the Center for Energy Studies at Rice University’s Baker Institute, who participated in the event.

Introduction

On April 3, 2018, Energy Dialogues and the Center for Energy Studies at Rice University's Baker Institute brought together representatives from academia, industry, and NGOs to discuss the economic benefits as well as the associated regulatory, societal, and environmental challenges of the energy renaissance in North America. This edition of the Houston Energy Dialogues was both a continuation and evolution of the discussion launched in March 2017,¹ and it was aimed at offering perspectives of stakeholders across the United States to highlight the challenges and opportunities associated with the shale revolution.

Much like the 2017 meetings, the 2018 Dialogues were centered on three central themes—economy, environmental stewardship, and coalition building. Broadly, “economy” focused on the economic benefits—local and nationwide—associated with the shale revolution. “Environmental stewardship” highlighted the role of actors across the energy industry in ensuring environmentally responsible development of resources to ensure the sustainability of shale. “Coalition building” delved into the interaction between industry, community, government, and non-governmental organizations, particularly as this interaction pertains to better understanding perspectives across constituencies so that concerns can be constructively addressed.

The participants were organized into four different working groups that convened at different times throughout the day to discuss the thematic elements of the Dialogues. Focused presentations and discussions that framed the issues under consideration were interwoven through the breakout working group sessions. The Dialogues opened with an armchair discussion between Ken Medlock, Senior Director of the Baker Institute's Center for Energy Studies, and Paul Goydan, Partner and Managing Director of the North America Energy Practice at The Boston Consulting Group. Their conversation centered on topics such as the role of energy in fueling economic growth, how market participants and policymakers can create a framework for affordable and reliable energy supply, the role of natural gas in the global energy mix, emerging demands around the world, the role of the US in the global natural gas market, and the impact of the Trump administration on the energy industry.

In addition to the opening armchair conversation, the Dialogues featured a panel discussion that was specifically focused on the environmental and social issues intersecting energy production, use, and sector investment. The Dialogues also included a keynote address by Greg Guidry, Executive Vice President of Unconventionals at Shell, that focused on the societal acceptance of fossil fuels and the related challenges for natural gas in the US. The day concluded with a panel discussion that allowed participants to summarize the day's discussions in their respective working groups.

¹ See *Energy Dialogues Summary*, June 2017, <https://www.bakerinstitute.org/research/houston-energy-dialogues/>.

Theme 1: Economy

The Dialogues began by focusing on the role of shale in fueling economic growth and development. Participants highlighted the positive impacts shale developments have had in terms of greater affordability, reliability, and security of supply domestically and internationally, as well as the benefits associated with reductions in CO₂ emissions seen in the US. Moreover, the newfound abundance of energy has helped trigger broader conversations about pathways to address the pressing issues associated with global energy poverty. However, shale has not always generated positive sentiment toward firms involved in the exploration and distribution of fossil fuels due to concerns related to environmental protection and sustainability, which are at the forefront of local and national debates over shale activity. Of course, the debate takes on different tones in different regions across the US and world, which highlights two important points: (1) healthy discussion about shale-directed activities must be had everywhere, and (2) the view of what is most important is heavily shaped by local perceptions and realities.

As noted by the participants, closing the gap between positive and negative sentiments associated with the American energy revolution will require increased outreach and engagement by the industry. Meaningful engagement and communication with different stakeholders—including members of Congress, regulators, and the general public—are key. In addition, participants noted that the industry must focus on outreach to younger generations who are increasingly focused on sustainability because their opinions are paramount to the future viability of the oil and gas industry workforce.

To this end, “sustainability” needs to be included as a fourth pillar of energy supply, in addition to affordability, reliability, and security. New natural gas and crude oil supplies, together with the growth of large-scale renewable energy sources, are transforming the global energy landscape. Consumers and other stakeholders are clearly interested in energy sources with lower environmental footprints, and that has motivated oil and gas companies to become more environmentally conscious. Participants expressed the belief that, if allowed to work, market forces would optimize across the four pillars of energy supply, but they highlighted a need for transparent market mechanisms.

Natural gas is often referred to as a “bridge” fuel towards a lower carbon energy future. Some participants expressed that the bridge may be shorter than anticipated in the US, as renewables continue to successfully compete with traditional sources of supply in electric power generation—a phenomenon driven by both renewable-friendly policies and improving economics. Thus, the US oil and gas sector needs to focus on continued innovation in the production and use of oil and gas, and it must look globally—in the form of exports—for market opportunities. Global demands for natural gas in electricity generation and industry and for crude oil and refined products in transportation and other applications continue to grow. This is providing a need for US-sourced supplies to balance global markets.

However, as noted by several participants, when assessing the economic opportunities for natural gas and crude oil, as well as any other energy source, it is crucial to avoid doing so from a US-centric point of view. The US has a unique legal and regulatory environment, which has had significant influence on the development of renewables, the expansion of energy infrastructure, and the accelerated the growth of natural gas production and use. Elsewhere, the reality on the ground is different. For example, Chinese gas demand is being driven by local air quality concerns as well as economic growth. However, newer, more efficient coal plants are also being built in China, and this recently established infrastructure will define a new legacy for China's grid and compete with other forms of generation for decades to come. The reality on the ground can also be influenced by social and cultural considerations. For instance, in a country such as Poland, coal has a special place in the domestic political spectrum, one that is heavily shaped by social and cultural elements. These types of things cannot be ignored when considering the future of a country's (or region's) energy mix, and they will have different influences on demand for different types of energy sources—renewables, natural gas, etc.—in different regions.

Participants also noted that in the US, the regulatory and policy landscapes are continuing to evolve, which may not bode well for uncertainty. In particular, actions recently undertaken by the US administration have led participants to three main conclusions: (1) they see a growing use of Executive Orders rather than new legislation from Congress; (2) they see an increase in regulatory oversight from state and local governments, effectively decentralizing policy; and (3) they see an increase in interventions by courts at the federal and state levels.

Various participants also expressed concerns about the current regulatory discussions on grid reliability. Some of the proposals that have been suggested to support coal and nuclear energy under the guise of reliability can present, if adopted, an impediment to future gas demand growth. The participants voiced concern almost without dissent that the proposals misunderstand domestic gas markets. Moreover, it was noted that subsidies—either direct or indirect—create a potential market distortion that, when coupled with existing policies that promote renewables, effectively squeeze natural gas demand. Indeed, it would become the only dominant fuel in the power sector that is not subsidized at end use. Participants noted that disadvantaging natural gas through complicated subsidies to other fuels would contribute to reduced grid reliability, particularly if natural gas was not as available to grid operators as a reliable ancillary service for intermittent renewables. This, ironically, is exactly the opposite of what the coal, nuclear, and renewables policy measures are aimed at accomplishing.

Finally, participants uniformly voiced concerns over the proposed US withdrawal from NAFTA, particularly because NAFTA has facilitated deeper cross-border trade, thereby strengthening North American energy markets. The threat of withdrawal adds uncertainty to the decision matrix for firms seeking to make long-term investment decisions regarding field development and infrastructure, a facet of firm-specific strategic planning that had not previously existed. In this context, participants called for capable and competent regulators across federal and state governments who fully understand the importance of

government not injecting uncertainty into markets, particularly if long-term reliability is a desired outcome.

Theme 2: Environmental Stewardship

One of the main challenges facing the onshore oil and gas industry has been effectively addressing environmental issues—both real and perceived. These include, but are not limited to, methane emissions, produced water handling and disposal, and induced seismicity. Although the participants recognized there has been considerable progress made on these fronts, they also agreed that continued improvement in operational standards and greater engagement on community education are required. It was noted that opportunities to demonstrate the potential positive impacts that the industry can bring to local areas are contingent on innovation and dialogue. The state of Oklahoma was noted as an example where the industry has been proactive and engaged in addressing the issue of induced seismicity. For the last few years, the oil and gas industry, Oklahoma state officials, and academia have collaborated to achieve a marked decrease in seismic activity related to oil and gas operations. Participants also noted the industry's efforts to expand water recycling for shale development activities in places such as the Marcellus shale, which demonstrates opportunities for creating a more sustainable, closed ecosystem. Moreover, such efforts carry different benefits in regions whose water stress profiles are distinctly different—for example the Marcellus versus the Eagle Ford shales.

The participants universally agreed that the success of any industry effort hinges on obtaining and maintaining a social license to operate. Societal acceptance requires incident-free and environmentally responsible operation. This acceptance is also often considered one of the greatest challenges that the industry faces. Different companies have adopted proactive approaches to this issue. Shell's Goal Zero and its five operating principles for shale production were noted as examples of the industry's commitment to operational safety and environmental sustainability that can facilitate social acceptance of oil and gas investment and operation.

At a more general level, it was argued that a major change is needed to the fortress mentality that has traditionally characterized the industry's response to environmental concerns. Rather than avoiding difficult issues, the industry should tackle them head-on, taking a lead in environmental protection and being proactive in the application of innovative solutions. It was specifically mentioned that this requires looking ahead, identifying potential negative environmental impacts, and finding solutions before any problems arise. This would lead to significant avoided costs and signal environmental stewardship.

Climate change, methane emissions, water pollution and scarcity, induced seismicity, and public health concerns were identified as risks that will continue to challenge the industry's social license to operate. Therefore, the industry needs to embrace its responsibility in addressing these and other potential issues going forward. Some guidance can be found in past and ongoing voluntary efforts to mitigate environmental risks and encourage

sustainability through research and innovation, data sharing, collaboration, and coalition building. Examples that were mentioned include the Permian Road Safety Coalition, Environmental Partnership Program by the American Petroleum Institute, Shell's i-Shale™ Initiative, and the Environmental Defense Fund's Methane Detectors Challenge.

Nevertheless, some participants noted that the industry is collectively challenged by the large number of companies operating in shale areas because not all firms share a common approach to environmental stewardship. Thus, despite the voluntary efforts by several of the larger operators, environmental damages by a few relatively small companies can taint the public's perception of the entire industry. As a result, it was argued that responsible regulatory guidance is important in meeting a broader goal of environmental protection, and the voluntary efforts of many environmentally conscious operators provide a track record for "best practices" and regulatory guidance.

Theme 3: Coalition Building

As various participants highlighted throughout the event, collaborative engagement with local stakeholders, regulators, and industry participants across the value chain is one of the most important tasks for the oil and gas industry. This includes overcoming the legacy of individual companies acting in isolation as well as aligning industry participants throughout the value chain towards common goals of community acceptance and sustainable development. It was generally agreed that such an approach would facilitate collective progress toward achieving and maintaining the social license to operate.

Various participants noted different opportunities for collaboration and coalition building. For example, opportunities for collaboration within the industry include consolidating efforts to develop infrastructure under established regulatory frameworks with the specific aims of increasing operational efficiency and minimizing adverse impacts to local communities. As an example, the Permian Strategic Partnership—formed early this year by major oil and gas producers in the Permian Basin—is aiming to collectively address community issues related to infrastructure development.

In addition to collaboration within the industry, participants highlighted the importance of continuing and broadening the dialogue with non-industry stakeholders, including regulators, environmentalists, and local communities. Specifically, it was noted that the oil and gas industry should seek deeper engagement in communities affected by oil and gas activities to better understand any existing and potential public concerns. Along this line of thinking, the importance of data transparency and information sharing was highlighted as a key aspect to demonstrating the industry's commitment to promoting best practices and community interests. It was argued that if companies were open to sharing information in a more robust and verifiable way, it would help address various community concerns and intercede misinformation about field activities. Moreover, it was argued that jargon should be avoided because simple and accessible language is critical when communicating information to the public. FracFocus was noted as an example of a clear and effective platform for data sharing.

When it comes to coalition building, as one participant stated, “ ‘retail relationships’ with local communities are critical in terms of removing misunderstanding and being more responsive to potential issues.” Participants agreed that there is a need for the industry to invest at the local level. To that end, it was argued that local community engagement should begin small and be founded on the principles of good faith, openness, and shared interests. By identifying common goals, coalition building can begin. Then, when addressing a problem—real or perceived—a small coalition of stakeholders from the industry and local community can seek a path forward that maintains shared goals while mitigating any problems. While no specific examples were discussed, it was argued that an approach that begins small contrasts to community engagement efforts that cast too wide a net by bringing in outside and tangential interests. The latter approach can lead to highly complex, multi-party discussions when various concerns arise. This can, in turn, seriously challenge the ability to reach any meaningful solution, which may be detrimental to the various parties involved.

Lastly, participants stressed the importance of having a meaningful dialogue to find a rational middle. To that end, many pointed to the need for

1. a neutral platform for multiparty discussions;
2. a third-party convener to gather participants across society, such as the Energy Dialogues and the Baker Institute for this event; and
3. clarity when framing and conveying an issue.

More importantly, participants acknowledged that the largest challenge for the oil and gas industry centers on turning conversation into action. This re-centered the discussions on the importance of industry efforts aimed at continuing to deliver energy in a low-cost manner, but in an environmentally responsible way.

Closing Remarks

The Dialogues closed with a panel that summarized the discussions amongst the various participants at the working sessions. While the participants were separated into four distinct working groups with each group represented by different constituents—including upstream, midstream, environmental NGO, consulting, and academic—the summary of the discussions at each table were thematically consistent. In particular, a better-informed public was identified as a critical component to addressing the issues discussed throughout the day. Well-informed stakeholders are key to coalition building because a deeper understanding helps identify issues and aids in finding common themes, both of which are important to producing tangible results.

It was reiterated that these types of events, organized by Energy Dialogues and hosted by the Baker Institute, are needed to encourage proactive thinking that can elevate the conversation about oil and gas activity in North America to a point where solutions to issues—both real and perceived—are based on data and analysis rather than ideology and advocacy. To this end, the Energy Dialogues City Series will be expanding its geographic

footprint in the coming months to include perspectives from across the US, a step that should lead to more informed discourse and perhaps even highlight regional differences regarding oil and gas industry activities.

May the conversation continue. . .

City Series - Houston Energy Dialogues
April 3rd, 2018, Rice University's Baker Institute

9:30am – 9:45am: Welcome Remarks

Monika Simoes, Managing Director, Energy Dialogues LLC

9:45am – 10:10am: "Fireside Chat" on the current regulatory and policy framework one year into the new administration - "smart regulations" in a time of deregulatory tendencies

Kenneth B. Medlock III, James A. Baker, III, and Susan G. Baker Fellow in Energy and Resource Economics, Center for Energy Studies at Rice University's Baker Institute
Paul Goydan, Partner and Managing Director, Leader North America Energy Practice, The Boston Consulting Group

10:10am – 10:50am: 1st Roundtable Working Sessions

ECONOMIC BENEFITS OF THE NORTH AMERICAN ENERGY RENAISSANCE

Seeding the conversation: The role of energy in economic growth; What is needed to create a framework for affordable, reliable, and secure energy supply?; What is the role of natural gas in the global energy mix?; Is there a moral case for fossil fuels?; What has been impact of the current administration?

10:50am – 11:10am: Coffee Break

11:10am – 12:00pm: Panel Discussion: Environmental and Societal Leadership Perspectives

Gabriel Collins, Baker Botts Fellow in Energy & Environmental Regulatory Affairs, Center for Energy Studies at Rice University's Baker Institute (Moderator)
Nate Teti, Vice President Communications, Statoil
Matt Watson, Associate Vice President, Climate & Energy Program, Environmental Defense Fund (EDF)
Tom Fowler, News Editor, Argus Media

12:00pm – 12:40pm: 2nd Roundtable Working Session

INDUSTRY'S ROLE IN CREATING ENVIRONMENTAL STEWARDSHIP

Seeding the conversation: Addressing real and perceived challenges - produced water, seismicity, and methane emissions; role of innovation and new technologies in enabling a clean energy future; the penetration of renewable energy and synergies with natural gas; assessing full-cycle shale development impact; industry's self-regulation efforts - what needs to be done and what has been achieved already?

12:40pm – 2:00pm: Lunch Reception

2:00pm – 2:30pm: Keynote on societal acceptance, related challenges for natural gas & fossil fuels and collaboration amongst all players

Greg Guidry, Executive Vice President, Unconventionals, Shell

2:30pm – 3:10pm: 3rd Roundtable Working Session

COALITION BUILDING WITHIN AND OUTSIDE OF THE INDUSTRY

Seeding the conversation: What are the ripple effects of public perception and how can industry respond? How will the “energy transition” mature and how does collaboration play into the outcome? What does collaboration between progressive partners look like? How can the industry engage in dialogue with thought leaders, influencers, and other key stakeholders? Implementing a sustainable energy strategy across the private and public sector - what are next steps?

3:10pm – 3:30pm: Coffee Break

3:30pm – 4:30pm: Table Leader Panel - Summary and Conclusion of Round Table Talks

Kenneth B. Medlock III, James A. Baker, III, and Susan G. Baker Fellow in Energy and Resource Economics, Center for Energy Studies at Rice University's Baker Institute (Moderator)

4:30pm – 5:30pm: Reception at Rice University's Baker Institute Campus