



ENERGY DIALOGUES SUMMARY

Final report prepared by

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“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 March 28, 2017, Energy Dialogues organized an event co-hosted with Shell at the Shell Woodcreek Campus in west Houston in which participants from across the oil and gas sector engaged in discussions that centered on three themes: economy, environment, and coalition-building. “Economy” focused on the role of natural gas in facilitating energy needs in an economically sustainable way that recognizes environmental goals. “Environment” delved into the role of natural gas in meeting various environmental objectives, particularly lower-carbon energy systems, as well as the roles of new technologies and regulation. “Coalition building” focused on energy transitions and the potential for private-public interaction to achieve sustainable energy-environment-economy pathways. Interwoven throughout the day were questions about the potential impact of the Trump administration on the energy industry in general, and specifically with regard to broader sustainability goals in the energy, environment, and economic dimensions.

The Dialogues were organized to increase interaction among the participants. Specifically, participants were separated into four different discussion groups to interact on the three different themes. After welcoming remarks, the Dialogues were opened with a presentation from Alan Thomson, Global Leader of the Energy Practice at Boston Consulting Group, on the study “America’s Unconventional Energy Opportunity” that was published in conjunction with Harvard University in June 2015. The presentation set the stage for the day’s discussions on each of the themes.

A midday highlight was a film screening of select shorts from the Rational Middle Energy Series and a panel discussion led by Gregory Kallenberg, the series’ director and producer. The panel consisted of three experts: Greg Guidry, Executive Vice President of Unconventionals at Shell, Ken Medlock, Senior Director of the Center for Energy Studies at Rice University’s Baker Institute, and Ben Ratner, Director of Corporate Partnerships at the Environmental Defense Fund. The film shorts that were viewed and subsequently discussed focused on methane emissions and the future of the energy industry. The relevance of the day’s three thematic discussions— economy, environment, and coalition building—was evident throughout the panel discussion. Indeed, the panelists highlighted issues such as the role of public sentiment in shaping the policy discourse, the importance of natural gas for meeting economic and environmental goals, and the importance of addressing environmental concerns such as methane escape through the use of advanced monitoring technologies that can aid in identifying “super-emitters” at a relatively low cost. On methane release in particular, it was noted that the use of new technologies to address this environmental concern could convey significant benefits in building coalitions supportive of oil and gas activities at the local level, thereby ensuring the economic and environmental sustainability of oil and gas activity.

Theme 1: Economy

The discussion focusing on the first theme of the day, Economy, began with a discussion of the Trump administration's possible impact on the natural gas industry. It was generally argued that natural gas is the most robust energy source to simultaneously fuel global energy demand, meet energy policy needs, address poverty and demographic challenges, and meet various environmental goals. It was also generally agreed that U.S. withdrawal from the Paris Accords might slow growth in global natural gas use. However, it was also argued that in the long run, market fundamentals, not overt policy support, will drive the global competitiveness of natural gas against other fuels, such as coal. This, in turn, would position natural gas as critical to meeting future energy demands, while also making it important for meeting various environmental objectives.

The participants also highlighted the important role of policy in shaping future infrastructure development, including electricity transmission and crude oil and natural gas pipelines. In particular, it was generally agreed that the administration will play a major role through its influence over the siting and permitting process as well as through federal tax policy and policies related to exports and trade. In this context, some participants noted that the current policy discourse lacks any meaningful discussion of policy-motivated investment uncertainty in the U.S. and its impact on long-term commitments to potential investors.

Participants also considered the administration's apparent push to shift from federal- to state-level oversight. Two main implications of such changes in the regulatory framework for natural gas market were discussed. One implication is a possible increase in opportunities to expand infrastructure and grow end-user activities and the gas-intensive industrial complex. The second implication is a possible increase in site-specific opposition from activist stakeholders. At the state level, these implications would be moderated by state regulations that generally depend on two factors: the political leaning of the state and the history of oil and gas operations within the region. It was mentioned that the latter factor, in particular, has a bearing on cultural and social acceptance of oil and gas activities in a region.

It was argued that since the Trump administration's energy policy appears to be relatively unclear, other than its support for coal, the oil and gas industry should focus on market dynamics and access to capital, which are critical to building infrastructure across the supply chain and to facilitating growth. The participants also stressed the importance of forward thinking in the current regulatory environment. Given the results of the elections at the presidential and congressional levels, and the dramatic shift in expectations that accompany them, it was noted that the industry should keep a long-term view of decision-making to identify opportunities rather than play a politically-minded short-term game. Importantly, part of such a long-term strategy should include development of a highly skilled workforce.

Many of the participants agreed that it is extremely important that industry look to market drivers, rather than policy interventions, to maximize opportunities in an environmentally responsible way. At the same time, it was emphasized that industry should establish an open and ongoing dialogue with different stakeholders to ensure a “social license to operate” at the state and local levels. This is particularly true when it comes to infrastructure development. As one participant put it, state and local governments are effectively “policy laboratories” that have an opportunity to take the lead in developing energy policy, especially given the predicted rolling-back of federal regulations by the Trump administration.

It was also noted that federal-, state-, and local-level oil and gas activities should be considered in the context in which they occur. Industry has a tremendous responsibility to establish and exercise environmentally responsible practices. By doing so, industry can ensure safe and responsible development and use of oil and gas resources. This, it was argued, is in the industry’s best interest as it has the potential to win acceptance at the local and state levels and thereby minimize regulatory costs. As one of the participants noted, regulators are the most responsive to industry’s actions.

Theme 2: Environment

The second theme of the day focused on the environment. It was noted that when it comes to the influence of regulations on environmental outcomes, regulators tend to be outcome driven. As such, specific technology options are often not explicitly suggested. In other words, it was argued that regulators tend to be technology-agnostic as long as the desired outcome is reached. However, some participants pointed out that outcome-oriented standards are not always cognizant of newly developed, cutting-edge solutions, and instead rely on well-established technologies. This can render regulatory guidance that is behind the times. It can also have the effect of imposing a regulatory burden that is unnecessary if technical solutions have already addressed an issue, or, alternatively, it can fail to drive an across-the-board adoption of best technologies, thus failing to maximize potential outcomes. This makes informing regulators about technology developments of the utmost importance so that regulation can be flexible in its design and implementation.

Besides technological innovation, the diffusion and deployment of new technologies is also important. The participants discussed the difficulty of diffusing technology across the industry, which was characterized as having a high level of fragmentation. Tremendous differences exist in operator types and across service companies, as well as in different regional- and resource-type activities. It was argued that this can create a barrier to technology adoption, thereby limiting the pace of new technology uptake in the industry. It was also argued that a lack of necessary technical support and appropriate commercial frameworks can make the adoption of new technologies difficult due a perceived high risk. Several initiatives, such as Shell’s iShale™ initiative, were then highlighted as examples of pathways to facilitate technology development and deployment aimed at minimizing environmental impacts of oil and gas activities.

Participants once again stressed forward thinking as critical in today's regulatory landscape for an industry that often struggles with an image of being unsympathetic to environmental goals. It was stressed that industry needs to be more proactive and, more importantly, should reflect on its performance when it comes to issues such as flaring in Bakken, seismicity in Oklahoma, or pipeline and infrastructure siting in the Mid-Atlantic region of the U.S. It was argued that operators should identify and address problems before they become issues for regulators, effectively taking steps to mitigate any potential calamity before damages occur. Recent oil and gas development in Pennsylvania was referenced as an example of where industry should be more proactive on environmental matters so that public sentiment does not shift in a way that deflects future opportunities.

Participants expressed positive opinions about the oil and gas industry's ability to be part of the solution to the global energy challenge, particularly through technology and innovation. However, it was noted that this is highly dependent on a productive dialogue between the industry and various stakeholders that reflects a diversity of perspectives and interests. The industry should also engage in educational opportunities that forge a better understanding of how environmental goals and oil and gas development are not necessarily mutually exclusive.

The experiences of the Colorado Oil and Gas Association (COGA) and of Apache Corporation in Reeves County in West Texas (where the company made a large oil and gas discovery) were shared as positive examples of stakeholder engagement and coalition building. COGA examined past experiences with stakeholders—both positive and negative—in the state of Colorado and used the analysis to conduct a yearlong stakeholder engagement that included hearings, seminars, and public comment. The Apache experience highlighted measures the firm took to engage stakeholders at a deeper level—including private conversations with each registered voter in the county, outreach to each county commissioner and the local school board, and a study on local water quality to establish a baseline point of reference prior to ramping up activity that was done in collaboration with the University of Texas at Arlington. Each of these efforts was cited as having been important in establishing social acceptance, and was generally viewed as an enlightening and positive engagement.

In light of all the discussions, it was noted that individual company engagement with stakeholders is critical. Only then can one realize what is important to different stakeholders so that a successful dialogue and coalition can be forged. Participants also urged that the industry engage with stakeholders that at present may be adversarial in the interest of advancing more enlightened views by all parties.

Lastly, in a discussion that expanded from local and regional issues to a much broader perspective, participants observed that it is important to engage with stakeholders in the developing world. Many individuals in the developing world are stricken with energy poverty, the condition of lacking access to modern energy services. These societies can be severely lacking in basic infrastructure and electricity services, but will be a future source of significant longer term energy demand growth. Thus, understanding and addressing

stakeholders' environmental concerns from the start will provide a unique opportunity to establish a successful long-term engagement.

Theme 3: Coalition building

Coalition building was the third theme of the day, and its importance flowed from the conversations in the first two themes. To begin, it is critical given the heterogeneous nature of oil and gas industry. For example, as small, independent companies drove the initial foray into shale in the U.S., it became incumbent on larger operators to engage with regulators, policymakers, and other industry participants to highlight concerns and challenges and to prevent any unexpected adverse consequences.

Participants also pointed out the potential value of coalition building across the value chain. Historically, the industry has been reluctant to collaborate with other market participants unless a project directly concerns a specific business enterprise, technology, or portfolio of assets, but a more collaborative environment, it was noted, is emerging. Participants attributed this, in part, to a generational change in the workforce that has helped promote collaboration between operators, equipment suppliers, and technologists across the value chain. In turn, this can provide benefits by facilitating the exchange of ideas, creating pathways for the entry of new technology, aiding in understanding how digitization can raise efficiency, and promoting standardization and sharing of best practices. These points, it was noted, convey economic and environmental benefits to firms and stakeholders alike.

It was also noted that while coalition building creates tremendous opportunities, there are many challenges that need to be addressed by the industry, such as the issue of trust and consistency in actions and messaging to maintain credibility and unity within the coalition. In addition, engagement should include stakeholders who want solutions and will engage in a productive dialogue regardless of their initial predispositions. Thus, it is critical that industry identifies a strategy for engagement that will bring multiple parties to the table for constructive dialogue.

It is equally important to build coalitions through the value chain and with the local stakeholders to develop the social license to operate in a sustainable way. An industry with unified messaging is necessary to provide credibility and consistency when engaging external stakeholders. Beyond the issue-based and politic-based coalition, it was stressed that coalition building needs to be extended to commercial and technology bases to truly unlock those opportunities that require specific expertise.

The participants underscored that market forces will dictate outcomes for the oil and gas industry, but given the importance of adequate infrastructure, policy has an important role. It was stressed that industry desires a clear policy framework, but that uncertainty continues to dominate the policy space. It is, therefore, important to carefully watch how the Trump administration reshapes the regulatory environment so that industry can identify opportunities and challenges as they arise. To provide clarity on how this may evolve, it was reiterated that industry should take the lead in addressing environmental

concerns through technology and innovation as well as stakeholder engagement and coalition building. It was agreed that such outcomes are crucial to defining a sustainable energy future.

Closing Remarks

The day wrapped up with a panel discussion of the day's three themes among the four Dialogue table leaders, who were selected by their peers from each discussion table. Much of the panel discourse focused on summarizing the day's discussions. But each participant emphasized that continuing the dialogue is very important for advancing sustainable solutions. Only by engaging in honest discourse will viable pathways be identified for achieving economic and environmental sustainability. Thus, it was expressed that the Houston Energy Dialogues would serve as point of departure for a shared journey toward a sustainable future. May the conversation continue ...