

Energy's Struggle with Rapidly Changing Roles, Responsibilities, and Reputation

Derek Mathieson, SPE, Chief Strategy Officer, Baker Hughes, and Peter J. Bryant, Senior Fellow, Kellogg Innovation Network



Derek Mathieson, SPE, is vice president and chief strategy officer at Baker Hughes, where he leads the strategic planning, global sales, enterprise

marketing, and mergers and acquisitions functions. Before his current role, Mathieson served as president of Western Hemisphere Operations at Baker Hughes, and was responsible for the company's businesses in North America and Latin America, as well as the Chemicals and Industrial Services business unit. His previous roles at Baker Hughes include president of Products and Technology and chief technology and marketing officer. Mathieson holds a PhD degree in microelectromechanical systems and a BS degree in electrical and electronic engineering from Heriot-Watt University.



Peter Bryant is a senior fellow with the Kellogg Innovation Network at the Kellogg School of Management and has more than 30 years of experience developing

growth strategies for companies in the United States, Asia Pacific, and Europe. He has held senior leadership roles at several global companies, including General Electric and Computer Associates. In addition, he has been CEO/president for two emerging technology companies and cofounder of an enterprise software services company. Bryant holds a bachelor of commerce and administration degree from Victoria University in Wellington, New Zealand. He holds a chartered account from the New Zealand Institute of Chartered Accountants and is a fellow of the Australian Institute of Company Directors.

Almost every aspect of modern society is supported or influenced by energy—and yet it is one of the least understood and possibly one of the most reviled industries on the planet. Whether we like it or not, the energy sector's public image has been shaped over the past couple of generations to be synonymous with corporate profiteering, environmental disregard, and social abstinence. It is hard for those of us who work in this industry to rationalize such a reputation when we know that our collective programs on safety, the environment, corporate social responsibility, and technology innovation are among the best to be found in any sector.

This is the energy paradox, and in the face of an ever-growing and daunting demand for energy, it is apparent that the industry's relationship with society has to change. But is it one that we can tackle on our own?

Changes at Scale

Nowhere is the energy paradox more evident than with the shale revolution in the United States. In just a few years, the industry has moved from initial experimentation to drilling almost 40,000 wells per year—changing employment and prosperity in many parts of the country, creating the potential for energy independence, and disrupting long-standing equilibria in the geopolitical landscape. In addition to this direct impact, the promise of sustained, accessible, and affordable energy is becoming a powerful economic multiplier, with an increasing number of new manufacturing plants replacing coal with natural gas, resulting in a marked impact on the reduction of carbon emissions.

The sheer scale of this activity, though, is stressing domestic infrastructure beyond design, overloading pipelines, roadways, and rail networks. More and more, these activities are expanding into private land and creating new engagements among companies that represent our industry and stakeholders in communities, local governments, and states. It remains to be seen to what degree these constituents are willing to deal with what is, in effect, the reindustrialization of the United States when it is in their own backyards.

Energy as a Foreign Language

We do have some strong indications that people are taking notice. Shale development today dominates the conversations and activities of a myriad of special interest groups, trade organizations, and government and community initiatives as well as industry forums. However, with more than 10,000 E&P companies working in this space in the United States alone, all of these activities, while important in their own right, are extremely fragmented and very few represent more than a few stakeholders.

It is at the interfaces among all these groups that the energy paradox is most obvious. The industry, mostly well intentioned, has typically developed messages that are too often meant to “teach” other groups about the “facts” of shale development. But these messages can be perceived as arrogant, condescending, and uncaring by stakeholders who have other, just as well-intentioned, viewpoints.

What we have learned throughout this short period is that *for every fact there is an equal and opposite fact*. It is as if energy has become a foreign language and as

Copyright 2014, Society of Petroleum Engineers. Reprinted from the *Journal of Petroleum Technology* with permission.

yet, no one has developed a curriculum that is satisfactory to any of the stakeholder groups.

At the Crossroads

Against this backdrop, a small, diverse group of stakeholders was convened by the Kellogg Innovation Network (KIN) at the Kellogg School of Management on the Northwestern University campus (www.kinglobal.org) in Illinois. After the initial workshop, it was determined that a KIN Catalyst should be created to address the issues raised. A KIN Catalyst is a safe and independent platform that seeks to break down the barriers that separate various stakeholders in action and opinion, so that we can start fresh as a “creative coalition” with new ideas that can propel us forward. The mission of this particular KIN Catalyst was to form a new beginning for the stakeholders in unconventional oil and gas, and the initial scope was to organize, with every stakeholder present, a safe dialogue about shale development.

Journey Into the Unknown

In March of this year, the first multi-stakeholder discussion was held at the Kellogg campus in Miami, Florida, and included representatives from about 20 groups across major operators, small independents, service companies, state government, nongovernmental organizations, environmentalists, community representatives, first nations, and academia. The stated mission of the forum was threefold:

- To identify and align on orbits of transformation and the opportunity for creative coalitions
- To create a wider community for engaged dialogue and

mutual understanding that can provide for more effective global development

- To explore the intent, passion, and goodwill to move forward to tackle the critical issues that stand in the way of the industry’s social license to operate

Three strong themes emerged from the initial discussion about how to defragment the industry’s message and engagement, broadening the topic of social license to operate, and developing a methodology to coordinate developmental activities across a diverse set of companies over the whole development and life cycle of the process.

A second dialogue was held in June at the Kellogg campus in Chicago, deepening discussion on the themes developed in Miami and prioritizing a series of Catalyst programs that could enable or transform progress through the creative coalitions being formed. Ten Catalyst work streams were envisioned by the group and a third dialogue was held in October to explore activating and mobilizing the top three programs through creative coalition work groups. These programs are aimed at tackling issues related to the lack of access to experts or reliable data from trusted sources, the lack of innovation on topics outside of only technology, and the lack of shared purpose and consistent, coordinated multistakeholder engagement.

Charting New Ground

As members of this coalition, we can say that it feels like we are making some real progress, but it also feels like we are just another voice in a very large crowd, shouting for attention. What is different

about this process so far is just how much perspective is being shared. The forum is safe, it allows respectful examination of different viewpoints, and all of us are focused on catalyzing a new reality with an outcome that all of the stakeholders will cocreate.

In studying the whole shale ecosystem from every possible angle, it is incredible to see the magnitude of the possibility in developing the resource as well as the magnitude of the challenges it is raising across almost every stakeholder group. The amount of technological progress being made sits almost diametrically opposed to how little stakeholder alignment and social progress are being made.

Countries in the developed world, through shale development, are having to relearn both the importance and the challenges faced in widespread engagement with primary industries. And while this is happening in the United States today, it is only a matter of time before many other nations around the world face these challenges from shale development or some other major resource.

Society cannot afford for this sector to fail in providing affordable, accessible, and reliable energy for the world; in many ways, the responsibility to do so has never been greater. But to become a trusted partner for society, the energy sector must first align itself, and then allow others to help reshape its approach. The role of creative coalitions is emerging as one such way of catalyzing resolutions to these types of intractable problems, and the KIN Catalyst for unconventional oil and gas is helping to chart this new territory. **JPT**