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Social License to Operate: Hydraulic Fracturing-Related Challenges Facing the Oil & Gas Industry

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Social License to Operate: Hydraulic Fracturing-Related Challenges Facing the Oil & Gas Industry

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Abstract

The crossroads of urban development and improved technology allowing oil and gas development in new areas can result in contentious community issues. The debate over one of the improved technologies – i.e., hydraulic fracturing – can be highly emotional. Consequently, industry must address community issues, earning trust and therefore a "social license to operate." This paper provides fundamental knowledge of the social license to operate concept, validates its application to the oil and gas industry, particularly with respect to shale gas development, discusses the current status of social license in the unconventional development sphere, analyzes current ongoing efforts for shale gas developers to monitor and establish a social license, and identifies potential new methods of encouraging, establishing, and monitoring a social license to operate. The paper also proposes a new institutional framework in which to promote the social license to operate, "The Center for Social License to Operate in the Oil & Gas Industry."

I. Introduction

Within the past decade, two key technologies have dramatically changed the landscape of oil and gas development, in turn drawing a great deal of attention to the "Shale Revolution": horizontal drilling and hydraulic fracturing.[1] These technologies, coupled with population growth and urban sprawl, have attracted a great deal of scrutiny to shale development. These technologic breakthroughs have also led to a paradigm shift in energy scholarship. Many shale resources that were previously considered unrecoverable are now economically recoverable. Interestingly enough, a significant portion of these shale resources encroach upon urban developments. As many as 300 million people around the world across six continents occupy land overlying a shale reservoir.[2] Large-scale industrial extraction of shale will no doubt impact these urban developments. Whether or not the impacts will be positive or negative for these local communities largely rests with industry's approach to development.[3]

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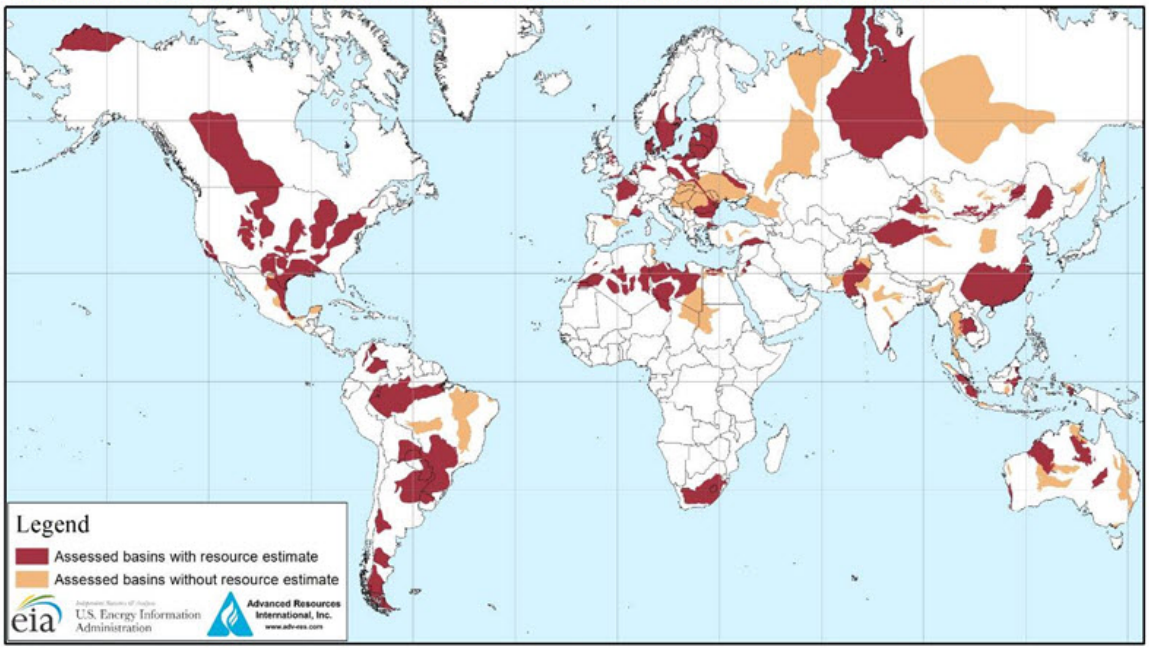
[1] Nathan Richardson, et. al., *The State of State Shale Gas Regulation*, RES. FOR THE FUTURE 3 (June 2013) *available at* http://www.rff.org/rff/documents/RFF-Rpt-StateofStateRegs_Report.pdf.
[2] Thomas G. Measham, David A. Fleming, *Correspondence: Assess Benefits and Costs of Shale Energy*, 50 NATURE 473 (June 26, 2014).
[3] *Id.*

Figure 1. Map of basins with assessed shale oil and shale gas formations, as of May 2013



Source: United States basins from U.S. Energy Information Administration and United States Geological Survey; other basins from ARI based on data from various published studies.

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The oil and gas exploration and production processes are increasingly the topic of discussion in the media, and not always with positive connotation. In the United States, a 2012 Gallup Poll reported that almost two-thirds of Americans have a negative view of the oil and gas industry.[5] A newspaper in the heart of shale development in Colorado went so far to say the "process of hydraulic fracturing for oil and gas is perhaps one of the most misunderstood drilling practices, becoming as bad of a word in some circles as a racial slur."[6] Moreover, some local communities have taken matters in to their own hands, going so far as suspending or banning hydraulic fracturing activities within city limits.[7]

Around the world, resistance from local communities continues to threaten shale development. Shale resources often go undeveloped, not for the lack of a legal license, but rather for the lack of a social license.[8] Many local communities express concerns about the impacts of shale development including ground and surface water protection, air quality, and increased traffic, dust, and noise.[9] However, "popular concerns about potential hazards to personal health and safety are often inconsistent with

[4] *Technically Recoverable Shale Oil and Shale Gas Resources: An Assessment of 137 Shale Formations in 41 Countries Outside the United States*, U.S. ENERGY INFORMATION ADMINISTRATION, http://www.eia.gov/analysis/studies/worldshalegas/.
[5] Rachael Seeley, *Shale's social license*, OIL & GAS JOURNAL 16 (July 21, 2014).
[6] Sharon Dunn, *Fracking 101: Breaking Down the Most Important Part of Today's Oil, Gas Drilling*, THE GREELEY TRIBUNE (Jan. 5, 2014), *available at* http://www.greeleytribune.com/news/9558384-113/drilling-oil-equipment-wellbore.
[7] Clifford Kraus, *Split Decision by Voters on Local Fracking Bans*, THE NEW YORK TIMES (Nov. 5, 2014), *available at* http://www.nytimes.com/2014/11/06/business/energy-environment/split-decision-by-voters-on-local-fracking-bans-.html?_r=0.
[8] Interview by Stephanie Joyce with Alex Hohmann, Stakeholder Relations Manager for Anadarko Petroleum, *in Relationships 101: Oil and Gas Looks for a Social License to Operate*, WYOMING PUBLIC RADIO (Dec., 5 2014), *available at* https://insideenergy.org/2014/12/05/relationships-101-oil-and-gas-look-for-a-social-license-to-operate/.
[9] *CNEE Powering Forward Full Report*, CENTER FOR THE NEW ENERGY ECONOMY, COLORADO STATE UNIVERSITY 92, *available at* http://cnee.colostate.edu/graphics/uploads/CNEE-Powering-Forward-Full-Report.pdf.

scientific evidence regarding the probability or risk that such hazards will actually happen."[10] Regardless of whether the hazards are probable, the mere presence of potential hazards creates a stigma of harm.[11] A stigma of harm, whether founded in fact, fiction, or emotion, must be addressed by companies wishing to explore for and develop shale resources.

In an effort to address the impacts of shale development on local communities, several energy development scholars recommend that operators obtain a "social license to operate" in communities near extractive industry projects. The process of obtaining a social license to operate includes, among other things, early as well as ongoing communication with communities, transparency and engagement in decision-making, and the establishment of effective conflict resolution mechanisms.[12] While the concept of social license to operate emerged from and evolved to become a standard business practice in the mining industry over the past nearly two decades, the concept of social license to operate is in its infancy in the oil and gas industry. This paper seeks to provide fundamental knowledge about "social license to operate," validate its application to the oil and gas industry, particularly shale gas development, discuss current ongoing efforts for shale gas developers to monitor and establish a social licenses, and identify potential shale gas industry practices to earn a social license to operate.

IMPACTS OF NATURAL GAS DEVELOPMENT

In recent years, natural gas has emerged as the preferred fossil fuel to bridge the gap between fossil fuel dependence and renewable energy. Natural gas has a wide variety of uses for residential use, commercial use, electricity generation, industrial use, and vehicle fuel.[13] When compared to other fossil fuels, natural gas is considered cleaner because it releases fewer harmful pollutants.[14] It has been dubbed the most environmentally friendly and the "cleanest" fossil fuel.[15] For example, natural gas combustion releases approximately half as much carbon dioxide as coal and 30 percent less carbon dioxide than oil, and significantly fewer pollutants per unit of energy.[16] Moreover, natural gas emits 15 to 20 percent less heat-trapping gases than gasoline when burned in vehicles.[17]

However, the natural gas exploration, drilling, production, and consumption processes are not without an environmental footprint. Critics note that the drilling and producing processes can contaminate groundwater, release air pollution including methane, disrupt wildlife habitats and negatively impact local communities.[18] Natural gas emissions occur during both the production process and the combustion, or consumption, process. In the U.S., natural gas production process results in venting or flaring of other fugitive methane releases, attributable to approximately two percent of total emissions, while natural gas combustion process causes approximately 21 percent of annual greenhouse gas emissions. Globally, natural gas combustion in 2011 accounted for 20.2 percent of the world's carbon dioxide emissions

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[10] Ian Thomson, *Understanding and Managing Public Reaction to 'Fracking'*, 33 J. OF ENERGY & NATURAL RES. LAW (2015).
[11] *Id.*
[12] Jason Prno & D. Scott Slocombe, *Exploring the origins of "social license to operate" in the mining sector: Perspectives from governance and sustainability theories*, 37 RESOURCES POLICY 346, 347 (2012).
[13] *Why is Natural Gas a Better Fossil Fuel?*, INNOVATEUS, http://www.innovateus.net/climate/why-natural-gas-better-fossil-fuel.
[14] *Natural Gas*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS, http://www.c2es.org/energy/source/natural-gas.
[15] *Id.*
[16] *Id.*
[17] *Environmental Impacts of Natural Gas: Global Warming Emissions*, UNION OF CONCERNED SCIENTISTS, *available at* http://www.ucsusa.org/clean_energy/our-energy-choices/coal-and-other-fossil-fuels/environmental-impacts-of-natural-gas.html#.VRbQdk10yUk.
[18] Nathan Richardson, et.al., *supra* note 1, at 5.

attributable to production and consumption of fossil fuels.[19] It is important to note that natural gas extraction and transportation processes results in methane release, which is different from carbon dioxide release and is considered by many to be a more potent global warming gas than carbon dioxide.[20] [21]

Despite its downfalls, natural gas is still the preferred fossil fuel of the future. Its abundance makes it a desirable alternative to other non-renewable resources, and its relative cleanliness compared to other fossil fuels – such as crude oil and coal – make it the preferred option in fossil fuel development.[22]

HORIZONTAL DRILLING AND HYDRAULIC FRACTURING

A discussion of social license is relevant today largely because of the technological advances of horizontal drilling and hydraulic fracturing. A common misconception is that the two technologies are synonymous with the drilling process; however, horizontal drilling and hydraulic fracturing are two distinct, separate processes that might be applied to an oil and gas drilling and production operation.

Horizontal drilling allows an operator to drill laterally, potentially covering more surface area of a shale resource than drilling vertically might accomplish.[23] On the other hand, hydraulic fracturing involves injecting water, sand and chemicals into a geologic formation to create fractures in the rock to increase permeability, thereby increasing the flow of oil and/or gas out of low permeability rocks.[24] Neither of these technologies is new. For example, hydraulic fracturing has been used in the United States since at least 1948.[25] However, it is the mastering of the processes and the ability to conduct them economically that makes their use so widespread today.

CONVENTIONALS V. UNCONVENTIONALS

Unconventional natural gas development, which highly utilizes the processes of horizontal drilling and hydraulic fracturing, is distinguishable from conventional gas development. While both processes result in the extraction of natural gas, conventional and unconventional recovery processes are distinct.

Conventional natural gas development, used for over 100 years, refers to the traditional process of extracting oil and gas from reservoirs below the earth's surface. In this process, gas is trapped in various porous zones of rock, typically in smaller volumes, which are relatively easy to develop.[26] For most conventional wells, operators utilize vertical drilling methods, and hydraulic fracturing is not necessary to recover the gas in place. Under conventional methods, the porosity of the rock is adequate enough to allow for a sufficient flow of gas out of the well.[27]

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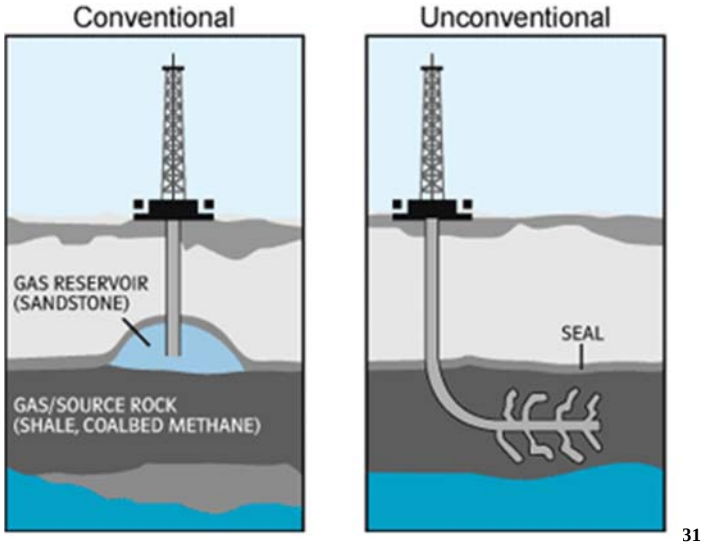
[19] *Natural Gas*, *supra* note 14.
[20] *Environmental Impacts of Natural Gas: Global Warming Emissions*, *supra* note 16.
[21] These impacts, however, can be attributed to shale gas development regardless of whether conventional or unconventional drilling and production methods are used. *See* Nathan Richardson, *supra* note 1.
[22] *Why is Natural Gas a Better Fossil Fuel?*, *supra* note 13.
[23] Nathan Richardson, et al., *supra* note 1.
[24] *Hydraulic Fracturing*, U.S. GEOLOGICAL SURVEY, http://energy.usgs.gov/OilGas/UnconventionalOilGas/HydraulicFracturing.aspx.
[25] Thomas E. Kurth, *Understanding Hydraulic Fracturing Issues, Challenges and Regulatory Regime*, PRACTICAL LAW GROUP 1 (2012).
[26] *Conventional & Unconventional*, CANADIAN ASSOCIATION OF PETROLEUM PRODUCERS, http://www.capp.ca/canadaIndustry/naturalGas/Conventional-Unconventional/Pages/default.aspx.
[27] *Formation of Natural Gas and Current Reserves*, EON, http://www.eon.com/en/business-areas/exploration-and-production/what-is-e-and-p/formation-of-natural-gas-and-reserves.html.

Unconventional gas development is a more recent phenomenon that has emerged based on mastering horizontal drilling and hydraulic fracturing technology to extract natural gas from virtually impermeable rock with less than ideal porosity. Unconventional shale resources are typically found in tight sands, shale, or coal beds.[28] To extract the natural gas from these tight structures, operators must create artificial pathways in the rock to release the natural gas.[29] The unconventional drilling process allows for the recovery of natural gas resources from rock formations previously thought unrecoverable. Most of the growth in supply of recoverable natural gas is attributable to unconventional gas reservoirs.[30]



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WHY STUDY NOW? THE IMPORTANCE OF GAS IN THE CONTEXT OF WORLD ENERGY GENERATION

The study of the shale gas boom and its associated social impacts is a highly relevant topic that warrants attention from industry, regulators, scholars, and the public. According to the United States Energy Information Administration's (EIA) International Energy Outlook, natural gas will be the world's fastest growing fossil fuel, with consumption rates growing at 1.5 percent per year through 2040.[32] This growth will occur in every region of the world, and will be highly concentrated in developing countries where the demand for natural gas is expected to occur twice as fast as in developed countries.[33] It is expected to occur over the next 20 years despite the dramatic recent weakening in global energy markets, and will be driven by ongoing economic expansion in Asia, particularly in China and India.[34] Population growth and increases in income per person are key drivers behind the increasing demand for energy.[35] According to Financial Times columnist Martin Wolf (commenting on the recent BP Energy Outlook Report), "the revolution in the production of shale gas and tight oil is expected to continue, with their share in primary energy production rising about 10 percent in 2035."[36]

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[28] *Id.*
[29] Additionally, in the past few years, hydraulic fracturing has been applied to some conventional wells as secondary recovery efforts to maximize production.
[30] *Conventional & Unconventional*, *supra* note 26.
[31] *Formation of Natural Gas and Current Reserves*, *supra* note 27.
[32] *Natural Gas*, *supra* note 14.
[33] *Id.*
[34] *BP's Energy Outlook 2035 in Brief*, BP, http://www.bp.com/en/global/corporate/about-bp/energy-economics/energy-outlook/outlook-to-2035.html.
[35] *Id.*
[36] Martin Wolf, *The riches and perils of the fossil-fuel age*, FINANCIAL TIMES, March 4, 2015, at 7.

THE SHALE GAS BOOM & THE GOLDEN AGE OF GAS

Recent innovations in the drilling and producing processes have drawn attention to what some term the "Shale Boom," the "Shale Revolution" or even the "Golden Age of Gas." These terms generally refer to a major shift in thinking regarding global natural gas reserves. Not more than a decade ago, there was a large consensus that hydrocarbon production was in a decline. But based on the above-referenced technologic advances, finding and producing gas in tight shale formations can now be accomplished economically.[37]

The "Golden Age of Gas" ideology, as coined by the International Energy Agency (IEA), considers the big picture of unconventional gas development. According to IEA Executive Director Maria van der Hoeven, "exploiting the world's vast resources of unconventional natural gas holds the key to a golden age of gas…but for that to happen, governments, industry and other stakeholders must work together to address legitimate public concerns about the associated environmental and social impacts."[38] The IEA has noted that if environmental regulation is developed in line with these principles in mind, environmental performance will lead to a level of public acceptance that provides industry with a necessary "social license to operate."[39] Companies must consider the social impacts of shale gas extraction projects. Those companies who effectively evaluate these social impacts will be best positioned to earn a social license to operate from the communities surrounding the project area.

II. Social license to operate

Social license to operate is a tool whereby companies manage socio-political risk by conforming to a set of implicit rules imposed by their stakeholders.[40] "While social license to operate is a fundamentally intangible concept, the concept does not lack definition or prescription for achievement."[41] It is an ongoing social contract with society that allows a project to both start and continue operating in a community.[42] Social license to operate derives from communities' perception of a company and its operations, comprised of a company's ongoing acceptance and approval from stakeholders.[43]

Social license to operate can be conceptualized as both a goal and as a set of rules to be followed.[44] It is "not as simplistic as a company's stamp of a community's approval but rather it reflects

[37] Edward L Morse, *Welcome to the Revolution: Why Shale is the Next Shale*, COUNCIL ON FOREIGN RELATIONS, http://www.foreignaffairs.com/articles/141202/edward-l-morse/welcome-to-the-revolution.
[38] Interview with Maria van der Hoeven, IEA Executive Director, in James Stafford, *The Golden Age of Gas, Possibly: Interview With the IEA*, OILPRICE.COM (Feb. 7, 2014), *available at* http://oilprice.com/Interviews/The-Golden-Age-of-Gas-Possibly-Interview-with-the-IEA.html.
[39] *Id.*
[40] Claire Richert, Abbie Rogers, & Michael Burton, *Measuring the Extent of a Social License to Operate: The Influence of Marine Biodiversity Offsets in the Oil and Gas Sector in Western Australia*, 42 RESOURCES POLICY 121, 121 (2015).
[41] John R. Owen & Deanna Kemp, *Social Licence and Mining: A Critical Perspective*, 38 RESOURCES POLICY 29, 32 (2013).
[42] Damien Giurco, et. al., *Responsible Mineral and Energy Futures: Views at the Nexus*, 84 JOURNAL OF CLEANER PRODUCTION 327 (2014).
[43] Robert G. Boutilier & Ian Thomson, *Modelling and Measuring the Social Licence to Operate: Fruits of a Dialogue Between Theory and Practice*, INTERNATIONAL MINE MANAGEMENT (2011); Richard Parsons, Justine Lacey, & Kieren Moffat, *Maintaining Legitimacy of a Contested Practice: How the Minerals Industry Understands its "Social License to Operate,"* 41 RESOURCES POLICY 83, 84 (2014).
[44] Jason Prno & D. Scott Slocombe, *supra* note 12; Claire Richert, Abbie Rogers, & Michael Burton, *supra* note *40*, at 121.

an ongoing and negotiated process where a community objection of one element of a project does not necessarily mean that the full support is being threatened or withdrawn."[45] Obtaining a social license to operate is critical for companies, since the failure to obtain this license will likely result in ongoing conflict and controversy with local communities.[46]

Social license to operate is, in many respects, a risk management tool. If a company can evaluate its social license, the company can assess its current level of risk associated with a project and take measures to reduce that risk.[47] Obtaining a social license to operate ensures that a company has addressed and reduced its socio-political risks.

STAKEHOLDERS DEFINED

When defining social license to operate, it important to also define and identify the "stakeholders" from which the social license should be earned. Stakeholders can be defined broadly or narrowly. A broad definition of stakeholders might include "any group or individual who can affect or is affected by the achievement of the organization's objectives."[48] Under this designation, almost anybody can be considered a stakeholder in a company's project. However, under a more narrow definition, "stakeholders bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm."[49] This narrower definition requires that a stakeholder has some level of risk associated to a company's project. Regardless of which definition is applied, stakeholders can be individuals, groups, or organizations, and stakeholders may or may not be part of the geographic community in which a project takes place.[50]

Defining "stakeholders" is critical part of the social license process and can create great heartburn for companies. Oftentimes, there are many individuals, groups, or organizations that are potential stakeholders, but their involvement in a project may be so minimal that it is debatable whether they should be included as part of the social license evaluation process.[51] Inclusion of these individuals, groups, or organizations is ultimately an internal business decision. Regardless of the type of definition of stakeholder that a company adopts, a company should clearly define and identify all potential stakeholders at the outset of a project.

Moreover, companies oftentimes have difficulty securing a social license because the network of stakeholders is internally divided.[52] As noted above, stakeholders can also be groups, or coalitions of groups.[53] Therefore, companies must also be aware of the dynamics within each stakeholder group and as

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[45] Justine Lacey, Richard Parsons, & Kieren Moffat, *Exploring the concept of a Social License to Operate in the Australian Minerals Industry*, CSIRO 7 (2012).
[46] Evan J. House, *Fractured Fairytales: The Failed Social License for Unconventional Oil and Gas Development*, 13 WYO. L. REV. 5, 51 (2013).
[47] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 121.
[48] Ronald K Mitchell, Bradley R Agle, & Donna J Wood, *Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts*, 22 ACADEMY OF MANAGEMENT REVIEW 853, 853 (1997).
[49] *Id.* at 853-54.
[50] Ian Thomson & Robert G. Boutilier, *Social License to Operate*, SME MINING ENGINEERING HANDBOOK 3RD EDITION, SOCIETY FOR MINING, METALLURGY, AND EXPLORATION INC. 1779, 1781 (2011).
[51] Ronald K Mitchell, Bradley R Agle, & Donna J Wood, *supra* note 48, at 854-54.
[52] R.G. Boutilier, L.D. Black, & I. Thomson, *From Metaphor to Management Tool – How the Social License to Operate can Stabilize the Socio-Political Environment for Business*, INTERNATIONAL MINE MANAGEMENT CONFERENCE (2012).
[53] *Id.*

well as the relationships among existing stakeholders to define both who is aligned and who has influential power.[54]

HISTORY OF SOCIAL LICENSE TO OPERATE: EMERGENCE IN THE MINING INDUSTRY

The concept of social license to operate is largely rooted in the mining industry. After several environmental incidents in the 1990's, the mining industry suffered from a greatly diminished reputation in local communities surrounding project areas.[55] In 1997, at a meeting with World Bank personnel in Washington, D.C., Jim Cooney, then Director of International and Public Affairs with Placer Dome, proposed that the mining industry act to address diminishing reputations by obtaining a "social license to operate."[56] Cooney's comments were largely based on his concerns with instable governments in developing countries not only halting major mining projects, but also failing to include local communities affected by such projects in the decision-making processes. Thus, the social license concept emerged to include local communities in decision-making processes while paralleling the legal licensing process.[57]

Following Cooney's comments in 1997, the concept of social license to operate gained traction and continued to develop as a part of the mining industry dialogue. In 2002 the International Institute for Environment and Development (IIED) issued a report on the mining industry entitled "Breaking New Ground: Mining, Minerals, and Sustainable Development."[58] The report noted that the concept of social license to operate initially developed as a defense mechanism for companies to address local distrust of industry, and that many companies had failed to convince constituents and stakeholders that they had a social license to operate.[59] The notion that companies should earn a social license to operate stuck, soon becoming part of the common vernacular in many corporate sustainability programs and implemented as an offensive tactic in preventing community mistrust. According to the International Council on Mining and Metals, by 2012, "the concept of social license to operate has been widely accepted by the mining industry."[60] However, the adoption and practice of social license was not met without hesitation, hurdles, or heartbreak. "Perhaps the greatest challenge to the value of mineral resources in recent years has been…social license to operate," one former Rio Tinto executive has written.[61]

Since its emergence in the late 1990's in the mining industry, social license to operate has gained support among many stakeholder groups including "mining companies, civil society, non-governmental organizations, research institutions, governments, and consultants."[62] It has also been applied to other industries including paper manufacturing, alternative energy generation, and agriculture.[63] Its widespread acceptance and successful application in other industrial and resource extractive industries make it an attractive option for application in the shale gas industry.

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[54] *Id.*
[55] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1779.
[56] *Id.*
[57] Jen Gerson, *Rise of 'Social Licence': Claiming They Speak for Their Community, Protest Groups are Undermining the Law*, THE NATIONAL POST (Oct. 17, 2014), *available at* http://news.nationalpost.com/2014/10/17/rise-of-social-licence-believing-they-speak-for-their-community-protest-groups-are-undermining-the-law/#__federated=1.
[58] *Minerals Mining and Sustainable Development Final Report*, INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT (2002) *available at* http://www.iied.org/mmsd-final-report.
[59] John R. Owen & Deanna Kemp, *supra* note 41, at 29.
[60] *In Brief: Mining's Contribution to Sustainable Development -- An Overview*, ICMM 5 (June 2012).
[61] Ken Haddow, *Should Mineral Rights for Hard-Rock Minerals be Awarded by Tender?*, 32 JOURNAL OF ENERGY & NATURAL RESOURCES LAW 335, 345 (Aug. 2014).
[62] Kieren Moffat & Airong Zhang, *The Paths to Social Licence to Operate: An Integrative Model Explaining Community Acceptance of Mining*, 39 RESOURCES POLICY 61 (2014).
[63] *Id.*

ELEMENTS OF SOCIAL LICENSE TO OPERATE

As noted, the concept of social license to operate is not without definition. Certain criteria can be applied to define and categorize a company's social license. Ian Thomson and Robert Boutilier have identified three major criteria that a company must establish to achieve the highest level of social license: legitimacy, credibility and trust.[64]

The first criterion, legitimacy, requires that a company spread awareness, listen to community concerns, and follow official and unofficial local norms, customs and practices.[65] To establish legitimacy, a company should establish its legal status, inform the community on how past projects have succeeded, and seek community participation from all constituents, regardless of age or gender, in planning and decision-making[66]

The second criterion is credibility. "When a company is regarded as credible, it is seen as following through on promises and dealing honestly with everyone."[67] Establishing credibility requires following through and taking action based on information or knowledge known by the company.[68] Credibility can be achieved by transparency and consistency in decision-making.[69]

Trust is the final criterion of a social license to operate. Trust is the degree to which the entire public holds collective trust towards an organization.[70] Companies should strive to achieve "full trust" from the public in their organization. "T]he term full trust means a broader and deeper trust. Credibility is a basic level of truth related to honesty and reliability. A full trust relationship is one where there is a willingness to be vulnerable to the actions of others."[71] When a community has trust in a company, the community feels confident that the company will act in the best interest of the community.[72] It requires going beyond a company doing what it says it will do.[73] It requires collaboration and develops over time.[74] As it has been said, "Trust is hard to earn, easy to lose, and very difficult to recover once lost."[75]

Based on the components of legitimacy, credibility, and trust, a company can achieve four levels of social license to operate: withdrawal, acceptance, approval, and psychological identification with a project.[76] The highest level of social license, psychological identification with a project, is associated with the least amount of risk and is ideally what companies should aim for when developing social license programs. However, most successful social license programs that reduce corporate risk fall within the approval level of social license to operate.[77]

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[64] Jason Prno & D. Scott Slocombe, *supra* note 12, at 347.
[65] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1784-85.
[66] *Id.*
[67] *Id.*
[68] *Id.*
[69] *Id.*
[70] Kieren Moffat & Airong Zhang, *supra* note 62, at 61-70.
[71] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1786.
[72] *Id.*
[73] *Id.*
[74] *Id.*
[75] *Id.*
[76] Jason Prno & D. Scott Slocombe, *supra* note 12, at 347.
[77] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1786.

Withdrawal is the lowest level of public acceptance. At the withdrawal level, no level of social license is achieved, and minerals will go undeveloped.[78] This is the worst-case scenario for companies and can result in a community halting progress on a project.[79] Community withdrawal is often marked by shutdown, blockade, boycott, violence, sabotage, and legal challenges to a corporate project.[80]

Acceptance is achieved when legitimacy is recognized but a company has not yet established credibility. In this stage, the community does not have a particular reason to doubt a company's credibility, but the community members are still reluctant about proceeding with approval of a project.[81] The acceptance level of social license to operate is troubled by recurring issues and threats from the community, interference by outside organizations such as non-governmental organizations, and third party monitoring of a project.[82]

Approval is achieved when a company establishes both legitimacy and credibility. At the approval level, a community views the company as a good neighbor. At this point, a company can securely access the resources it needs, and the community has pride in the company's projects.[83] The community has a positive outlook towards projects and is happy with its existence.[84] At the approval level, there is no longer sociopolitical risk associated with the project.[85]

Psychological identification is achieved when a community has full trust in a company and the community fully supports a project.[86] Rather than "us and them," the relationship between community and company represents a "we," marked by co-ownership in the project.[87] At this point, the community will defend the company against outside criticisms or attempts to impede project movement, making this level unique and stronger than others.[88] "Very few companies have actually succeeded in taking their community relations to this level."[89]

BUT IS SOCIAL LICENSE EVEN NECESSARY?

The concept of social license has not developed without criticism. Some critics argue that achieving a social license is unattainable based on the nature of modern society and the structure of governments. These arguments are largely centered on the philosophy that perfect consensus within general society is impossible, and regulatory bodies exist to define legal licenses because the general public is incapable of agreement.[90] Assuming regulatory authorities appropriately manage environmental social concerns in the legal licensing process, acceptance of this social philosophy would negate all need for a social license to operate.

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[78] *Id.* at 1784.
[79] *Id.*at 1779, 1784, 1786.
[80] Tay Wiles, *What I Learned from Western Royalty*, HIGH COUNTRY NEWS (Mar. 5, 2014), *available at* http://www.hcn.org/blogs/goat/what-i-learned-from-western-royalty/print_view.
[81] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1785.
[82] Tay Wiles, *supra* note 80.
[83] *Id.*
[84] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1786.
[85] *Id.*
[86] *Id.*; Tay Wiles, *supra* note 80.
[87] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1786.
[88] *Id.*
[89] *Id.*
[90] Jen Gerson, *supra* note 57.

Moreover, social license to operate has been criticized as undermining the law.[91] A social license may place a great deal of authority in the social, intangible, extra-legal license, thereby taking value away from legal licenses. Some critics go as far as to say that legitimization of social license may actually result in violent protest. When discussing social license to operate as it applies to Indigenous communities in Canada, Dwight Newman writes:

> any overly enthusiastic embrace of social license to operate in its mistakenly transformed senses is actually a rejection of the rule of law and a suggestion that Canada should become a less well-ordered society…over-enthusiastic embraces of social license that actually misinterpret it through a sort of mistake about categories thereby undermine legally determined rights and even legitimize physical violence. Those who have rushed to embrace some interpretations of social license because they are socially minded and support better flourishing of people in society should really think about whether they want to embrace a form of the concept through which they may legitimize physical violence…legitimization of a concept that breaks down the rule of law is not helpful to industry, and it is not helpful to Indigenous communities.[92]

Social license to operate has also been criticized as placing too much authority in the general public. Under social license, corporations now must negotiate directly with members of the community, a "free-market killing concept" in line with communism in that everything belongs to the people, one observer has asserted.[93]

Despite the criticism, however, there are many who believe social license to operate is a positive development. Dwight Newman also writes that:

> At a real level, social license to operate has practical effects. At the same time, there are important reasons to resist any drift in the concept. So long as it remains a descriptive concept for business to be able to analyze factors that include what are ultimately legitimate impacts against business, it is a valuable tool for those bold enough to try to create prosperity in a sometimes unwelcoming world.[94]

In addition, many experts recognize the business risks associated with not achieving a social license to operate. Some emphasize that only recently have environmental concerns and their associated impact on corporate risk for failure to obtain a social license come to light.[95] Stakeholders now have the ability to impose additional costs on companies or can potentially impact conditions on financing.[96] Stakeholders can achieve this by organizing boycotts, media campaigns, lobbying governments, or legally challenging projects.[97] Achieving a social license to operate is imperative because communities have the ability to impact a company's image or reduce its market share.[98] Therefore, social license to operate is a critical tool in evaluating the risk associated with community opposition to a project and identifying the appropriate measures to minimize that risk.

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[91] *Id.*
[92] Dwight Newman, Commentary, *Be Careful What you Wish For: Why some versions of "social license" are unlicensed and may be anti-social*, MACDONALD-LAURIER INSTITUTE PUBLICATION 4 (Nov. 2014).
[93] Terence Corcoran, Comment, *From Northern Gateway to Keystone, the Undefinable 'Social Licence' Movement is in Control of Jobs and Growth*, FINANCIAL POST, Apr. 22, 2014.
[94] Dwight Newman, *supra* note 92, at 4.
[95] Susan Joyce & Ian Thomson, *Earning a Social License to Operate: Social Acceptability and Resource Development in Latin America*, 93 THE CANADIAN MINING AND METALLURGICAL BULLETIN 1037 (2000).
[96] Richard Parsons, Justine Lacey, & Kieren Moffat, *supra* note 43, at 84.
[97] *Id.*
[98] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 122.

III. Social license to operate in the Oil and Gas Industry

HISTORY

In general

The consideration of a social license to operate in the oil and gas industry started in the final years of the 20th century. It began in the context of oil and gas development taking place primarily in the developing world. Still, the issue would not attract a great deal of attention in the developed world until the decade beginning in 2010.

In the late 1990s, social license to operate in the oil and gas industry initially took the form of securing what was then referred to as a "license to operate" in addition to any legal or regulatory requirements. "By 'license to operate,' the companies meant something beyond the production-sharing contracts that producers signed with host country governments, or the [engineering, procurement, and construction] contracts engineering firms signed to build plants in the country not their own," Bob Tippee, editor of the *Oil & Gas Journal*, has written.[99] "'License to operate' means not just legal permission to perform specific work but social sanction for business activity," he wrote adding, "Judgments about it are rendered not in courts of law, but in the much less well-defined yet often more potent court of culture."[100]

However, by 2010, the discussion within the international development industry about the license to operate had begun to fade for several reasons. "One easy answer," Mr. Tippee suggested, was "that the concept has been absorbed into a more general emphasis – albeit an important one – on corporate responsibility."[101] Moreover, by 2010, many host country governments were keeping the best projects for themselves, thus reducing to some extent the role of international oil and gas firms.[102] Finally, the anti-globalization effort, which had blossomed in the late 1990s bringing with it a general antipathy for the work of many global companies, had diminished.[103] Notwithstanding these developments, Mr. Tippee argued that in 2010 "the topic is more important than ever," stating that transparency was a key element in the overall discussion.[104] "Priorities such as health, safety, and environmentally sound behavior are vitally important and closely linked to the legitimacy of energy work – expatriate or otherwise," he observed.[105]

Despite what had taken place in the international oil and gas development context, the matter of social license to operate in the developed world did not really begin until the advent of unconventional oil and gas development using horizontal drilling and hydraulic fracturing was introduced and implemented in a major way around 2010. The combination of these technologies allowed developers to extract resources from shale plays near urban settings. As a consequence, the stage was set for the current debate about the industry's social license to operate in unconventional developments.

The social license to operate "gap" between the mining and oil and gas industries

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[99] Bob Tippee, "It's Time for a Fresh Look at the License to Operate," OIL & GAS JOURNAL, Apr. 26, 2010.
[100] *Id.*
[101] *Id.*
[102] *Id.*
[103] *Id.*
[104] *Id.*
[105] *Id.*

In many settings, the mining and oil and gas industries share the appellation of extractive industries. "Both industries extract non-renewable mineral resources with consequent issues of resource depletion and conservation," Jim Cooney has said.[106] However, there are major differences between how the industries operate. "Mines often have long lifespans that stimulate the formation of new or expanded communities, which are prone to economic depression during cyclical downturns in commodity prices…[In addition] the population explosion around mines poses significant risks to surface and ground water," Mr. Cooney has observed.[107]

On the other hand, oil and gas development typically is undertaken in relatively quick steps, leading the industry to often assume – or behave as if – it has less need of a long-term relationship with the community where the work is being done. One Montana-based activist has explained it this way:

> There's a significant reason why oil and gas companies will never make a serious effort to engage with this community the way the [local mine] has. The answer lies primarily in the oil and gas cycle… Companies come in for a quick profit. At most they stay a few years, and their complicated financial relationships with other companies mean that much of their work is subcontracted to others. Their employees come and go, frequently without families, often living in temporary housing. The mine, by contrast, is in the community for the long term. They have a small number of locations, their employees live in the community and send their children to local schools, and as a result the company and its employees have to live with the consequences of the way they run their business. It makes sense to work with the community as good neighbors.[108]

As a consequence of how mining is undertaken, as well as public concern and criticism of the impacts of mining, the industry "has moved farther than other industries outside its comfort zone to diffuse criticism, to find common ground with critics and to change itself," Mr. Conney has said.[109] "[T]he mining industry [has] learned matters both of process and of substance: from the engagement process, mining companies have learned difficult models of comprehensive dialogue and consensus building with critics. By listening to their critics, the companies have learned different approaches to analyzing and managing critical issues," he adds.[110]

Looked at another way, the mining industry understands "that obtaining a formal license to operate from governments and meeting regulatory requirements is no longer enough. Instances of mining developments being delayed, interrupted, and even shut down due to public opposition have been extensively documented."[111]

THE NECESSITY OF SOCIAL LICENSE TO OPERATE IN THE OIL AND GAS INDUSTRY

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[106] Jim Cooney, Sustainable Mining and the Oil Sands, Keynote Speech, at the 2008 Alberta Environment Conference (Apr. 23, 2008).
[107] *Id.*
[108] David J. Katz, *American Petroleum Institute 'Good Neighbor' Guidelines Sound Nice, But Have Little Relationship to Reality*, PRESERVE THE BEARTOOTH FRONT BLOG (Jul. 14, 2014), *available at* http://preservethebeartoothfront.com/2014/07/14/american-petroleum-institute-good-neighbor-guidelines-sound-nice-but-have-little-relationship-to-reality/.
[109] Jim Cooney, *supra* note 106.
[110] *Id.*
[111] Kieren Moffat & Airong Zhang, *supra* note 62, at 61.

The absence of social license to operate by an oil and gas firm can be a significant impediment, as it is likely to raise important social-political risk in the form of development disruption.[112] The impacts of such disruption are many, but perhaps the most important is putting profits at risk.[113]

There are two concepts that underpin the increasing need for oil and gas companies to acquire and maintain a social license to operate. The first involves "observable shifts in governance from State to non-state actors [that] have given more power to civil society to inform decision-making."[114] The second is founded in "people's concerns [that] have been influenced by the spreading of the sustainability paradigm, which emphasizes in particular the importance of preserving…natural capital."[115]

Looked at from an oil and gas company's perspective, the need for the industry to support tougher regulatory requirements – in this specific instance methane regulations – is "all about social license to operate."[116]

There is also the matter that in many cases companies will go back to wells that have been previously fractured. If the social license was not established the first time, or if established but not maintained, then a company (or its successor) may find it is not welcome "the second time around." This will become increasingly important as operators take advantage of advances in technology to refracture existing wells. "Refracturing and recompleting existing horizontal oil and gas wells is becoming more prevalent as companies work to make the most of their assets amid pricing uncertainty," according to FTI Consulting, Inc., which works in the oil and gas sector.[117]

On the other hand, there are potential weaknesses associated with an industry raising the profile of social license in the form of the "failure…to articulate a collaborative developmental agenda for the sector."[118] In this regard, "A necessary step in this process is for industry to reconcile its internal risk-orientation with external expectations and this requires a less defensive and more constructive approach to engagement and collaboration."[119]

WHAT HAS HAPPENED SO FAR

Despite the efforts of many companies, there remains a deep-seated apprehension among some investor groups that the industry's efforts have not allayed the public's concerns associated with unconventional development, thus putting the social license to operate at risk. For example, one investor group focusing on North America has said, "As evidenced by the continuing controversy over allowing shale energy development to move forward in Colorado, California, New York, Eastern Canada, and elsewhere, energy companies have still not managed to allay public concerns about the risks associated with their operations and continue to face potential loss of their social license to operate."[120]

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[112] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 123.
[113] *Id.*
[114] *Id.* at 122.
[115] *Id.*
[116] *Colorado Becomes First State to Restrict Methane Emissions*, NATIONAL PUBLIC RADIO (Feb. 25, 2014), http://www.npr.org/2014/02/25/282359550/colorado-becomes-first-state-to-restrict-methane-emissions.
[117] Danny Boyd, *Refracturing Brings Mature Wells to Life*, WELL SERVICING 36 (2014). A University of Texas engineering professor, Matthew Balhoff, has estimated that "success could mean boosting additional recovery by 5 percent from some existing wells, although results can vary widely by field and reservoir." *Id.* at 38.
[118] John R. Owen & Deanna Kemp, *supra* note 41, at 35.
[119] *Id.*
[120] Richard Liroff, et. al., *Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing Operations*, 5 (2014), *available at* http://disclosingthefacts.org/report/DisclosingTheFacts_2014.pdf.

Still, this same group stated that there were significant opportunities to address this risk stating, "We believe companies implementing current best practices in operations and providing thoroughly transparent information about these efforts will: enhance the likelihood of securing and maintaining their social license to operate; reduce regulatory and reputational risks; reduce liabilities associated with poor performance, spills, contamination, and lawsuits; and thereby increase their access to capital."[121]

Historic barriers to engagement

Numerous concepts could be pointed to as having been (and continuing to be) historic barriers to engagement. Identifying and analyzing them can be helpful in considering how they might be more successfully addressed in the future.

Perhaps the key element that underscores the current barrier of engagement is simply this: the historical lack of trust between the industry and its stakeholders. But what exactly is trust? Professor Geoffrey Hosking[122] from University College London has considered the history of trust. In his words, "One of the many difficulties involved in studying trust is that it is several phenomena at once. It is first of all a feeling…Trust is also an attitude…Trust is also a relationship, between oneself and another person, collective of persons or institution…All three aspects of the world 'trust' then…imply a social context, and they are all to do with behavior and action or the potential for action."[123]

The corrosive influence of a situation in which lack of trust takes root can be extremely damaging. As Professor Hosking has written, "Once unleashed, distrust can spread like a forest fire in dry, windy weather…Trust and distrust are part of the deep grammar of any society, the way in which we relate to each other, trust or distrust each other, determines much of our social behavior. In order to take decisions and act in real life, we need to trust in other people, in institutions, or simply in the future. As an Indian policymaker has commented, 'Confidence grows at the rate a coconut tree grows, and it falls at the rate a coconut falls.'"[124]

Trust also needs to be understood in the context of identity. "We tend to trust those who most resemble us because they are using symbolic systems similar to our own," according to Professor Hosking.[125] "Hence we feel a sense of community with them, and to trust them requires little conscious efforts."

The perceived lack of openness by the oil and gas industry towards its stakeholders underpins this lack of trust. This is a crucial barrier since, "The openness of all involved is vital," as a report about hydraulic fracturing by the U.K. House of Commons Environmental Audit Committee, recently observed.[126] This lack of openness, whether real or perceived, has lead one investor group to assert that the industry "has still not managed to allay public concerns about the risks associated with their operations and continue to face potential loss of their social license to operate."[127] On the other hand, the

[121] *Id.*
[122] *See Professor Geofrey Hosking*, UNIVERSITY COLLEGE LONDON, https://www.ucl.ac.uk/ssees/people/history-staff-folder/geoffrey-hosking.
[123] GEOFFREY HOSKING, TRUST: A HISTORY 27 (2014).
[124] *Id.* at 22.
[125] *Id.* at 201.
[126] *Environmental Risks of Fracking*, HOUSE OF COMMONS ENVIRONMENTAL AUDIT COMMITTEE, EIGHT REPORT OF SESSION 2014-15, HC 856, 33-34 (Jan. 21, 2015).
[127] Richard Liroff, et. at., *supra* note 120, at 5.

lack of trust can be viewed from the industry's perspective as well. No set of professionals will react favorably when it perceives, real or imagined, that it is being attacked for being irresponsible.

The lack of openness, again real or perceived, finds its way into the matter of whether the public thinks adequate information has been made available by the industry. In the absence of this so-called "adequate" information, "[T]he public lacks a sufficient basis for evaluating fracking and horizontal drilling operations, and is left with only its intuition and the information put forth by third parties."[128] Relying on third parties who may have their own parochial perspective is not likely to result in a clearer picture of the risks and benefits associated with development.

Associated with the involvement of third parties mentioned above is the problem of polarization. The recent report by the U.K. House of Commons Environmental Audit Committee described the problem in these words: "Public acceptance…is critical in determining whether fracking should continue in the U.K…[B]ut we are unable to see at this stage how the crucial 'social licence' can be established when the debate around fracking is so polarized."[129] Once polarization is in place, then there is a very real chance that the issue quickly becomes politicized and all parties to the underlying issues may lose control of the real issues at hand.

Finally, there is the challenge associated with "post normal" science, a term credited to Professors David Ravitz and Silvio Funtowitz.[130] Hydrofracturing is an example of a post normal technology, which is typified by "excess amount of controversy, dueling fact sheets, or information campaigns, dramatized polarities ('for' and 'against'), and deeply entrenched misunderstandings on both sides."[131] In this situation, "[E]xperts on both sides [are] embroiled in nasty disagreements about data. In these cases, having more information does not always settle public unease about extractive projects."[132]

In numerous respects, the theme of trust – or lack thereof – is associated with many of the barriers to engagement. The need to fully address the matter of trust cannot be underestimated since, "When social trust breaks down, it tends to reconfigure in a lower-level collective, which then erects rigid boundaries around itself."[133]

The "social amplification of risk"

The relationship between the deployment of a potentially hazardous technology and the social setting in which it will take place can result in establishing an unsubstantiated negative image within the public's collective mind.

Ian Thomson, who has a long history of working with the natural resources industry, has described it this way: "As information about the possible hazard is exchanged, either through word of mouth between individuals or through the mass media, internet and social media such as Facebook and Twitter, a population may come to perceive the risk of impact as a threat that is many times greater than that calculated by informed experts."[134] He refers to this as the "social amplification of risk."

[128] Evan J. House, *supra* note , 46 at 54.
[129] Environmental Risks of Fracking, *supra* note 126, at 33-34.
[130] JEROME R. RAVITZ & SILVIO O. FUNTOWICZ, UNCERTAINTY AND QUALITY IN SCIENCE FOR POLICY (1991).
[131] Jen Schneider, *Barriers to Engagement: Why it is Time for Oil and Gas to Get Serious about Public Communication*, OIL AND GAS FACILITIES: CULTURAL MATTERS (Apr. 2013).
[132] Jen Schneider, *supra* note 131.
[133] Geoffrey Hosking, *supra* note 123, at 201.
[134] Ian Thomson, *supra* note 10.

Mr. Thomson has identified several factors that contribute to the social amplification of risk: "[S]election, sensational and/or inaccurate media reporting of risks and regulatory actions to control them; the use of technical language; limits in the ability of non-specialists to understand technical information; intolerance for scientific uncertainty on the way in which risk is described as an abstract percentage or frequency relative to some (seemingly irrelevant) standard; and failure to address the concerns of the public directly."[135] The end result, in many instances is that "social amplification is…the precursor to stigmatization of a hazard, project or indeed, the industrial activity (fracking) itself."[136]

Non-trade association efforts to promote social license

There have been a small number of non-trade association affiliated efforts to promote social license in the oil and gas context. Most of these efforts have involved the Marcellus Formation in the Appalachian Basin in the eastern part of the U.S. This may be attributed to the fact that unconventional development began at an early stage in Pennsylvania, a state that is politically "more balanced" than states such as Texas or Oklahoma where the industry has a faced a more sympathetic reception.

Center for Sustainable Shale Development

The Center for Sustainable Shale Development[137] (CSSD) describes itself as "a group of leading environmental organizations, philanthropic foundations, and energy companies [that] has collaborated to form a unique center to provide producers with certifications of performance standards for shale development."[138] CSSD's overall aim is "to encourage prudent and responsible development of shale gas resources in the Appalachian region."[139]

Established in 2013, CSSD is funded by foundations and energy companies operating in the Marcellus Shale region. Founding participants included Chevron, the Clean Air Task Force, CONSOL Energy, Environmental Defense Fund, Heinz Endowments, Citizens for Pennsylvania's Future, Shell and the Penn Foundation.[140]

CSSD received considerable press coverage when it was launched, including a laudatory editorial in The Washington Post.[141] The Pittsburgh Quarterly, in characterizing several editorials about the CSSD, said the coalition was a "long-overdue step toward bridging ideological differences and in addressing the environmental safety concerns at the heart of shale gas controversy."[142]

CSSD was announced at the same time a predecessor organization launched 15 initial performance standards "designed to ensure safe and environmentally responsible development of the

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[135] *Id.*
[136] *Id.*
[137] *See* CENTER FOR SUSTAINABLE SHALE DEVELOPMENT, https://www.sustainableshale.org.
[138] *Center for Sustainable Shale Development Names Susan Packard LeGros Executive Director*, CENTER FOR SUSTAINABLE SHALE DEVELOPMENT (Jan. 21, 2014), *available at* https://www.sustainableshale.org/wp-content/uploads/2014/01/LeGros_News_Release.pdf.
[139] News Release, *Center for Sustainable Shale Development Certification and Verification Program Opens for Business*, CENTER FOR SUSTAINABLE SHALE DEVELOPMENT, (Jan. 21, 2014), *available at* https://www.sustainableshale.org/wp-content/uploads/2014/01/Master_News_Release.pdf.
[140] News Release, *Center Formed to Provide to Shale Gas Producers Independent Certification of Performance Standards*, CENTER FOR SUSTAINABLE SHALE DEVELOPMENT, (Mar. 20, 2103), *available at* http://037186e.netsolhost.com/site/wp-content/uploads/2013/03/General-News-Release-FINAL-3-20-13-GPX2.pdf.
[141] Editorial, *A Fracking Breakthrough for Environmentalists and Drillers*, THE WASHINGTON POST, Mar. 23, 2014.
[142] Jeffery Fraser, *Finding Common Ground*, PITTSBURGH QUARTERLY (Summer 2013), *available at* http://www.pittsburghquarterly.com/index.php/Marcellus-Shale/finding-common-ground.html.

Appalachian Basin's abundant shale gas resources."[143] These standards, which underpin CSSD's third-party certification process, are the main focus of CSSD. However, the CSSD also has been involved in supporting fracking-related legislation in Ohio, a move that resulted in criticism of the organization.[144]

The level of financial support from the oil and gas industry has caused some to suggest "the funding balance [has] shifted too heavily to industry members."[145]

The Marcellus Center for Outreach and Research

The Marcellus Center for Outreach and Research[146] (MCOR), launched in 2013,[147] is Penn State University's research and education initiative related to unconventional gas development. It serves a host of stakeholders including industry, environmental groups, landowners, state agencies, and elected officials.

MCOR is "committed to expanding research capabilities on technical aspects of developing this resource and to providing science-based programming while protecting the Commonwealth's water resources, forests and transportation infrastructure."[148]

MCOR's activities include:[149]

- Researching extraction methods, including alternative fracturing methods and water treatment and disposal;
- Evaluating workforce issues including training and community changes;
- Publishing reports and presenting programs about changes in land use and landowner decision-making; and
- Providing information about legal issues including regulation as well as pipeline siting and tax revenues.

MCOR offers a series of short courses for environmental consultants, project planners and engineers, economic development officials, water and wastewater treatment managers, and government officials.[150]

The university's College of Agricultural Sciences, College of Earth and Mineral Sciences, Penn State Institutes of Energy and the Environment and Penn State Outreach collectively fund the MCOR.[151] However, on at least one occasion it is reported to have used industry funding to offer a "Shale Gas Regulators Training Program."[152]

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[143] *Center Formed to Provide to Shale Gas Producers Independent Certification of Performance Standards*, THE HEINZ ENDOWMENTS (May 20, 2013), *available at* http://www.heinz.org/Interior.aspx?id=423&n=247.
[144] Bonner J. Cohen, *Fracking Debate Splits the Environmental Movement*, ILLINOIS REVIEW (October 31, 2014).
[145] David Conti, *Center for Sustainable Shale Development Aims to Raise Standards*, THE PITTSBURGH TRIBUNE-REVIEW, January 12, 2015.
[146] *See Marcellus Center for Outreach and Research*, PENN STATE, http://www.marcellus.psu.edu.
[147] *See Penn State Launches New Education, Research Center on Marcellus Shale*, PENN STATE (Aug. 18, 2010), *available at* http://news.psu.edu/story/165604/2010/08/18/penn-state-launches-new-education-research-center-marcellus-shale.
[148] *See Marcellus Center for Outreach and Research*, *supra* note 148.
[149] *See Marcellus Center for Outreach and Research: What We Do*, PENN STATE, http://www.marcellus.psu.edu/about/What_we_do.php.
[150] See *Marcellus Center for Outreach and Research: Short Courses*, PENN STATE http://www.marcellus.psu.edu/events/index.php.
[151] *See Marcellus Center for Outreach and Research*, *supra* note 148.
[152] *Money Draws State Colleges into Marcellus*, THE NEWS-ITEM (Shamokin, PA), May 4, 2014.

Appalachian Shale Recommended Practices Group

The Appalachian Shale Recommended Practices Group[153] (ASRPG,) is a consortium of 11 oil and gas producers operating in the Appalachian Basin. These operators "have come together to identify and disseminate responsible standards and practices for effective environmental, health and safety practices utilized in shale natural gas and oil development operations in the Appalachian region."[154] Participating companies include Anadarko, Chesapeake Energy, Chevron, Shell, WPX Energy and XTO Energy.

The ASRPG uses a "consensus-based approach to developing the recommended standards and practices for Appalachian Shales provides a roadmap to enhance transparency and regulatory complicate, as well as empowers workers to stop work that is potentially unsafe, emphasizes the important of optimizing local content…"[155]

The ASRPG Recommended Standards and Practices,[156] which were published in April 2012, were developed entirely by the 11 companies.

Center for a Sustainable We^{2}st

The ConocoPhillips Center for a Sustainable We^{2}st[157] (CSW) was launched in 2014 at the Colorado School of Mines. CSW's mission is "to promote the joint sustainability of unconventional energy production and water resources through education of energy-water literate graduate and undergraduate students, and by conducting world-class research on both community acceptance of unconventional resource development, and water resources related to unconventional energy production."[158]

Research undertaken by the CSW focuses on community acceptance and water resources research.[159] An innovative aspect of the CSW is its undergraduate scholars and graduate fellows programs.[160]

Center director Terri Hogue, associate professor of civil and environmental engineering at Mines, said, "Areas of focus for the center include education; community acceptance, communication and corporate social responsibility research; and integrated water resources assessment research. The research and educational initiatives undertaken at the center will benefit not only unconventional energy producers and water-reliant industrial stakeholders, but also the general public."[161] ConocoPhillips provided $3 million in funding to start the center.[162]

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[153] *See* APPALACHIAN SHALE RECOMMENDED PRACTICES GROUP, http://asrpg.org.
[154] *Id.*
[155] *Consortium of Energy Producers Announce Recommended Standards and Practices for Exploration and Production of Natural Gas and Oil from Appalachian Shales*, ASRPG (May 1, 2012), http://asrpg.org/pdf/ASRPG%20Press%20release.pdf.
[156] *ASRPG Recommended Standards and Practices*, ASRPG (Apr. 2012), http://asrpg.org/pdf/ASRPG_standards_and_practices-April2012.pdf.
[157] We^{2}st stands for Water-Energy Education, Science and Technology. Mark Harden, *ConocoPhillips establishing energy-water center at Colorado School of Mines*, DENVER BUSINESS JOURNAL ENERGY INC. (Mar. 26, 2014), *available at* http://www.bizjournals.com/denver/blog/earth_to_power/2014/03/conocophillips-establishing-energy-water-center-at.html?page=all; *see* CENTER FOR A SUSTAINABLE WE^{2}ST, http://inside.mines.edu/WEST-home.
[158] *Id.*
[159] *See* CENTER FOR A SUSTAINABLE WE^{2}ST, http://inside.mines.edu/WEST-research.
[160] *See* CENTER FOR A SUSTAINABLE WE^{2}ST, http://inside.mines.edu/WEST-undergrads.
[161] Mark Harden, *supra* note 159.
[162] *See* News Release, *ConocoPhillips Establishes the ConocoPhillips Center for a Sustainable WE2ST at Colorado School of Mines*, CONOCOPHILLIPS (Mar. 26, 2014), *available at*

The University of Texas at Austin Energy Institute

The University of Texas at Austin Energy Institute[163] (EI) "fosters interdisciplinary interactions among colleges and schools across campus, while serving as a portal for external audiences interested in learning more about energy research" conducted at the university.[164] Although involved in policy issues at a high level, the EI does not convene meetings where various stakeholders can move towards consensus positions on controversial issues.

Other areas in which the EI is involved include education, convening energy-related conferences, serving as a point of contact for industry, supplying grant money for faculty research, and publishing the monthly UT Energy Bulletin,[165] and promoting commercialization of energy concepts with industry.[166] Energy funding at the University of Texas at Austin from all sources is about $70 million per year.[167]

Equitable Origin

Equitable Origin[168] is a for-profit[169] "social enterprise" with the mission of promoting "best practices and continual improvement of responsible upstream oil and gas operations through a set of stakeholder-negotiated and internationally recognized environmental, social, and good governance standards."[170]

Equitable Origin was co-founded by David Poritz[171] and Manuel Pallares, who first met in Ecuador, where both were working with communities in the Amazon.[172] In early 2009, Equitable Origin, which has focused primarily on the Amazon, organized a multi-stakeholder effort that included governments, oil and gas companies, indigenous communities, social and environmental NGOs, and academics "to create a rating system for social and environmental responsibility in oil and gas exploration and production."[173] Out of this effort came the EO™100 Standard, which "consolidates and ensures alignments with existing global standards and regulations."[174]

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http://www.conocophillips.com/newsroom/Pages/2014/ConocoPhillips-Establishes-the-ConocoPhillips-Center-for-a-Sustainable-WE2ST-at-Colorado-School-of-Mines.aspx.

[163] *See Energy Institute*, UNIVERSITY OF TEXAS AT AUSTIN, http://energy.utexas.edu/mission/.

[164] *Id.*

[165] *See Energy Institute: UT Energy Bulletin*, UNIVERSITY OF TEXAS AT AUSTIN, http://energy.utexas.edu/ut-energy-bulletin/.

[166] *Id.*

[167] *See Energy Institute: Energy Funding Chart*, UNIVERSITY OF TEXAS AT AUSTIN, http://energy.utexas.edu/funding-chart/.

[168] *See* EQUITABLE ORIGIN, http://www.equitableorigin.com/home/.

[169] Equitable Origin is organized as a for profit venture because its founders concluded that "a for-profit model would allow for additional flexibility and ability to scale faster in an industry that is several orders of magnitude larger than industries other standard-setting organizations are working in." *See FAQs*, EQUITABLE ORIGIN, http://www.equitableorigin.com/faq/.

[170] *EO100™ Standard*, EQUITABLE ORIGIN (February 2012 (A)), http://www.equitableorigin.com/media/eoweb-media/files_db/EO100_Standard_Shale_Oil_and_Gas_DRAFT_v2.pdf.

[171] For a transcript of a recent video interview with Mr. Poritz, *see Oil and Gas: Certification System Rates Social and Environmental Responsibility of Production Sites*, EETV, Nov. 24, 2014, http://www.eenews.net/tv/videos/1902/transcript.

[172] See *Helping transform the oil and gas industry one site at a time*, EQUITABLE ORIGIN, http://www.equitableorigin.com/about-us/overview/.

[173] *See Our Story*, EQUITABLE ORIGIN, http://www.equitableorigin.com/about-us/our-story/.

[174] *Id*

Until recently Equitable Origin had focused on onshore conventional oil and gas development.[175] In early 2015, Equitable Origin released a draft of proposed standards, EO100™ Standard Technical Addendum EO100.1: Shale Oil and Gas Operations,[176] related to hydraulic fracturing in the U.S.[177] The proposed standards[178] cover:

- Human rights, social impact and community development
- Fair labor and working condition
- Indigenous peoples' right
- Climate change, biodiversity and environment
- Project lifecycle management

In announcing the proposed standards, Josh Garrett, a spokesman for Equitable Origin, said, "What we're looking to do is engaged all types of community members and groups that have been affected by shale oil and gas development…We want to provide a space for people to get together and discuss the positive and negative impacts, view our draft standards, give their input on it and help us develop standards in the future that are feasible for the industry and help reduce risk, but also in a comprehensive way address all of the concerns that a community may have with new sale oil and gas development coming into their area."[179] The company hopes to apply its standards beginning in late 2015.[180]

Oil and Gas Accountability Project

A group that does not seem focused on social license to operate but should be mentioned is the Oil and Gas Accountability Project (OGAP), [181] which is part of Washington, D.C.-based Earthworks.[182] It describes itself as "the only U.S. environmental nonprofit that focuses exclusively on the destructive impacts of resource extraction on community and the environment, in the United States and around the world."[183] Earthworks is the group behind the "No Dirty Gold" campaign,[184] which includes some 80 retailers of jewelry who "have committed to cleaning up dirty metals" by sourcing metals more responsibly.[185]

Trade association efforts to promote social license

Several trade associations have actively been involved in addressing social license-related issues. For example, in 2014 the American Petroleum Industry (API) published its "Community Engagement

[175] *See FAQs*, EQUITABLE ORIGIN, *supra* note 169.
[176] *See EO100™ Standard Technical Addendum*, EQUITABLE ORIGIN, *available at* http://www.equitableorigin.com/media/eoweb-media/files_db/EO100_Standard_Shale_Oil_and_Gas_DRAFT_v2.pdf.
[177] *Organization seeks to create shale development standards in U.S.*, NATURAL GAS INTELLIGENCE (Mar. 16, 2015), *available at* http://www.naturalgasintel.com/articles/101680-organization-seeks-to-create-shale-development-standards-in-us.
[178] *See EO100™ Standard Technical Addendum*, *supra* note 176.
[179] *Organization seeks to create shale development standards in U.S.*, *supra* note 177.
[180] *Id.*
[181] *See Oil and Gas Accountability Project*, EARTHWORKS, http://www.earthworksaction.org/reform_governments/oil_gas_accountability_project.
[182] *See* EARTHWORKS, http://www.earthworksaction.org.
[183] *See Media*, EARTHWORKS, http://www.earthworksaction.org/media.
[184] Dirty Gold, EARTHWORKS, http://nodirtygold.earthworksaction.org.
[185] *80 Jewelry Retailers Sign on to No Dirty Gold Campaign*, ECOWATCH (Feb. 15, 2012), *available at* http://ecowatch.com/2012/02/15/80-jewelry-retailers-sign-on-to-no-dirty-gold-campaign/.

Guidelines."[186] Moreover, the IPIECA, a global organization that focuses on environmental and social issues of the oil and gas industry, established in 2002 a Social Responsibility Working Group, which assesses good practices in the context of social responsibility, social impact, and community outreach.[187] IPIECA has also published reports about "Oil and gas industry guidance on voluntary sustainability reporting – 2010 update"[188] and "A Guide to Social Impact Assessment in the Oil and Gas Industry."[189] These efforts are discussed below.

RECOMMENDED GUIDELINES

In general

Many ideas have been suggested as concepts involved with obtaining and maintaining a social license to operate. This section identifies and analyzes the most effective concepts, which are referred to as "guidelines." The aim of the guidelines is to help oil and gas companies evaluate the risks and benefits of implementing a particular guideline or suite of guidelines.

Before beginning, however, it is useful to note that social license is generally "granted on a site-specific basis,"[190] and thus not every concept will be appropriate in every circumstance. But this list, gleaned from the best thinkers in the social license field, represents a well-considered starting point.

Building trust

Building trust among the developers and all stakeholders is fundamental to establishing the social license to operate. The lack of trust is corrosive, often leading to intractable disagreements that offer no reasonable ways forward.

But when a crisis of trust does develop, or appears to be developing, "[T]he optimal response is…to attempt to broaden the radius of trust by seeking higher-level positive-sum games, reaching across boundaries to solve common problem and discover common interest, hoping in the process to create the first links of mutual trust, which can then be strengthened."[191] That said, there will always be issues that must be treated confidentiality and cannot be disclosed, although deciding what information falls into this category can represent "a tricky balance."[192]

Finally, a key to building trust is for all parties to recognize that in cultivating "the skills necessary to maintain it, we need to recognize the overriding importance of trust in the trustworthy."[193]

Emphasizing and implementing early, ongoing communication and engagement

<u>Improve community engagement</u>

[186] *Community Engagement Guidelines*, API, ANSI/API Bulletin 100-3, First Ed. (Jul. 2014), *available at* http://www.api.org/~/media/Files/Policy/Exploration/100-3_e1.pdf.
[187] *Social Responsibility*, IPIECA, http://www.ipieca.org/focus-area/social-responsibility.
[188] *Oil and gas industry guidance on voluntary sustainability reporting – 2010 update*, IPIECA, January 2011, http://www.ipieca.org/publication/oil-and-gas-industry-guidance-voluntary-sustainability-reporting-2010-update.
[189] *A Guide to Social Impact Assessment in the Oil and Gas Industry*, IPIECA, http://www.ipieca.org/publication/oil-and-gas-industry-guidance-voluntary-sustainability-reporting-2010-update.
[190] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1781.
[191] Geoffrey Hosking, *supra* note 123, 202.
[192] *Id.*
[193] *Id.* at 203.

The need for oil and gas companies to improve community engagement is fundamental to establishing and maintaining a social license to operate. However, this comes with a cautionary warning: "This does not mean developing more sophisticated public relations campaigns; more spin will not solve the problem,"[194] according to Professor Jen Schneider,[195] an expert on public communication involving environmental controversies."

Bearing this in mind, improving engagement is particularly important in geographical areas not familiar with oil and gas development. In launching its Community Engagement Guidelines[196] in 2014, the American Petroleum Institute (API) noted, "[T]he energy revolution is now occurring in areas of the country where oil and natural gas exploration doesn't have the same history as Texas or Oklahoma."[197]

The Community Engagement Guidelines are a "first of its kind standard for community engagement," according to API.[198] The Guidelines require, "Oil and gas operators acknowledge the challenges associated with industry activities, which can include challenges important to a community. Principles of integrity, transparency and consideration for community concerns underpin responsible operations. Conscientious operators are committed to helping communities achieve positive and long-lasting benefits. Both local stakeholder and operators can use this guidance...These suggested guidelines are typical and reasonable and generally apply under normal operating circumstances."[199] While impressive in many respects, the guidelines are just that – the ultimate decision about whether to implement them is left up to the individual operator.[200]

The Guidelines are still relatively new, but they have already received some criticism. A U.S. community group has said that the Guidelines will be ineffective. "The API is a public relations arm for the oil and gas industry. They have written a document that has many positive elements, but has little chance of being adopted by oil and gas operators, who are much more interested in a hit and run kind of approach."[201] Interestingly enough despite this criticism, however, the group went on to compliment the API's efforts:

> Throughout the entry phase, which is the one we are in today, the document encourages frequent one on one meetings and community forums with local residents to talk about things like road safety and traffic, providing communication materials that lay out the company plans. They also suggest a way for local citizens to communicate concerns and for the company to provide feedback on those concerns in a public way. There are suggestions for working with local authorities on workforce development, defining likely jobs and ways for residents to prepare for those jobs. The list goes on. The document includes many good suggestions that could make a huge difference in how a community sees the likely impact of oil and gas drilling.[202]

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[194] Jen Schneider, *supra* note 131.
[195] *See Jen Schneider*, BOISE STATE UNIVERSITY, http://sspa.boisestate.edu/publicpolicy/faculty-and-staff/jen-schneider/.
[196] *Community Engagement Guidelines*, *supra* note 186.
[197] Statement by David Miller, API Director of Standards, *API Issues 'Good Neighbor' Standards for Oil and Natural Gas Developers*, API (Jul. 9, 2014), *available at* http://www.api.org/news-and-media/news/newsitems/2014/july-2014/api-issues-good-neighbor-standards-for-oil-and-natural-gas-developers.
[198] *See* David Miller's Remarks at Press Conference on Community Engagement Standards, (Jul. 9, 2014), *available at* http://www.api.org/news-and-media/testimony-speeches/2014/david-miller-press-conference-on-community-engagement-standards.
[199] *Community Engagement Guidelines*, *supra* note 186.
[200] *Id.*
[201] David J. Katz, *supra* note 108.
[202] *Id.*

One activist group does not speak for all groups, obviously, but it does suggest that the API may well have opened up a "new front" in the industry's efforts to engage more effectively and should be recognized for such efforts.

In the eyes of Jim Cooney, who was addressing mining in this comment, "The accountability of mines to society requires an on-going process of engagement with local and international stakeholders, often through mine oversight or advisory committees, in a form of 'shared governance.'"[203] Whether and how "shared governance" should play a role in the oil and gas sector remains to be seen. But Mr. Cooney's remarks come from experience and nearly two decades of observations and therefore deserve careful consideration.

Engagement may even include some type of consultation with the community that is being impacted. A major study undertaken by the IIED concluded that "increasingly 'engagement' is understood to include 'consultation,' meaning that the community should be consulted – and on some occasions even give its formal or informal consent – about the best way that the company can prevent and mitigate its impact before, during, and after the project."[204] The same report defines "meaningful consultation" as, "two-way communication in the form of a dialogue and with due regard for linguistic, cultural, gender or other barriers, and sensitivity to cultural differences or perceived power imbalances between the company and the community."[205]

Looked at from the perspective of Christine Bader, an American who has worked for an international oil and gas company, the key is to avoid an aggressive approach in the community where a company is operating. "Extractive companies operating overseas have realized that the best approach is not an antagonistic one, that you simply can't throw up a wall, first of all, and try to block out the community around you and take a defensive stance, never mind an offensive one," Ms. Bader,[206] a former BP executive, has observed.[207]

A final observation on the importance of community engagement, and the benefits that may flow to a company from undertaking this in a serious and comprehensive manner, is based on a recent study conducted about a mining project in Australia. Researchers found that, "When community members reported feeling heard, listened to, and that the company would act on their concerns, their trust in the company was enhanced. Consequently, the acceptance of the mining operation increased…In the literature, it has been suggested that when decision making processes are perceived as being fair, people are more accepting of decisions even when the eventual decisions are not in their favour."[208]

<u>Establish stakeholder relations manager/department</u>

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[203] Jim Cooney, *supra* note 106.
[204] EMMA WILSON AND EMMA BLACKMORE, EDS., *INTRODUCTION*, DISPUTE OR DIALOGUE?: COMMUNITY PERSPECTIVES ON COMPANY-LED GRIEVANCE MECHANISMS, INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT 20 (2013), *available at* http://pubs.iied.org/pdfs/16529IIED.pdf.
[205] *Id.*
[206] *See* CHRISTINE BADER, http://christinebader.com/?gclid=CNHiv_alzMQCFQmDfgodc0gAXQ. Ms. Bader is author of *The Evolution of a Corporate Idealist: When Girl Meets Oil*, which was published in 2014.
[207] Mark Hand, *'Corporate Idealist:' US Shale Companies Could Learn from Overseas Oil Producers*, SNL.COM, (Mar. 20, 2014), *available at* https://www.snl.com/InteractiveX/Article.aspx?cdid=A-27359208-12586. Ms. Bader has also offered this observation about how people in the U.S. might oppose an extractive industries project: "[I]n the U.S., people have access to recourse. People can sue. People can call up *The New York Times*. People can tweet. People can post on Facebook. People can start campaigns." *Id.*
[208] Kieren Moffat & Airong Zhang, *supra* note 62, at 61, 68.

The crucial nature of engagement requires every oil and gas company employee (and subcontractor and service provider employee) to consider him or herself invested in the "stakeholder management effort." However, a developer can leverage its engagement efforts even farther by establishing a position of "manager of stakeholder relations" (or similar name) responsible for a department committed to the effort.

The manager of stakeholder relations identifies and talks to all key stakeholders well before drilling begins, pinpoints key areas where drilling might be appropriate (or not) based on his or her engagement with the stakeholders, works with the operations engineers on well siting while bearing in mind stakeholder concerns, is available through the drilling and fracturing processes to field calls and to meet with stakeholders, and more. Anadarko Petroleum's Colorado-based efforts have just a position and accompanying department.[209] Alex Hohmann,[210] a professional engineer, is the first person in this newly created position. Considered an expert on social license to operate, Mr. Hohmann defines it as "the level of acceptance or approval continually granted to an organization's operation or project(s) by the local community and other stakeholders."[211]

According to Mr. Hohmann, engagement is "tantamount to 'Relationship 101.'"[212] As he has adeptly noted, "Stakeholder grievances seldom point to 'hydraulic fracturing' specifically," but rather subjects such as light, noise, traffic, notification, dust, proximity, duration (intensity) and visual impediments.[213]

Ideally, the manager of stakeholder relations will be a petroleum engineer with experience in all facets of unconventional development. Preferably, the manager of stakeholder relations should report to the highest level of operations rather than the communications, public relations, or governmental relations department. In this way the manager of stakeholder relations will have access to individuals within operations who can stop or order a project change as a result of findings derived from stakeholder engagement.

In Mr. Hohmann's view, the risk associated with unconventionals going undeveloped is often attributable "not for a lack of legal license, but for lack of growing, earning, and maintaining a social license."[214]

Effectively using social media

Social media has changed the landscape regarding how information is accessed as well as who provides it and when. As a result, effectively using social media can represent a "critical success factor for resource

[209] Alex Hohmann, *Colorado Counties Inc. 2014 Summer Conference, available at,* http://ccionline.org/download/conference_presentations/CCI%20Foundation%202014%20Summer%20Conference%20Anadarko%20Petroleum%20Corp..pdf.
[210] For a video presentation by Alex Hohmann, *see* Alex Hohmann, *Social License to Operate: Solving the Human Variable*, 2014 LANDSCAPE DISCUSSION ON ENERGY LAW & POLICY IN THE ROCKIES, UNIVERSITY OF WYOMING, (Oct. 30, 2014), *available at* http://wyocast.uwyo.edu/WyoCast/Play/a90f6978795d436795bf515a2bfde8f61d?catalog=b3edf27d-f1a3-4752-b149-e95d7c7dd956.
[211] Alex Hohmann, *supra* note 209.
[212] Stephanie Joyce, *supra* note 8.
[213] Alex Hohmann, *supra* note 209.
[214] Stephanie Joyce, *supra* note 8.

development"[215] according to energy communications experts at Makovsky Integrated Communications. "Companies need to understand that communications is no longer a one-way street – talk with them, not to them. With the emergence of social media and digital news, community members, activists, and potential customers can all interact with any industry – in real time," according to Andy Beck, Makovsky's executive vice president.[216]

Clearly, social media comes with risks. For example, companies need to understand that technology – i.e., the Internet and social media – enhance "the ability of grass roots opposition to mobilize and form coalitions of like-minded others…"[217]

But there are significant opportunities as well. "The speed and ubiquity of digital communications both makes [a company's] reputation more fragile…[but it also] allows corporations and their leaders to develop their own channels…without the intermediation of pesky reports," a columnist for the Financial Times has written.[218]

Specific social media-steps include[219]:

- Sharing "compelling content";
- Implementing "social listening programs";
- Proactively monitoring potential crisis situations; and
- Increasing social followers.

The effective use of social media can benefit CEOs, who must "visibly engage and communicate both inside and outside the organization," an effort that is considered "extremely important" by Sir Mark Moody-Stuart, former chairman of Royal Dutch Shell.[220]

Improve transparency

In general

Increasing transparency about operations associated with unconventional shale gas development is one of the keys to developing or maintaining a social license to operate. The Interfaith Center on Corporate Responsibility and the Investor Environmental Health Network have suggested, "Companies must be publicly transparent about managing their environmental footprint and social impacts, and engage with key community stakeholders to earn and maintain their social license to operate."[221] Transparency, in the eyes of these two organizations, "requires full disclosure of steps being taken to minimize risks, and

[215] Velda Addison, *Social Media Could be Key to Social License to Operate*, 34 MIDSTREAM MONITOR, HART ENERGY 9 (Aug. 25, 2014).
[216] *Id.*
[217] R.G. Boutilier, L.D. Black, & I. Thomson, *supra* note 52.
[218] John Lloyd, *End the Feud between the Spinners and the Fourth Estate*, FINANCIAL TIMES, January 7, 2015. Mr. Lloyd went on to observe, "Leaders of the [public relations] industry both in the US and in Europe see in digital and social media not just a route of escape from journalistic tyranny, but also the possibility – rather, the necessity – of creating of a more transparent world. They now say that they and their clients must not just profess ethical behavior, but demonstrate it." *Id.*
[219] Velda Addison, *supra* note 215.
[220] Sir Mark Moody-Stuart, *CEOs must listen and visibly engage*, CRITICAL RESOURCE EXECUTIVE BRIEFING, (Jan. 2013), *available at* http://www.c-resource.com/q-a-with-sir-mark-moody-stuart-former-chairman-of-shell-anglo-ceos-must-listen-and-visibly-engage/.
[221] *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations*, INTERFAITH CENTER ON CORPORATE RESPONSIBILITY AND INVESTOR ENVIRONMENTAL HEALTH NETWORK 3 (2011), *available at* http://www.iccr.org/sites/default/files/resources_attachments/ExtractingTheFacts121311LR.pdf.

acknowledgement of challenges and failures, and clearly defined steps to continually improve operations."[222]

A key element of improving transparency needs to include increased quantitative reporting. One investor group has said, "[N]arrative reporting – anecdotal reporting of activities in one or two plays – and aggregated company-wide reporting of impacts on a national or company-wide level, do not sufficiently inform investors about how effectively companies are managing the risks or opportunity associated with their operation. Companies should report data associated with their operational impacts using quantitative metrics…in order for investors to be able to rigorously assess company practices." [223]

The need to divulge environmental performance and community impact reports also "creates a powerful incentive to improve such performance, especially from a regulatory standpoint."[224]

Another aspect of the need for more transparency is the requirement in some jurisdictions that additional reporting take place. For example, in 2014 the European Union adopted legislation that will require the disclosure in annual reports of large companies' environmental performance and community impacts.[225] And in 2012, the Chinese Party Congress "ordered that all major industrial projects complete a social risk assessment with slated impact mitigation measures before any project can being. This move was aimed at addressing the increasingly violent environmental protests of the law several years...Zhou Shengxian, the Environmental Minister announced that no major projects could be launched without social risk evaluations. By doing so, he hoped to reduce the number of mass incidents in the future."[226]

Toxic chemicals

Oil and gas operators can demonstrate a greater willingness to be transparent by disclosing the chemicals they are using as well as reporting on efforts to reduce fracking fluid toxicity."[227]

A recent investor report indicated that "[M]any companies communicate some kind of intent to reduce the toxicity of their fracturing fluids…but very few provide data that would allow investors or other stakeholders to evaluate the effectiveness of these initiatives in reducing the toxic chemical use…including baseline toxicity, type of toxicity reductions, and percentage of total amount of chemical reductions."[228]

Notices of violations and fines

No company – oil and gas or otherwise – desires that its mistakes be called to the public's attention. However, taking a lead from the Global Reporting Initiative's Oil and Gas Section Supplement,[229] the

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[222] *Id.*
[223] Richard Liroff, et. al., *supra* note 120, at 5.
[224] James A. Kent, *Community Impact from a Global Perspective: Keeping Social Assessments Close at Hand*, RIGHT OF WAY 23 (May/June 2014).
[225] Directive 2014/.../EU of the European Parliament and of the Council, July, 25 2014. "One of [the] criteria [subjecting a company to the legislation] is being listed on an EU stock exchange. That means that some U.S. companies listed on the EU stock exchanges might also need to report if they meet the rest of the directive's criteria." Andrea Vittorio, *U.S. Companies Advised to Get Ready for EU's Sustainability Reporting Rules*, BLOOMBERG BNA DAILY ENVIRONMENT REPORT, Oct. 28, 2014.
[226] James A. Kent, *supra* note 224, at 23.
[227] Richard Liroff, et. al., *supra* note 120, at 10.
[228] *Id.*
[229] *Sustainability Reporting Guidelines and Oil & Gas Sector Supplement*, GLOBAL REPORTING INITIATIVE (2012), *available at* https://www.globalreporting.org/resourcelibrary/G3-1-English-Oil-and-Gas-Sector-Supplement.pdf.

"monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations" should be reported to all stakeholders.[230]

As stated by the GRI, "From an economic perspective, ensuring compliance helps to reduce financial risks that occur either directly through fines or indirectly through impacts on reputations...The strength of the organization's compliance record can also affect its ability to expand operations or gain permits."[231]

Management team accountability

In many instances, the types of work that are associated with unconventional development may ultimately represent financial risks to shareholders and companies "in the form of fines, regulations, resource constraints, or the threat to their social license to operate."[232] Consequently, a corporate-level risk management strategy that includes risks associated with environmental performance, health, safety and social issues should be established.[233]

Increasing disclosure about the company's environmental, health, safety and social risk performance has to be a top level concern. In this regard, "Following the maxim of 'what gets measured, gets managed,'…oil and gas companies [should] increase disclosure about their use of current best practices to minimize the environmental and community risks of their fracking activities."[234]

Investors are also going to be interested in a company's performance on these measures since it will allow for a better understanding of how these business risks are being addressed.[235] New York State Comptroller Thomas P. DiPapoli said in 2014, "The long-term value of our investments in energy companies depends on their transparency regarding the steps they've taken to manage environmental and other risks inherent in the industry."[236] On the other hand, companies that have adopted best management practices will be able to differentiate themselves from the laggards.[237]

A company's performance in health, environmental, and safety should be reflected in the compensation of executives and managers.[238]

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[230] *Id.* at 45. Several other trade associations have developed similar guidelines. To compare the approach of IPIECA, API, and the International Association of Oil & Gas Producers, with the GRI guidelines, *see* http://www.ipieca.org/topic/GRI and click on "IPIECA, API and OGP Guidance mapped to GRI 3.1 & OGSS" under downloads.

[231] *Sustainability Reporting Guidelines & Oil and Gas Sector Supplement*, *supra* note 229, at 45. The supplement "provides organizations in the sector with a tailored version of GRI's G3.1 Sustainability Reporting Guidelines. It includes the original Guidelines, which set out the Reporting Principles, Disclosures on Management Approach and Performance Indicators for economic, environmental and social issues. The Supplement's additional commentaries and Performance Indicators, developed especially for the sector, capture the issues that matter most for oil and gas companies." *Id.*

[232] *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations*, *supra* note 221, at 3.

[233] *Id.*

[234] *Id.*

[235] *Id.*

[236] Press Release, *Investor Coalition Successfully Urges Natural Gas Companies to Address Impacts of Hydraulic Fracturing Operations*, AS YOU SOW (June 10, 2014), *available at* http://www.asyousow.org/wp-content/uploads/2014/06/Investor-Coalition-Successfully-Urges-Natural-Gas-Companies-to-Address-Impacts-of-Hydraulic-Fracturing-Operations.pdf.

[237] *Id.*

[238] Richard Liroff, et. al., *supra* note 120, at 34.

Moreover, increased emphasis should be placed on a company's hiring of subcontractors "who adhere to the highest standards."[239] Using independent third parties to verify health, safety, and environmental performance for potential subcontractors and supplies may be useful in helping establish the integrity of the process.[240] It may also be useful to include a "social license to operate" provision, which sets out responsibilities and expectations, in any agreements with subcontractors.

Identifying key stakeholders

Identifying key stakeholders is fundamental to establishing a social license to operate. Despite the importance of this undertaking, however, there is no one-size-fits-all approach. Rather, each situation will be slightly different. That said, there are some general principles that may be useful in identifying stakeholders.

The classic definition of a stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives."[241] This has been described as "one of the broadest definitions in the literature, for it leaves the notion of stake and the field of possible stakeholders unambiguously open to include virtually anyone."[242]

Within the context of stakeholders can be a number of types including, "dormant stakeholders, dominant stakeholders, dangerous stakeholders, definitive stakeholders, discretionary stakeholders, demanding stakeholders, dependent stakeholders...with varying levels of power, legitimacy and urgency."[243]

A complementary approach to identifying and working with stakeholders can be through a process called "human geographic mapping," which depicts "specific bio-social ecosystems and [portrays] the attachment people develop to each other and to the land where they live and work. Social, cultural and economic routines along with the geographic features of an area distinguish one population or cultural area from another."[244] James A. Kent and Kevin Preister, experts about land use disputes, use the mapping procedure along with "social ecology," which they describe as "a science of community based on cultural processes operating in any geographic area."[245] There are two keys to making the social ecology effort successful. First, it must be initiated at the very beginning of the project and second "it must have parity with the other disciplines in tactical and strategic decision-making."[246] Messrs. Kent and Preister acknowledge that this approach takes more time at a project's beginning, but that the cost and time of responding to "community-driven disruptive issues" is reduced in the long run.[247]

Develop more sophisticated grievance mechanisms

Leading extractive industry companies are beginning to address community-based grievance procedures through formal mechanisms that the companies establish.[248] Establishing such mechanisms – or channels

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[239] *Id.*
[240] *Id.*
[241] R.E. FREEMAN, STRATEGIC MANAGEMENT: A STAKEHOLDER APPROACH 46 (1984).
[242] Ronald K Mitchell, Bradley R Agle, & Donna J Wood, *supra* note 48, at 853.
[243] *Id.* at 874.
[244] *See Human Geographic Mapping: Treating the Land and the People As One*, JAMES A. KENT GROUP, http://www.jkagroup.com/methods/humangeomapping.htm.
[245] Jim Kent & Kevin Preister, *Surging Industries in Global Energy: Creating a new era in Community Engagement*, RIGHT OF WAY (Jul./Aug. 2013).
[246] *Id.*
[247] *Id.*
[248] EMMA WILSON & EMMA BLACKMORE, EDS., *supra* note 204, at 10.

– is especially important in developing countries where tribunals and courts "can be inefficient, corrupt, or reluctant to interfere with extractive industry activities. This can result in increased conflict and resentment among host communities, which may be a key legacy challenge when one company acquires a project from another."[249]

A company-community grievance mechanism is a process "for receiving, evaluating and addressing grievances from affected communities, in a timely and consistent manner at the site or operational level. The mechanism may be wholly or partially run by the company."[250] However, this mechanism is not a substitute for a firm's "community engagement process or vice-versa. The two are complementary and should be mutually reinforcing."[251]

Top executives may resist establishment of a grievance mechanism. However there are several business reasons for implementation, including "(1) meeting external standards and expectations, (2) avoiding escalation of disputes and (costly) conflicts, and (3) learning for better decisions and outcomes."[252]

"Broaden" decision-making procedures

Whether the industry likes it or not, the public is demanding to have some sort of involvement in decision-making.[253] At a minimum, the views of stakeholders must have a well-defined way to reach corporate decision-makers.[254] In addition, cultural aspects of the community must, where appropriate, be taken into consideration in terms of decision-making.[255]

Appropriately broadening decision-making in the very early stage of a project may help overcome a "clash of cultures" between the developer and the local community. The historic approach to decision-making has been characterized by designing in isolation from the community, proposing the design, and finally defending a decision against opposition.[256] In contrast, by involving the community early, the community is given "a voice and emotional ownership, which in turns give the company a social license to operate. If intentional efforts are made to resolve legitimate citizen issues early in the design stage and optimize the local benefits of a project, citizen ownership through absorption will serve as a buffer for the project against outside forces."[257]

Another stakeholder group that must be taken into account is investors, and in particular the "socially responsible investment movement."[258] In this regard, shareholder resolutions related to environmental and social issues have been "on an ever-upward climb," according to the Sustainable

[249] *Id.*
[250] *Id.*
[251] *Id.*
[252] *Id.* at 26. In the mining industry context, "The International Council on Mining and Metal's sustainable development framework has been an important driving force in the uptake of company-community grievance mechanisms in the mining sector." *Id.* at 111.
[253] Richard Liroff, et. al., *supra* note 120, at 10.
[254] David L. Owen, Tracey Swift, & Karen Hunt, *Questioning the Role of Stakeholder Engagement in Social and Ethical Accounting, Auditing, and Reporting*, 25 ACCOUNTING FORUM 272 (Sept. 2001).
[255] Jason Prno & D. Scott Slocombe, *supra* note 12, at 347.
[256] Jim Kent & Kevin Preister, *Surging Industries in Global Energy: Creating a new era in Community Engagement*, RIGHT OF WAY (Jul./Aug. 2013).
[257] *Id.*
[258] Ian Thomson & Robert G. Boutilier, *supra* note 50, at 1779.

Investments Institute (SII).[259] This trend has been the result of the shifting of investor advocacy "from a moral approach to one that showed the business value of company action," according to SII.[260]

Establish community development agreements

Community development agreements are increasingly being used in the natural resources industry "as a form of and often legally sanctioned means for registering and securing stakeholder support for particular projects."[261] However, it should be borne in mind that, "While agreements provide a tangible basis for community engagement and benefit sharing with local communities, fulfillment of agreement conditions does not always guarantee what the industry regards as a 'social licence.'"[262]

Establish environmental agreements

Increasingly, environmental agreements (EA) are being used in the mining industry, with at least 120 being used in Canada alone.[263] These agreements are "particular to specific…projects and exist alongside the multiple voluntary international standards that seek to codify best business practices and asses firms' [corporate social responsibility] performance."[264] An EA is "supra regulatory…in the sense that it exists alongside formal processes like environmental impact assessment but is not itself prescribed in regulation."[265]

Expand environmental health research to integrate community perspectives

Community-based participatory research (CBPR) should be considered where there are community perceptions of health stressors or impacts related to unconventional development.[266] "CBPR provides a framework for engaging community members in research and has been effectively applied to a number of environmental health problems. CBPR goes beyond just sharing research results with community members to creating meaningful opportunities for community participation in all stages of research (i.e., project scoping, data collection, analysis and dissemination). CBPR principles should be embraced in designing and conducting studies on environmental and health impacts of unconventional natural gas drilling operations so that a range of community perspectives are addressed."[267]

The process of involving all stakeholders (e.g., individuals, communities, advocacy groups, industry, decision-makers) "fosters multi-directional communication and accountability" and should be engaged in early on.[268]

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[259] Andrea Vittorio, *Environmental, Social Issues Attract Record Support in 2013 Proxy Season*, BLOOMBERG BNA DAILY ENVIRONMENT REPORT, Oct. 15, 2013.
[260] *Id.*
[261] John R. Owen & Deanna Kemp, *supra* note 41, at 33.
[262] *Id.*
[263] Jessica Smith Rolston, *Turning Protestors into Monitors: Appraising Critical Collaboration in the Mining Industry*, 28 SOCIETY & NATURAL RESOURCES: AN INTERNATIONAL JOURNAL 165, 166 (Jan. 20, 2015), *available at* http://dx.doi.org/10.1080/08941920.2014.945063.
[264] *Id.*
[265] *Id.*
[266] Trevor M. Penning, et. al., *Environmental Health Research Recommendations from the Inter-Environmental Health Sciences Core Center Working Group on Unconventional Natural Gas Drilling Operations*, ENVIRONMENTAL HEALTH PERSPECTIVES 13-14 (Jul. 18, 2014), *available at* http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2014/7/ehp.1408207.pdf.
[267] *Id.*
[268] *Id.*

Under the CBRP process, study results are disseminated to communities in a timely manner.[269] As such, a "Community First Communication Model," which shares research findings with the affected community before publishing them in scientific literature as a way to empower the community by reducing information disparities, is recommended. Communities should be engaged in determining the most effective ways to disseminate research findings and there should be timely and transparent dissemination and access to aggregated data."[270]

Expand social investment

Social investment, as defined by the IPIECA, represents "voluntary contributions companies make to the communities and broader societies where they operate, with the objective of benefiting external stakeholders, typically through the transfer of skills or resources."[271]

The IPIECA and the Society of Professional Engineers have recently combined efforts to raise the profile of social investment by oil and gas firms. "Over recent years, energy companies have worked to expand traditional philosophy into approaches that more explicitly address risk management, social license, and shared value objectives," the IPIECA and SPE have said. In 2014 they sponsored a webinar to "explore this evolution as well as discuss some of the major success factors and challenges associated with determining social investment priorities, managing design and implementation requirements, assessing social investment performance, and reporting on impacts."[272]

It is worth noting that social investment is different from community engagement. According to IPIECA, "Community engagement focuses on maintaining positive relations between the company and its local stakeholders on a day-to-day level, whereas social investment aims to have a positive impact on the sustained well-being of stakeholders. They require different, but complementary, strategies and approaches."[273]

Finally, IPIECA provides cautionary advice about who provides the social investment program: "[If] a company engages with a community only through [a social investment] program implemented by a partner, and lacks having a 'face' in the community, it invites the risk that any credit will go to the implementing partner, while blame will still come back to the company."[274]

Corporate philanthropy expert Bruce DeBoskey has advised that "Successful companies now recognize that philanthropy is a key component of corporate citizenship and business strategy. Too often, corporate philanthropy is random and uncoordinated. To be truly effective, it must be strategic."[275]

Improve water stewardship

The process of hydraulic fracturing entails the use of large quantities of water. In addition, one of the most prominent concerns of communities where unconventional development takes place is the matter of

[269] *Id.*
[270] *Id.*
[271] *Guide to Successful, Sustainable Social Investment for the Oil and Gas Industry*, IPIECA 2 (2008).
[272] *Social Investment Performance*, IPIECA, April 29, 2014, http://www.ipieca.org/event/20140411/social-investment-performance.
[273] *Guide to Successful, Sustainable Social Investment for the Oil and Gas Industry*, *supra* note 271.
[274] *Id.*
[275] Bruce DeBoskey, *Seven Steps toward Strategic Corporate Philanthropy*, THE DENVER POST, Mar. 8, 2015, at 2K.

water pollution. However, the amount of water used "can be less important than how stakeholders perceive [a company's] withdrawal and consumption patterns."[276]

Consequently, a key element in the effort to establish and maintain a social license to operate involves water stewardship. "Most companies realize that much of their social license to operate hinges on their prudent management of water in terms of both quality and quanity," a leading non-governmental organization has suggested.[277] Moreover, "By getting ahead of the curve on water stewardship, the oil and gas industry has an opportunity to avoid conflicts over water usage before they become acute as well as to improve its image as a whole," according to a Deloitte Center for Energy Solutions study.[278]

Water stewardship programs should take into consideration three water-related risks: regulatory, physical, and reputational (which is based on stakeholder perceptions about a company's pattern of withdrawals and consumption).[279]According to the Deloitte Center for Energy Solutions the programs, which should span the entire company, will "often consider how water competition could affect business operations, brand value, and the social license to operate, along with analyzing the potential implications of upstream and downstream activities upon water quality, withdrawal and consumption."[280]

Overall use of water should be reduced and wherever possible, recycled water should be used while bearing in mind any associated increased risks associated with storage and or transport.[281]

There are related reporting practices that should be considered. For example, in addition to increasing water monitoring the reporting on water quality monitoring practices should be undertaken.[282] Furthermore, as the use of water is more closely managed and efficiency increased, the metrics on improved efficiency should be provided to all interested stakeholders.[283] Industry may also want to consider supporting efforts such as Colorado Water Watch (CWW),[284] which is "a real-time groundwater monitoring pilot project" developed by Colorado State University and the Center for Energy and Water Sustainability. CWW includes a network of sensors "capable of detecting changes in groundwater quality due to natural or operation impacts. The data is monitored, gathered, analyzed and reported by CWW and posted to [a] website to provide information to communities in the [Denver Julesburg] Basin."[285]

Discharging processed water or effluents to treatment facilities "not only reduces pollution, but can also lower the organization's financial costs and the risk of regulatory action for non-compliance…All of this enhances the …organization's social license to operate."[286]

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[276] Will Sarni, *Oil and Water Can Mix: Moving toward Water Stewardship in the Oil and Gas Industry*, DELOITTE CENTER FOR ENERGY SOLUTIONS 6 (November 2014), *available at* http://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-og-oil-and-water-can-mix-11192014.pdf.
[277] Lisa A. Hyland, et. al., *Realizing the Potential of U.S. Unconventional Natural Gas*, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES 49 (Apr. 2013), *available at* http://csis.org/files/publication/130409_Ladislaw_RealizingPotentialUnconGas_Web.pdf.
[278] Will Sarni, *supra* note 276, at 6.
[279] *Id.*
[280] *Id.*
[281] Richard Liroff, et. al., *supra* note 120, at 34.
[282] *Id.*
[283] *Id.*
[284] *Colorado Water Watch*, CENTER FOR ENERGY WATER SUSTAINABILITY, http://waterwatch.colostate.edu.
[285] *Id.*
[286] *Sustainability Reporting Guidelines & Oil and Gas Sector Supplement*, *supra* note 231, at 32.

Finally, the adoption of well integrity practices should be of paramount concern so as to ensure the adequacy of casing and cement.[287]

Improved "risk communication" and managing "outrage"

It has been suggested "When it comes to communicating environmental risk, business needs to recognize that outrage is as important as hazard."[288] Acknowledging "outrage" is fundamental to improving risk communication, according to Peter Sandman, the leading U.S. expert on environmental risk communication and managing public outrage.[289] According to Mr. Sandman, "When people are outraged, they tend to think the hazard is more serious that it is…Trying to convince them that it's not is unlikely to do much good until you reduce the outrage."[290]

Mr. Sandman, who has also been called a "crisis communications expert,"[291] has given considerable thought to the challenges companies face when communicating about fracking, particularly the relationship between some of the public's outrage, on the one hand, with the real nature of the hazard it may present on the other. He begins by placing considerable weight on how the underlying issues are "framed."

"[F]raming the controversy – economic pluses versus environmental minuses – is arguably part of the risk communication problem. That's certainly the way most fracking proponents and opponents see the controversy, and the way most media stories report it: as a classic jobs-versus-environment battle," Mr. Sandman has said.[292] In contrast, he argues that people need to acknowledge that there are pluses and minuses on both sides of the equation, a development that "would force us all to grapple with the tradeoffs."[293]

Framing, according to Mr. Sandman, who founded the Environmental Communication Research Department at Rutgers University in the U.S. state of New Jersey, is a "universal psychological phenomenon…It is characteristic of nearly all risk-versus-benefit controversies. Once people decide a technology is unacceptably risky, they tend to ignore or disparage its benefits, rather than regretting that the risks make those benefits sadly unattainable. Similarly, once people decide a technology is too good to pass up, they tend to ignore or disparage its risks, rather than claiming that the risks are real but the benefits make those risks worth taking."[294]

Bearing this challenge in mind, Mr. Sandman has compiled a list of recommendations for how companies can address the risk communication challenges related to fracking:[295]

- Before work begins, offer well water testing.
- Quit referring to "education" as if it is the only impediment between a person's acceptance of the process. "Few things are more guaranteed to arouse stakeholders' outrage than telling them that

[287] Richard Liroff, et. al., *supra* note 120, at 34.
[288] Dwight Holing, *It's the Outrage, Stupid*, TOMORROW MAGAZINE (Mar./Apr. 1996), *available at* http://www.psandman.com/articles/holing.htm.
[289] *Id.*
[290] *Id.*
[291] Patrick Tucker, *My First Meltdown: Lessons from Fukushima*, THE FUTURIST (Jul./Aug. 2011), *available at* http://www.wfs.org/content/futurist-interviews-crisis-communications-expert-peter-sandman-fukushima-daiichi-nuclear-mel.
[292] Peter Sandman, *Fracking Risk Communication*, PETER SANDMAN RISK COMMUNICATION (Dec. 9, 2013), *available at* http://www.psandman.com/col/fracking.htm.
[293] *Id.*
[294] *Id.*
[295] *Id.*

they're ignorant and would be on your side for sure if they just understood the facts. Fracking industry spokespeople…need to learn that the fracking debate is about values at least as much as facts."

- Early attention should be given to individual complaints.
- "Take a stand against corporate bad actors…It's probably too much to expect for a fracking company to blow the whistle on another fracking company…But after others have identified the bad actors, is it too much to expect for the rest of the industry to take the information onboard?"
- Avoid development in locations that are special to a community. "[P]utting a drilling pad near a grade school is courting outrage. So is putting a drill pad near a much-loved park, or putting one where it will ruin a cherished viewscape."
- "Acknowledge the history of fracking misbehavior…A company or industry that expects to be forgiven for what it has done in the past must own up to it first – not just once but often; not just factually but with visible contrition; not just when your critics raise the issue, but proactively, raising it yourself until your critics are sick of hearing about it."

The cost of implementing these recommendations might increase the business costs, Mr. Sandman admits. "But at least in the developed world, the cost of outrage is now higher than the cost of outrage management. An industry that can't afford to ameliorate stakeholders' outrage without going out of business is going to go out of business anyway," he argues.[296] "However belatedly, the industry is coming to realize that anti-fracking stakeholder outrage poses an existential threat. Figuring out how best to ameliorate that threat should be – and I think will be – a top industry priority for the foreseeable future. The industry can't succeed without improved environmental performance. But it can't succeed without improved risk communication either," he suggests.[297]

Become a "social purpose leader"

Taking a leadership role on an important social issue – i.e., becoming a "social purpose leader" – may broadly help a firm establish and/or maintain a social license to operate.[298] The Canadian and Latin American-based firm Impakt helps companies identify a social purpose. Impakt recommends development of a statement of corporate social purpose in the form of "an articulation of the corporation's social purpose that captures what the company stands for, what social issue is most aligned with who the company is and what it does and how social initiatives will contribute to measurable business objectives and meaningful social change."[299] This statement can function as "a key strategic and communications asset that helps to establish program priorities and to support communications," Impakt says.

Acknowledge climate change and efforts to address it

Acknowledging that climate change is taking place, and the need to take action to address the change, can help the gas industry build trust among its many stakeholders.[300] In this regard, Shell has been "increasing transparency and engagement on emissions and climate change."[301]

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[296] *Id.*
[297] *Id.*
[298] Paul Klein, *Three Ways to Secure your Social License to Operate in 2013*, THE CSR BLOG (Dec. 28, 2012), *available at* http://www.forbes.com/sites/csr/2012/12/28/three-ways-to-secure-your-social-license-to-operate-in-2013/.
[299] *Statement of Corporate Social Purpose*, IMPAKT, http://impaktcorp.com/statement-of-corporate-social-purpose.
[300] *CNEE Powering Forward Full Report*, *supra* note 9, at 92.
[301] Andrea Vittorio, *In Rare Move, Shell Tells Shareholders to Back Proposal on Climate Risk Reporting*, BLOOMBERG BNA (Jan. 29, 2015).

As a part of this effort, companies can highlight that the increased usage of gas to power electricity generation has two fundamental benefits. First, it reduces the total amount of carbon released as gas begins to displace coal-fired electricity generation.[302] And second, "Natural gas can be dispatched flexibly. The quick ramping ability of natural gas generators makes them ideal for complementing variable renewable generation."[303]

A final observation about climate change involves the notion that if oil and gas companies are, in the final analysis, involved in the energy business, then it may make sense to hedge some percentage of a firm's assets by investing in renewable energy. On the one hand, this will demonstrate climate change sensitivity to stakeholders concerned about the issue while on the other hand reassuring investor groups that the company is positioning itself to deal with a more carbon-constrained world.[304]

Measuring social license to operate efforts

Measuring success, or lack thereof, in relation to social license to operate efforts is not an easy task. A group of Australian researchers has said, "The social licence to operate is inherently difficult to quantify."[305] However, considerable benefit can be achieved by a company that can evaluate the social license issues and assess the efforts that may be required to reduce any socio-political risk "to an acceptable level."[306]

While efforts to measure social license to operate are new, there are indications that it can be done with the appropriate expertise. Kieren Moffat, senior fellow at the Centre for Social Responsibility in Mining at the University of Queensland[307] and colleague Airong Zhang have recently written (in the context of the mining industry) that social license "can be quantitatively measured and modeled using sophisticated social science methods and analytical techniques. This allows for consistent and robust benchmarking of social performance across time as an operation develops."[308]

At least one research project has identified questions that may be useful in trying to measure social license to operate.[309]

Other ideas

Among other ideas, which should all be part of a Social License to Operate Report, to bear in mind in relation to social license to operate:

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[302] *See New Report Shows Decline in Carbon Dioxide and Other Pollutants from U.S. Power Plants, but State and Power Company Emissions Vary Widely: Electric Power Industry is Transitioning to Lower-Carbon Sources and Positioned to Meet New EPA Carbon Standards*, CERES (May 28, 2014), http://www.ceres.org/press/press-releases/new-report-shows-decline-in-carbon-dioxide-and-other-pollutants-from-u.s.-power-plants-but-state-and-power-company-emissions-vary-widely.

[303] April Lee, Owen Zinaman, & Jeffrey Logan, *Opportunities for Synergy Between Natural Gas and Renewable Energy in the Electric Power and Transportation Sectors*, NATIONAL RENEWABLE ENERGY LABORATORY, (Dec. 22, 2012), *available at* http://www.nrel.gov/docs/fy13osti/56324.pdf.

[304] Andrea Vittorio, *Investors Ask Oil and Gas Companies About Business Plans for Climate Change*, BLOOMBERG BNA (Dec. 9, 2014).

[305] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 121.

[306] *Id.* at 122.

[307] *See Kieren Moffat*, THE UNIVERSITY OF QUEENSLAND, AUSTRALIA, https://www.csrm.uq.edu.au/people/kieren-moffat.

[308] Kieren Moffat & Airong Zhang, *supra* note 62, at 69.

[309] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 125.

- Paying above the minimum "can be one factor in building strong community relations, employee loyalty, and strengthening an organization's social license to operate. This [becomes] most relevant for organizations in which a substantial portion of their workforce is compensated in a manner or scale that is closely linked to laws or regulations on minimum wages."[310]
- Sourcing from local suppliers will demonstrate "positive local economic impacts. Local sourcing can be a strategy to help ensure supply, [support] a stable local economy…The proportion of local spending can also be an important factor in contributing to the local economy and maintaining community relations."[311]
- Providing training, education, and counseling to workers and members of the community about serious disease particularly where work is taking place in areas with a greater communicable disease incidence. In this regard, "Preventing serious diseases contributes to the health, satisfaction, and stability of the workforce, and helps maintain the organization's social license to operate in a community or region."[312]
- Investing in renewable energy companies and projects, and using renewable energy where possible in operations.[313]

IV. Looking Ahead

IN GENERAL

What is often missing from the discussion about social license to operate in the oil and gas industry's unconventional development work is an entity or institution that can convene all parties to a dispute. In the absence of such a body, the various sides to the dispute typically line up on opposite sides and then the skirmish ensues in the middle. The result is all too often underscored by bitterness, contention, and polarization. In many such instances, no party really wins. Moreover, what is left is a legacy of distrust combined with bitterness. But it does not necessarily have to be this way, particularly if companies and their stakeholders have somewhere else to go to consider and ultimately reconcile their differences.

Looking back at the history of the international mining community in the 1990s, the establishment of the Minerals, Mining, and Sustainable Development (MMSD) effort, and the subsequent launching of the International Council on Mining and Metals[314] provide context in which to consider where today's unconventional developers find themselves. Of course the mining and metals industry is not identical to the unconventional oil and gas development industry, but there are lessons from the mining industry that may be useful. Jim Cooney provides greater context in this regard. Referring to the MMSD effort as well as a Canadian-based Whitehorse Mining Initiative,[315] Mr. Cooney has said, "These two initiatives propelled the mining industry forward towards a new way of doing business, of relating to critics, of engaging with stakeholders, and of understanding the role and responsibility of mining."[316] A group of leading companies had "decided to move out of their defensive posture and engage their critics in a comprehensive dialogue in search of common good," he says.[317]

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[310] *Sustainability Reporting Guidelines & Oil and Gas Sector Supplement*, *supra* note 231, at 11.
[311] *Id.* at 12.
[312] *Id.* at 14.
[313] From a business perspective, a fossil fuel-based company may want to hedge it bets as well as provide investors clear evidence that they are taking action to "remain sustainable and profitable in the future amid stricter government policies on climate change." Andrea Vittorio, *supra* note 304.
[314] *See* INTERNATIONAL COUNCIL ON MINING & METALS, http://www.icmm.com/members.
[315] *See* WHITEHORSE MINING INITIATIVE, http://www.nrcan.gc.ca/mining-materials/policy/government-canada/8698.
[316] Jim Cooney, *supra* note 106.
[317] *Id.*

While the parallels are not exact, this is clearly a time that the unconventional oil and gas development industry – and their stakeholders as well – must consider a paradigm shift just as the international mining industry did around 2000. It will, of course, not be without much questioning and even derision from those who are wedded to the past. But an alternative to today's approach must be conceived by respected and open-minded individuals and organizations.

THE CENTER FOR SOCIAL LICENSE TO OPERATE IN THE OIL & GAS INDUSTRY

What is envisioned is the establishment of a new entity (or set of entities as the case may be) that will have as its mission to launch an organization to serve as a neutral venue where all parties can gather to explore their points of view, including those on which they agree as well as disagree. The Center for Social License to Operate in the Oil & Gas Industry (the Center) will provide a safe and inclusive place to gather on an on-going basis.

The Center will preferably bring (or develop over six to 12 months) these attributes:

- Located within a research university of indisputable integrity.
- Have links to research universities in the area (e.g., the region or state) that focus on all of the many disciplines involved with unconventional development near people, including business, engineering, environmental science, law, health and so on.
- Be headed by an individual of great distinction both in an academic and business sense.
- Be advised by a board of directors[318] that reflects the wide range of stakeholders interested in this subject, including, but not limited to businesses, communities, economic developers, environmental groups, health and safety professionals, and oil and gas representatives.
- Have initial funding provided by foundations or other organization that are not connected to the oil and gas industry.

The Center's work will, among other things, consist of:

- Gathering the stakeholders together on a regular basis.
- Helping the stakeholders identify shared goals, as a beginning step.
- Publishing, where appropriate, stakeholder-agreed guidelines for social license to operate best practices.
- Sponsoring community seminars where the work of the Center can be explained and ideas solicited.
- Working with educational institutions on preparing curricula for key types of professionals (e.g., business people, conveners, engineers, lawyers) that will integrate best practice thinking into the various disciplines as well as encourage cross-disciplinary teaching as a way to "break down walls" between the various key professionals.
- Working with the media to provide more context to coverage of the underlying issues.

The Center's work plan

The Center's work plan will include the following:

- Convening stakeholders[319] who pledge a "good faith effort" to work to form consensus-based SLO guidelines.

[318] It would be preferable that members of the board not see their role as to simply represent the narrow interests of their own group, but rather agree to work for "the good of the whole."

[319] In the context of the MMSD project, the Scoping Report said a critical aspect of the project would be to achieve key stakeholders' early involvement and establishing a work approach focused on building a partnership. Having

- Initially conducting a "scoping exercise" with a small group of stakeholders to establish the process for collaboration.
- Undertaking dialogue that includes pinpointing the key issues, considering aspects of agreement and disagreement about the key issues, agreeing to continue to talk on an on-going basis.
- Working towards consensus agreements on planning and operating guidelines
- Establishing an auditing system against which company (voluntary) performance can be judged.
- Certifying auditors.
- Publishing audit reports freely available to all.

Developing knowledge in a "shared" environment

A key element of the Center's function will be commissioning independent research on current and future issues that are critical to building consensus decisions and community trust. Among the initial research projects might be:

Analyzing local community benefits and costs

An important step in achieving sustainability and the social acceptance of communities where development takes place involves how to "maximize the net benefits."[320] This is particularly the case for what can be called "boom town" communities, which flourish when development is taking place but suffer when it slows or disappears.[321]

In this regard, better understanding the environmental risks associated with unconventional development will need continuing attention. "Because the scale of shale gas development has increased so quickly, the research community is playing catch-up in terms of understanding how large the environmental risks of…development might be," according to Resources for the Future.[322] Among the important sub-issues to be studied include:

- How significant are water quantity and water quality risks? What are the best options to manage these risks, particularly in areas of water scarcity?[323]
- What is the frequency and extent of impacts to groundwater?[324]
- What is the impact of "habitat fragmentation" associated with unconventional development?[325]
- How can biodiversity and habitat impacts be lessened?[326]

stakeholders "inside the project" would be critical "to better [defining] the issues at stake, [and] also to [ensuring] that the results have credibility and weight." Luke Danielson, *Architecture for Change: An Account of the Mining, Minerals and Sustainable Development Project - History*, GLOBAL PUBLIC POLICY INSTITUTE 43 (2006).

[320] Alan J. Krupnick, *Managing the Risks of Shale Gas: Key Findings and Further Research*, RESOURCES FOR THE FUTURE 1 (June 2013), *available at* http://www.rff.org/rff/documents/rff-rpt-managingrisksofshalegas-keyfindings.pdf.

[321] *Id.*

[322] Alan J. Krupnick, et.al., *The National Gas Revolution: Critical Questions for a Sustainable Energy Future*, RESOURCES FOR THE FUTURE 19 (Mar. 2014), *available at* http://www.rff.org/RFF/Documents/RFF-Rpt-NaturalGasRevolution.pdf.

[323] Alan J. Krupnick, et.al., *The National Gas Revolution*, *supra* note 324, at 19.

[324] *Id.* at 20.

[325] *Id.*

[326] *Id.* Reputational damage may result if there is a "failure to adequately manage such impacts" and this may contribute to a loss of social license to operate. *Sustainability Reporting Guidelines & Oil and Gas Sector Supplement*, *supra* note 231, at 19.

Meanwhile, the social impact of a company's activities also needs more study. It has been noted that in the mining context economic and environmental impacts have been closely monitored, but not so for social impacts.[327] This is quite likely the case for unconventional development as well, and should be addressed by the Center.

Understanding public health impacts

To date, the identification and tracking of health impacts has generally been limited due to a lack of data.[328] However, "Health impacts and stressors are perceived to exist in communities with unconventional natural gas drilling operations. Given that elements of a property owner's control may cease once [drilling] begins, these perceptions are consistent with an involuntary risk model, based on a lack of control of an unknown hazard with little opportunity for independent verification of safety."[329]

Consequently, to what degree has public health, including physical and mental, been impacted by unconventional development?[330] Health researchers have increasingly noted "that having a better understanding of the relationship between energy development and health outcomes, including social support, life satisfaction, and mental health issues…is critical to developing and implementing intervention programs design to prevent and/or treat negative health outcomes."[331]

Evaluating seismic activity

Seismic impacts have received considerable media attention,[332] but more research needs to be undertaken. "Felt seismicity induced by hydraulic fracturing is very rare,"[333] according to a recent article in the Bulletin of the Seismological Society of America. Moreover, a leading think-tank has said, "[T]he academic literature strongly leans towards the view that seismic impacts from fracking per se are trivial. [However], impacts from liquid waste injection into Class II wells are of greater concern."[334]

With those ideas in mind, what is the relationship between fracking operations, including water disposal, and seismic activity? If a relationship is established, what strategies are available to mitigate the impact?

Analyzing the loss of public trust

[327] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 43.
[328] Trevor M. Penning, et. al., *Environmental Health Research Recommendations from the Inter-Environmental Health Sciences Core Center Working Group on Unconventional Natural Gas Drilling Operations*, ENVTL. HEALTH PERSPECTIVES 13-14 (Jul. 18, 2014), *available at* http://ehp.niehs.nih.gov/wp-content/uploads/advpub/2014/7/ehp.1408207.pdf.
[329] *Id.*
[330] Alan J. Krupnick, et.al., *The National Gas Revolution*, *supra* note 324, at 21.
[331] Jeffrey B. Jacquet, *Review of Risks to Communities from Shale Energy Development*, 48 ENVTL. SCIENCE & TECHNOLOGY 8321, 8328 (2014).
[332] Max Ehrenfreund, *Massive spike in Oklahoma earthquakes may be due to fracking*, THE WASHINGTON POST WONKBLOG, (Jan. 7, 2015), *available at* http://www.washingtonpost.com/blogs/wonkblog/wp/2015/01/06/wonkbook-massive-spike-in-okla-earthquakes-may-be-due-to-fracking/.
[333] Robert J. Skoumal, Michael R. Brudzinski, & Brian S. Currie, *Earthquakes Induced by Hydraulic Fracturing in Poland Township, Ohio*, 105 BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA 189 (Feb. 2015).
[334] Alan J. Krupnick, et.al., *The National Gas Revolution*, *supra* note 324, at 22.

A major stumbling block to unconventional development is often attributable to the lack of trust the public holds in the institutional foundations of government and the oil and gas industry.[335] Professor Jeffrey B. Jacquet, an expert on the sociology of rural development, has written, "Trust…is becoming of increasing importance in shale gas communities, as new research shows that decreased trust in governing bodies and officials correlates strongly with increased perception of risks, increased stress, and increased reportage of physical and mental health problems."[336]

Thus, the underlying questions: How pervasive is the loss? Can it be re-established? If so, how?

Tracking and evaluating public response

Tracking the public's response to the development of unconventional energy is important. What does longitudinal research[337] indicate regarding public response? Does it change over time and through various market cycles? To make such research of more use to environmental and rural sociologists, in addition to policy makers, "it must also be situated within the study of other sociological phenomena such as natural resource conflicts, ecological modernization, risk perspective, the treadmill of production [and] technological disasters."[338]

Measuring social license to operate

Measurement protocols for social license to operate in the oil and gas industry need further attention, including how they can be fine-tuned for use at different local and regional levels. Of particular importance is developing sophisticated (but flexible) schemes to better ascertain "perceptions of economic legitimacy and social legitimacy."[339]

[335] *Id.* at 23.
[336] Jeffrey B. Jacquet, *supra* note 333, at 8324.
[337] Longitudinal research involves collecting and analyzing data over a period of time. This research method is essential in the measurement of social change. *Social Research Update – Longitudinal Research in the Social Sciences*, UNIVERSITY OF SURREY, ENGLAND, http://sru.soc.surrey.ac.uk/SRU28.html.
[338] Anthony E. Ladd, *Stakeholder Perceptions of Socioenvironmental Impacts From Unconventional Natural Gas Development and Hydraulic Fracturing in the Haynesville Shale*, 28 JOURNAL OF RURAL SOCIAL SCIENCES 56, 83 (2013).
[339] Claire Richert, Abbie Rogers, & Michael Burton, *supra* note 40, at 127. The authors of this report went on to write, "In this study we develop measures of SLO for the oil and gas industry in Western Australia. The approach is novel in that it aims to identify the SLO held by communities that may be geographically distant from the operational site, rather than local communities, something that has not previously been investigated. We identify two measures of SLO, that related to perceptions of economic legitimacy and social legitimacy.…[W]e find it rare for an individual to hold a higher value for social legitimacy than economic legitimacy, i.e., economic legitimacy is necessary but not a sufficient condition for social legitimacy. The scores for economic legitimacy indicate that the population on average believes that [the oil and gas] industry provides the State with economic benefits. This aligns with the observation...that in the West Australian context the process of gaining a SLO has been largely limited to one of economic legitimacy. However, they are more ambivalent in their judgment of whether oil and gas companies contribute to their wellbeing, share their values, and are generally trustworthy. As a result, oil and gas projects are likely to be accepted, but not to receive a binding SLO…[T]hese initial results do suggest that the approach used would have value in any jurisdiction where there are concerns about the impacts of industry within the broader civil society, and not just local populations who may have direct interactions with industry." *Id.*

As the Australian Commonwealth Scientific and Industrial Research Organisation has asserted, "Measuring and modeling social licence….shows industry where to invest to develop genuine, trust based relationships with community stakeholders."[340]

Auditing systems to confirm company performance against SLO guidelines, thus leading to certification

For the public to develop trust in a company's performance against SLO guidelines, a fair and transparent auditing scheme must be established. In this regard, Resolve,[341] a Washington, D.C.-based independent nonprofit organization, has written,

> A concerted research effort is needed to bridge significant gaps in knowledge about the impacts of standards and certification systems and the conduct under which they are more or less effective...This effort could include filling gaps in knowledge about the baseline status of relevant socio-cultural or ecological systems, as well as linking into research on the relationships between prescribed management practices and outcomes.[342]

That said, certification systems "remain limited in their ability to compel compliance in the same way as regulations enforceable by law. Governments continue to play a critical role not only in creating and enabling environment for certification but in complementing standards with regulations and other measures that ensure minimum acceptable performance."[343]

In rural settings

While a considerable amount of unconventional development is taking place in more urban and suburban settings than ever before, there continues to be development in rural settings. Dr. Tom Measham,[344] an Australian-based expert on the sustainability of rural communities, has noted, "One substantial economic change which has developed over the past decade, and which has significant impacts for rural areas with a history of agriculture, is a new industry in the form of unconventional natural gas."[345] In this regard, he has said, "Unconventional gas posed different impacts on rural communities compared with other forms of resource extraction. In particular, the imprint of unconventional gas is extensive rather than intensive…This has the effect of thrusting different and potentially competing industries together in the same parcel of land. This can generate new types of conflicts, and potential benefits."[346]

Consequently, unconventional development in rural areas needs to be studied bearing in mind the different types of issues that might well be important in a rural setting (e.g., how to address the demographic phenomenon of large numbers of young men being concentrated in the development area[347]

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[340] *See Social Licence to Operate*, COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (CISRO), http://www.csiro.au/Organisation-Structure/Flagships/Minerals-Down-Under-Flagship/mineral-futures/Project-Social-licence.aspx.
[341] *See* RESOLVE, http://www.resolv.org/.
[342] *Executive Summary - Toward Sustainability: The Roles and Limitations of Certification*, THE STEERING COMMITTEE OF THE STATE-OF-KNOWLEDGE ASSESSMENT OF STANDARDS AND CERTIFICATION ES-17 (June 2012), *available at* http://www.resolv.org/site-assessment/files/2012/06/Toward-Sustainability-Executive-Summary.pdf.
[343] *Id.* at ES-13.
[344] *See* CSIRO, http://people.csiro.au/M/T/Tom-Measham.aspx.
[345] Thomas G. Measham & David A. Fleming, *Impacts of Unconventional Gas Development on Rural Community Decline*, 36 JOURNAL OF RURAL STUDIES 376 (2014).
[346] *Id.* at 378.
[347] This situation "has been historically linked to particular types of social impacts such as alcoholism, sexually transmitted diseases and violence, with the effect of discouraging young women from staying in the affected communities and contributing to underlying rural decline." *Id.* at 379.

and how unconventional gas development influences "the three core components of rural decline, namely rural out-migration, education attainment, and poverty reduction"[348]).

What is the impact of media coverage on public perception?

An informed media can provide better and more complete coverage of issues. That said, today's media coverage of unconventional development needs to be improved if the larger audience of readers is going to understand what is going on. Research needs to be undertaken on how the media covers the issue and what impact that has on public perception. This project should likely be undertaken in conjunction with a well-respected school of journalism or media communications.

The transfer and/or capture of wealth

More research needs to be undertaken about the impact of shale development on both community and individual wealth. The primary question to be considered is "the degree to and ways in which royalties to landowners can serve to mitigate the long-term community-level problems" associated with boomtowns and the resource curse.[349] For example, "What happens…when farmer-landowners receive mineral wealth? Are they more likely to invest in farm operations or consumer spending? To stay on the land or move elsewhere?"[350]

Consideration of this set of questions might inform initiatives focused on "capturing the wealth at the local level," if that was so desired.[351]

Understanding the impacts of community-level stigma and how to address it

Communities where shale gas development is taking place may be stigmatized as a result of the perception of environmental contamination.[352] The concept of stigma involves "labeling and categorization…based on perceived negative and disgraceful attributes."[353]

As a consequence, there are several questions that need further study:

- To what degree might a community be stigmatized by shale development?
- Will communities where shale development is taking place experience "adverse effects on population growth and investment?"[354]
- In the event of occurrence of adverse effects, "will it primarily affect certain types of investment, such as amenity-led development?"[355]
- "Are shale energy contaminants likely to lead to 'brownfield'-type remediation and associated challenges, or will the actual and perceived contamination…result in [a] novel kind of remediation context?"[356]

How can a positive SLO be taken account of in an M&A context

[348] *Id.* at 382.
[349] Jeffrey B. Jacquet, *supra* note 333, at 8327.
[350] *Id.*
[351] *Id.*
[352] *Id.* at 8326.
[353] *Id.*
[354] *Id.* at 8328.
[355] *Id.*
[356] *Id.*

Mergers and acquisitions attorneys have long understood the importance of factoring in "political risk" in situations where major oil companies purchase assets from exploration firms. To the extent that political risk also embodies social license to operate, this suggests "that the absence of social license is already integrated to some extent into the process."[357] On the other hand, the *value* of having a social license to operate in place has not attracted as much attention. Consequently, research needs to be undertaken on how to value a positive social license, including how to reflect the value in a transactional agreement.

Final thoughts about the Center

Currently, there is no institution or entity that closely parallels the Center described above. However, the benefit of having such an organization becomes evident when one takes into consideration what has been said about a somewhat similar entity, the Center for Sustainable Shale Development (CSSD): "[I]nitiatives like the CSSD have a long way to go before they can claim to be genuinely influential. But the rewards for improving public trust are obvious."[358]

V. Conclusion

The 2012 International Energy Association publication *Are we Entering a Golden Age of Gas Special Report* acknowledged what many thought – and continue to think – about the future of gas. In short, "The future for natural gas is bright."[359] One reason for this assessment was the North American shale boom. And yet, despite the optimism associated with the report's findings, IEA Chief Economist Fatih Birol offered a cautionary tale about the unconventional development industry. "If this new industry is to prosper, it needs to earn and maintain its social license to operate," he warned.[360]

However, three years on from that advice the picture that emerges seems very hazy at best. It is undeniable that some things have changed. But that observation may well be illusory in the context of the growing challenges that industry faces. In particular, approaches continuing to be framed in legal clashes as a means of ensuring the future development of unconventional oil and gas assets represent a very risky, and ultimately disconcerting, way for the oil and gas industry, society generally, and communities in particular to address their differences.

Bearing in mind the highly emotional and deeply entrenched perspectives associated with hydraulic fracturing, "heading to court for an injunction or similar legal decision in favor of the company in order to overcome local community opposition…is most unlikely to resolve the situation to anyone's satisfaction. It is, in fact, much more likely to create frustration and resentment within the community…and a shift from latent to overt conflict."[361] Moreover, the industry risks hydraulic fracturing bans by voter initiative as demonstrated in the heart of oil country – Denton, Texas – in 2014,[362] a result that was described as something "many never imagined possible."[363] This is hardly a promising scenario

[357] JOHN MORRISON, THE SOCIAL LICENSE: HOW TO KEEP YOUR ORGANIZATION LEGITIMATE 137 (2014).
[358] *Fracking Fears Force US Shale Players to Act*, PETROLEUM INTELLIGENCE WEEKLY, June 16, 2014.
[359] *World Energy Outlook 2011*, IEA, http://www.worldenergyoutlook.org/goldenageofgas/.
[360] *IEA sets out the 'Golden Rules' needed to usher in a Golden Age of Gas*, IEA (May 29, 2012), *available at* http://www.iea.org/newsroomandevents/pressreleases/2012/may/name,27266,en.html.
[361] Ian Thomson, *supra* note 10.
[362] *See Cumulative Report – Official Denton Country 2014 November General Election*, 14, http://assets01.aws.connect.clarityelections.com/Assets/Connect/RootPublish/denton-tx.connect.clarityelections.com/ElectionResults/2014/110414/denton_county_cumulative.pdf.
[363] Stephanie Joyce, *supra* note 8. One new story after the election suggested that "local frack bans add to investor concerns that shale producers confront challenges that will slow drilling." Bradley Olson & Jim Polson, *Texas College Town Fracking Ban a Bad Sign for U.S. Boom*, BLOOMBERG, Nov. 5, 2014. A group called "Frack Free

considering that the use of hydraulic fracturing "could develop into one of the most contentious environmental movements of our time."[364]

Thus, and perhaps to the consternation of some who are entirely invested in maintaining the status quo despite its many limitations, the "letter of the law" approach may not be the best means of addressing issues that have continually defied legal resolution. This is exactly the context in which alternatives must be considered, and one that has significant potential is encouraging companies to seek, earn and maintain a social license to operate.

This is not to suggest that there is not a role for the political or legal license. There definitely is. "However, both legal and political licenses have limitations and they are increasingly reliant on social license," according to John Morrison, an SLO expert.[365] Highly-respected environmental law jurist Brian J. Preston, Chief Judge of the Land and Environment Court of New South Wales, has described the relationship between the legal and social licenses in this manner:

> The law may encapsulate society's expectations to a greater or lesser degree. To the extent that the law does so, the business can be viewed as having a legal licence to use land and its resources. The legal licence sets the formal framework for obtaining and maintaining the right to use land and its resources and for imposing and enforcing the responsibilities and accountability for the exercise of that right. To the extent that the law does not do so, the business needs to rely on the notion of a social licence. A social licence describes the latitude or freedom that society allows the business to use land and its resources without interference. Society expects more of businesses than that they just comply with the law.[366]

Bruce Harvey, a former Rio Tinto executive and now an adjunct professor at the Center for Responsibility and Mining at the University of Queensland, has made this observation:

> If we think about what's happened in the world in the last 50 years, previously the resource sector secured its license to operate at the discretion of government. In fact, we still do. And that's called a legal license and permits and license are granted and we lived up to the expectation and they are maintained. But in the world of globalization and in an increasing world of scrutiny and mobilization of local voices, if you don't have the broad based support of local people for what you want to do, then you won't get your legal license.[367]

Understanding how to establish a social license to operate and then maintain it is admittedly not an easy task, but it is not impossible.[368] A leading international global risk consultant has said that achieving social license "is time consuming and resource intensive. Everyone in a company has a role to play to gauge changing sentiment and emerging issues, to continuously communicate with stakeholders at all levels and to capture the need for changing strategies when they emerge."[369]

Denton" organized the successful ballot measure. For more information about the group, *see* Frack Free Denton, http://frackfreedenton.com/.

[364] Anthony E. Ladd, *supra* note 340, at 82.

[365] JOHN MORRISON, *supra* note 359, at 159.

[366] Brian J. Preston, *The adequacy of the law in satisfying society's expectations for major projects*, INTERNATIONAL BAR ASSOCIATION ANNUAL CONFERENCE PAPER, Tokyo, Japan (Oct. 22, 2014).

[367] JOHN MORRISON, *supra* note 359, at 16. Interview with Bruce Harvey by the author in 2011.

[368] Nathalie Wlodarczyk, *Why social license is simple in theory and hard in practice*, IHGBLOG (Feb. 11, 2015), *available at* http://blog.ihs.com/why-social-license-is-simple-in-theory-and-hard-in-practice.

[369] *Id.*

However, at the outset perhaps the key factor that will underscore whether it proceeds or not lies in the hands of oil and gas developers. And like it or not, the industry is facing, in effect, a "social process" revolving around the acceptance of fracking that it not wholly within its control. No business willing gives up control over any aspect of its operations, but at a minimum the oil and gas industry must acknowledge that it cannot determine the outcome on its own. Canadian resources dispute expert Ian Thomson has encapsulated the situation in which the industry finds itself: "Given the speed and power with which social process can operate, it falls to the operating company to be proactive in understanding the local community, its hopes, fears and social structure, and develop a process of communication, consultation, and sharing that brings the various players together rather than polarizing positions and driving them apart."[370]

The establishment of a series of Centers for the Social License to Develop in the Oil and Gas Industry may represent an important step in defining and deploying social license to operate. By assembling the parties in a neutral forum, it will aim to replace contention with consensus, and animosity with partnership. And, as a key part of the Center's work, energy and resources must be invested in developing "shared knowledge" where all of the participants play a role in defining the issues to be considered.

In short, "The ingenuity and tenacity of the oil industry fueled the shale revolution. Now, the same ingenuity and tenacity is needed to safeguard and ensure that this newfound energy abundance is lasting."[371] In today's environment, this is particularly important because when the process of establishing and maintaining a social license to operate is done well, the risk of disruption is minimized and the opportunity of business success is maximized.

Former U.K. Prime Minister Winston Churchill, no stranger to facing enormous challenges and succeeding, once remarked, "The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty." Despite the challenges that lie ahead, we definitely remain optimists.

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