

IHS Energy CERAWEEK 2014

Highlights from ERM



CERAWEEK 2014 Strategic Partners



The world's leading sustainability consultancy

Introduction

IHS Energy CERAWeek is one of the most influential energy conferences in the world with over 300 executive level speakers from most of the largest energy companies. ERM has been the Sustainability Partner of the event for the past 4 years.

Various factors including increasing investor pressure, spiralling development costs and supply/demand dynamics are driving subtle, and not so subtle, changes of priorities in the energy market. These changes include reduced capex spend, more caution around new markets/high cost development projects and the need to manage risk, compliance and reputation even more diligently. These come at a time of an increasingly competitive war for talent and the constant need to achieve greater operational excellence. All of these issues continue to challenge industry executives and will influence their strategies going forward.

This year ERM contributed its thought leadership on a number of key themes which are causing challenges for our clients. ERM leaders spoke about improving performance through HSE operational excellence, obtaining and sustaining a license to operate through better stakeholder engagement and management of non-technical risk, emerging issues in transactions, and difficult technical issues, relating to air quality, and in particular methane.

This document is our top line view of some of the key themes and observations from IHS Energy CERAWeek and our insights. While this is not meant to be an exhaustive summary, we hope it stimulates some thoughts, or reinforces some of your own thinking, which we would be happy to discuss with you.



Shawn B. Doherty
Global Commercial Director

Observations and Insights

Geopolitics, politics and oil economics

Oil price stability looks set to continue. It has only moved between \$108-\$111 over the past 3 years. The short term hotspots that could de-stabilize this include Venezuela, Russia's actions in Ukraine, Iran and Iraq. In upstream, the U.S. will continue its march to energy independence. In other parts of the world there is more likely to be joint ventures driving development particularly in shale and tight oil and gas. Regulation and legislation is a challenge as noted by Lisa Murkowski, U.S. Senator, Senate Energy Committee, where she reflected that from a U.S. perspective the need to address access to Federal land is a key issue as well as the export policies to create greater opportunities. The U.S. export issue was a recurring theme and energy policy relating to national competitiveness.

CERAWeek focus on gas

Gas naturally dominated the conversations with the big finds nearly all being in gas. Maximizing the opportunities will require the right geology, so it is accessible at the right cost but also the effective management of non-technical risks such that they do not become 'deal breakers' in a project. One commentator summed this up as needing the "right rocks" and the right above ground conditions to make a project viable. There was a sense of optimism that the unit cost for exploration for gas is on the decline in the U.S., but pessimism about the ability to use the technology and learnings on shale gas as a repeatable model outside the U.S., mainly because of the vagaries of above ground risks.

The decade of over-spending on flagship capital projects is over

Companies are streamlining capital project portfolios and looking for ways to rationalize exploration and development costs. There is a clear focus on improving asset level performance and "recycling" projects more frequently to obtain a better return on capital. For example, during IHS Energy CERAWeek, one major announced the formation of a separate Houston based business to manage onshore U.S. oil and gas assets with a separate management team. It was mentioned several times that there are plenty of opportunities out there, but now is the time to make 'smarter choices.'



Managing Performance During a War of Talent

There is a significant skills shortage in North America. Companies need to be mindful that acquiring, training and retaining talent is not just an issue within the industry, but there is competition from other industries for the best talent. For companies it's not just about your own employees, but also having a responsibility for your contractors too.

Challenges in Operational Excellence

In a video-on-demand interview, available at ERM.com; Shawn Doherty, ERM's Global Commercial Director, was asked for ERM's view on some of the challenges in addressing the issue of Operational Excellence (OE) and the leadership challenges this has within an organisation.

"For ERM our goal is to help our clients deliver sustainably safe and compliant operations, we call it Sustainable Operational Excellence."

Shawn highlighted the complicated landscape of leadership and management around OE programs. Imagine this dynamic: Corporate leadership decides there's an area of OE to improve upon-it might be safety, it could be compliance, or it might be measuring and reporting. Typically what happens is functional leadership, HSE leadership, gets called in to build a performance improvement program around that topic. Then business line or frontline leadership in the field gets a heads up that there is a new performance improvement initiative coming. Then, to further complicate matters, an external implementation partner, like ERM, will get involved to help deploy whatever it is that's the subject of interest. That's a complicated leadership and management space and one in which there is considerable room for a disconnect between the functional and business objectives, unless there is excellent execution of project planning, communications and leadership messages." It's further complicated by the workforce dynamics in the O&G sector in particular. One CEO commented he has 3,000 retirements a year, 5,000 new hires a year and on any given day, 200,000 contractors. Even though we come into the equation because of our technical expertise, at the end of the day it's a leadership and people challenge.

There are complex matrixes of strategic and technical issues to address. As Shawn points out, at ERM, while we have strategy consultants, we have also built our business with consultants who have different expertise on the more technical side of compliance, safety, social performance. We do things like help our clients deploy their management systems in a more effective way. We come up with programs of change around social and safety performance. We're also working on information solutions, competency assessments and training programs to help the people in our client organizations get better at these areas of HSE operational excellence.



Stakeholder Engagement is a key to obtaining and maintaining a license to operate

Keryn James, ERM's Asia Pacific CEO, in a discussion session with Nate Teti from Statoil, Clay Bretches from Anadarko and Paul Jeakins Commissioner of the BC Oil and Gas Commission outlined some of the challenges and opportunities with regards to license to operate.

Keryn highlighted the very real schedule, financial, and reputational risks that arise from failure to manage non-technical or "above ground" risks, by sharing ERM's research on the large number of oil and gas projects that have experienced some form of delay, and the associated financial and reputational costs, running into the millions.

Stakeholder engagement, done well, can be a very effective tool in managing some of the critical non-technical risks.

"Generally speaking, stakeholder engagement is incredibly important for companies and I think it is difficult for a lot of companies. Some of the reasons behind that difficulty are:

1) Communities are all very different and there is no one set of stakeholders or communities that are the same. I think companies, in their push for efficiency and managing cost, would very much like to have a template that they can apply to stakeholder engagement, but it is very relationship driven and trust driven so you can't have a one size fits all, so I think companies struggle with that.

2) Companies also struggle with the timing. Most projects are schedule driven and "time is money" but the reality is stakeholder engagement takes time and therefore in order to manage those issues you need to invest time and money. However, it often conflicts with project schedules.

In suggesting ways we could improve stakeholder engagement to really make a more meaningful impact, Keryn added, "I think there are a few points to consider: The first one is around how industry as a whole performs. We've heard a lot of discussion here at CERAWEEK about above ground risk and in particular the fact that you're really only as strong as your weakest link. There is a real imperative for industry to work together to develop best practice; but also to manage underperformance in their sector because community perceptions of projects are dictated by how they see the rest of the industry performing. Industry leadership is a key issue.

The second thing is that companies could really make a significant improvement in their understanding of the stakeholder context. To do something we like to refer to as the 'stakeholder seismic'. Companies often invest a lot of money in understanding the geological conditions and characteristics but perhaps they don't invest the same amount of time and effort in understanding the complexities of their stakeholder landscape. If they did that I think they would be better prepared.



Finally, I think if companies made more of a commitment to investing in stakeholder engagement in the early stages of a project and throughout a project; resourcing that appropriately and making sure the properly trained resources and the right tools and approaches are being adopted, I think they would have far better project execution.”

Transactions and joint ventures

Mark Errington, Global Head of Transaction Services articulated in an interview some of the issues we are seeing in the market that have a bearing on transaction success.

“In the past, the liability assessment process has been heavily focused on legacy issues and as such is very backward looking. At ERM we are pioneering a more forward looking approach embedding sustainability, environment, social governance and non-technical risk into our process. We think this approach allows us to help clients add value into business operations. That has become a mainstay of what we do in the transactions space.

For example, we use remote sensing to gather information, particularly around upstream and midstream projects. It allows us to gather data quickly and to identify issues whether they are technical or community impact issues. We can then use financial modeling to pull out the major cost liability—what are the liabilities, why is it a liability, the costs associated with those liabilities and the degree of confidence we have around that cost. We plug that into our clients risk model depending on their risk appetite. We find it a far more streamlined approach, adding more generated value than say the ASTM phase I approach, which frankly is not suitable for this purpose.”

Exploring this in more detail, his belief is that the non-technical risks actually have a greater impact on companies’ reputation and the success of those projects versus the traditional HSE compliance.

“For non-technical risks when one looks at issues like license to operate in developing markets, you can have all the compliance with government regulations that you want, but if the local communities are picketing the front gate of your facility, then one can say we don’t have the full license to operate. In fact, in today’s highly connected world, the impact on reputational issues can be enormous”.



Shale Gas: Methane Emissions myth and reality

Ken Weiss, Global Head of Air Quality and Climate Change at ERM in one of the more technical sessions sought to clarify some of the current discussion around methane and its impact on the environment and the possibility of it as a 'bridge fuel.'

"Looking at the information that is being reported in the literature, there is a growing urban legend about methane that we should take a look at and understand. If you look at the data, I believe it does support the idea that methane is a great bridge fuel as we decarbonize electricity generation in the United States. It is pretty clear on the surface that we have a role to play in making that known".

In a recent issue of the Philadelphia Inquirer, a newspaper in the U.S., the lead editorial headline was – "the ecological villain is methane". Quoting a Stanford University Study, a review of more than 200 earlier studies, suggests U.S. emissions of methane are considerably higher than official estimates. Natural gas extraction is the cause of that was the inference in the article and methane is 30 times more powerful than carbon dioxide in causing global warming. None of these three statements are true.

If you actually look at the Stanford study, it's based on a review of 20 years of literature that's scarce. All of the research was done before fracking became prevalent in the US. There is no way fracking could have caused it. If you look at the conclusions of the study, it concluded that generating electricity is a good thing. Unaccounted for methane leaks are likely not attributable to hydraulic fracking.

The focus on methane from natural gas will continue to get attention and it creates the opportunity for business interruption. You want to run the business and not be interrupted you really need to pay attention to this. It should be noted, the industry has done pretty good in addressing this - natural gas related methane emissions have decreased over the last twenty years in the U.S.; but that doesn't stop the pressure being applied.

In terms of actual methane emissions, if we use the EPA's numbers, there is about 10.5 million metric tonnes of methane emissions related to natural gas production in the U.S. That's equivalent to 62 coal-fired power plants so it's not a small source. Comparing the greenhouse gas footprint of generating electricity by gas to that by coal and how much leakage you can document is the most important issue. Some reports in the literature cite a leakage rate of 7.9% which is unsupported anywhere else. Leakage rates are probably about 2.5%-3.5%, the EPA says 2.2% based on adding all the leakage reported to them divided by the total production of gas in the country. What is clear is there number varies, but is likely to be less than 4%. As with many issues in energy, there are misconceptions which if left unchecked present potential business disruption.



About ERM

With over 5,000 people in 40 countries, ERM have been advising energy sector clients for more than 40 years in the areas of entering new markets, capital project support, how you operate in a safe, compliant and sustainable way. This includes using information solutions to improve transparency and corporate reporting, as well as advising on a firm's social performance, and asset retirement strategies. The range work we do for our clients gives us a broad based and hands on perspective to many of the more pressing issues facing the energy sector and hence a wealth of insights and advice we are happy to share.



To find out more how ERM can help you go to www.erm.com or your local ERM contact.