ERM was the Sustainability Partner at IHS CERAWeek for the third year running. CERAWeek is the leading gathering of senior energy decision-makers from around the world. This event had presentations from over 300 speakers — including senior industry executives, government officials and thought leaders — on the changing energy playing field. It offered insight into emerging themes in global energy — and how markets, geopolitics and technologies are changing the game for producers, consumers and policy-makers. Economic austerity and regulatory uncertainty further compounds the risks as the industry seeks to invest to meet future energy needs. At the same time the global unconventional oil and gas revolution is shifting the competitive landscape for industrial production and demand. The conference explored some of the challenges and opportunities that lie ahead for oil, natural gas, coal, renewables, and nuclear power—including what the investment landscape looks like today.

**Why is ERM the Sustainability Partner for CERA Week?**

For ERM, sustainability is a commitment to support socio-economic development that meets the requirements of the present without compromising the ability of future generations to meet their own needs. Through the work that we do, we will be incorporating the lessons we learn and the approaches we develop for the benefit of our clients through our market offerings. This will not only help us protect our planet, its resources and communities, but also help our clients create business value through meeting the challenges of operating more sustainably.

At this event last year we heard from CEO after CEO that we were in the midst of a once-in-a-career opportunity to find, produce, and use abundant, cleaner-burning natural gas in our energy mix. These same CEOs also spoke to the need to be transparent with their stakeholders, ensure the safety of people working in and around their industry, and protect the environment.

This year, the discussions went deeper into the sustainability agenda which gave us a unique opportunity to provide input. During this year’s conference ERM’s experts provided thought leadership on a range of issues including community issues surrounding unconventional resource development, how we identify and address the non-technical risks that are slowing down the delivery of capital projects, the strategies and practicalities in pursuing operational excellence, and the impact of oil & gas finds in the socio-economic development of Africa.

This document is our top line view of some key themes and observations we saw and highlights some of the insights we contributed. While this is not meant to be an exhaustive summary, I hope it helps stimulate some thoughts for you and we would be happy to discuss any of these with you further.

Shawn Doherty
Global Commercial Director
Observations and Insights

We are facing a paradigm shift in the energy industry

The rise in energy supply growth is and will be unprecedented. This is driven by a number of factors. Saudi Aramco President and CEO Khalid Al-Falih noted four new realities that are driving this. First, global energy demand is moderating, owing not only to economic stagnation but also to changing demographics, consumer behavior, and government policies. Second, concerns over resource limitations have been largely dispelled. Third, government policy on monitoring access to key resources has become more focused. Fourth, renewable and environmental policies are being reevaluated. As economic austerity spreads, governments are seeking to balance policies promoting economic growth and protection of the environment more effectively. This brings with it increasing demands by a wider range of stakeholders which means in balance with its operational performance, an organization’s policies to the environment, the communities where it operates and the health and safety of its employees and contractors has never been under greater scrutiny. The tangible and intangible risks facing companies have never been greater.

“The Golden Age of Gas”

Joe Geagea, President, Chevron Gas, used this phrase to highlight the shift in the importance of gas in the energy market. While gas presents opportunities globally, in the US in particular he sees LNG’s development coming from a moment of alignment between producers and sellers. Future economic development will depend on US policy making this happen faster. The average time from discovery to market for the last 35 global LNG projects is 18 years. Philippe Sauquet, President, Total Gas & Power, sees global growth opportunities, but global pricing seems a long way away, which will influence development opportunities, but sees LNG as the future. Peter Coleman, CEO and Managing Director, Woodside Energy in Australia, sees that while these opportunities are substantial, some basic fundamentals are key namely ‘excellence in execution’ and strong partnerships across the entire LNG value chain. This means getting back some basics in project fundamentals, define and plan well, get the right contracting in place and have the right people executing this. If you are unprepared to deliver these mega projects, more often than not the project team will be replaced.

Environmental Stewardship will be the biggest challenge to realising the opportunities

Daniel Poneman, US Deputy Secretary of Energy, of the United States emphasized the important and growing role of fossil fuel production. US oil production has rapidly increased as the result of technological innovation; the United States is now a net exporter of oil products and is expected to cut its oil imports in half by 2020. However, Mr. Poneman highlighted an emphasis on environmental stewardship is necessary to ensure that this opportunity is fully developed.

The changing costs of supply influencing operations

There was much discussion surrounding the US wrestling with what to do with their enhanced power following the ‘shale gale’ and what that means from a geopolitical, strategic and operational perspective. Clearly this will intensify as the US moves towards energy independence. Charles Weston, CEO of Direct Energy noted operations in the United States have benefitted greatly from the shale gas revolution. He noted that the average consumer household in the United States now uses 3.5 times more power than its equivalent in the United Kingdom and yet has also experienced a 20% decline in the cost of electricity. Consumers in the United Kingdom now pay the equivalent of 20 cents per kilowatt-hour compared with just 11 cents in the United States.
There are distinct shifts occurring in corporate strategy

The dominance of unconventionals in discussions was marked. This unconventional revolution has also brought about fundamental shifts in corporate strategies. Ryan Lance Chairman and CEO of ConocoPhillips highlighted this citing national oil companies are today seeking to participate in unconventional opportunities held by international oil companies (IOCs). At the same time, IOCs are refocusing on organic growth rather than mergers and acquisitions. He drew a distinction between the investment life cycles of unconventional and conventional developments. Shale development requires greater ongoing investment, but gives quicker payback. By comparison, conventional “megaprojects” require very large upfront investment, and payback may be achieved a decade or more later. The operational expertise best suited to the two types of developments is also different. Unconventional developments require fast deployment of rigs and completion equipment, and the focus is on improving efficiency and controlling costs. The planning and execution of these unconventional projects compared with, for example, conventional deep-water projects are quite different.

There will be challenging times for renewables ahead

Alex Klein, IHS Research Director, Clean and Renewable Power, saw renewables in the two largest markets facing headwinds: this is driven by the unconventional revolution in the United States and budget austerity in Europe. Over the next two decades more than two-thirds of new renewables capacity is expected to be built outside the United States and Europe.

Not delivering projects on time, on budget and delivering shareholder value present career risks

The rise of the ‘known unknowns’ of non-technical risks are being perceived by many as a bigger risk than below-ground risks. The challenges of realising capital projects was raised from a number of perspectives not least managing the community impacts, which can seriously delay projects and the war for talent not just on projects, but more widely across the full range of an organisations more technical activities.

Developing economies still provide decent opportunities

The growth opportunities were seen as still being in the emerging economies. Much of the challenge is deciding where the greatest opportunities lie. Africa was a focus of many of the sessions, as it continues to offer numerous opportunities for companies seeking to acquire new upstream acreage. From mature onshore and offshore acreage in the west and north of the continent to promising frontier territory in the east and south, Africa remains a region which is open for business. However, as recent events in Mali, Libya and Algeria have highlighted, the region continues to present a variety of risks.

The rise in interest of National Oil Companies in the debate

This year there was a notable rise in the number of delegates from countries that have not attended extensively in the past, such as Russia and China. It was also interesting to see a greater number of national oil companies attending which re-emphasizes the increased activity and joint ventures between these national oil companies and the majors and super major’s.

ERM experts contributed to the debate on number of these issues as follows.
Capital Project Issues

In a video-on-demand interview, Shawn Doherty (Global Commercial Director) was asked to speak about sustainability issues impacting capital project development since capital management featured on the CERAWeek agenda in several places. Early on Shawn set the tone by saying:

“It is fair to say, over the last 3 or 4 years we have seen our biggest clients, those with the largest capital budgets really struggle with and express their disappointment with performance on delivering those projects. So it is becoming an increasing area of emphasis and today, and nearly 40% of the business we do at ERM is capital project support driven.”

Other highlighted points included:

- In addressing these front end non-technical risks organisations are facing both public and regulatory approvals. This is not only for land access, but also for construction and operating permits.

- One of the things we have seen industries do is take a hard look at project development and execution processes. We see them, and we have assisted some, expanding the front-end of that work process to include more realistic timeframes and a more fully articulated set of activities needed to get through the approvals process.

- The days of project managers adding a six month placeholder to the front of the schedule for getting the permits are long gone. The scale of the investments is too big, and the public and regulatory approvals process is just too complex.

Shawn concluded his session by laying the approach ERM is taking to help its client improve in this part of their business. He framed it like this:

“What we are trying to do in response of feedback from our clients, is apply a three pronged approach: use our knowledge of how to get local, national, and/or lender approvals by virtue of our 40+ country presence and 40-year experience base to build an achievable schedule; provide a more robust project management approach to getting those non-technical issues addressed on scope and schedule, as well as communicated to all the project stakeholders; and because there are lots of technical and functional teams involved, we are helping keep our clients teams integrated along this non-linear process.”
Understanding and Managing Community Impacts on Unconventionals

Non-technical risks (NTR) especially community and social issues, create significant capital risk and opportunity in the development of unconventional resources. Keryn James (ERM CEO, Asia Pacific) in a session with Doug Bannerman, Head of Social Responsibility at Statoil and Barry Smitherman of the Texas Railroad Commission outlined some of the issues in understanding and managing community impacts.

“Research from projects we have worked on as well as published research from others shows that more than two-thirds of project delays come from sustainability risk, namely stakeholder, community, environment, regulatory and safety-related causes. And these delays result in increased costs, impacts on project financing and reputation risk, all of which ultimately impact on the careers of executives leading these projects. Our clients are telling us that the scale of NTR impacts can quickly approach the billions with significant NPV erosion. The imperative for change is compelling”.

Below are some key success factors which we think should be factored in by project owners.

Firstly, integrating social risks in project life-cycle decision-making. This results in an improved understanding of the costs and benefits, in financial terms (for example in NPV analysis), of the risks, and can therefore lead to risk avoidance through alternative design and development or improved risk management.

Secondly, making a commitment to building an understanding of the impacts of development at a community level will lead to more informed decision making. This needs to be customized to reflect the particular circumstances of the project. One size does not fit all – building a robust understanding of the community, including how they view the impacts and risks is critical.

Thirdly, effective stakeholder engagement is the key to gaining and maintaining the social license to operate and there are some key components to this;

- Timing; early engagement is crucial
- Resources are appropriate, in terms of the skills and experience and the quantity
- Unhindered information flow to all parties, in forms that can be accessed and understood by them
- Stakeholder inclusiveness; all relevant groups are included
- Two-way dialogue which is instigated as early as possible

Another important factor to consider is the role of voluntary action by industry in addressing concerns. Regulatory frameworks rarely fully address community concerns, so going beyond regulatory compliance will deliver greater project certainty. Industry’s contribution plays an integral part in constructive dialogue. Collaboration with all germane stakeholders is crucial in creating a more certain approvals framework, consistent performance, and fact-based dialogue.

Taking these points together, managing community impacts can be pictured as follows;

Integrate consideration of non-technical risks
Understand your community context
Effective stakeholder engagement - TRUST
Go beyond compliance - social license to operate
Collaborate on frameworks, performance & information
A big theme that pervaded a number of sessions was the evolution of Operational Excellence. Mark Sobol (Senior Partner for Sustainable Operational Excellence) was a Co-facilitator with Joe Stough from IHS for the invitation only ‘Operational Excellence Summit’ held at the conference.

“Operational Excellence has been on the rise with senior executives and boards throughout industry. This is driven by the fact that the sectors we operate in are under increasing pressure. There’s less margin for error, there’s greater risk attached to the operations that we’re engaged in; the level of technology that we’re deploying is increasing, there’s greater media scrutiny in everything we do, that we’ve never seen in this way before and organizations are finding out, sometimes to their detriment, they just can’t afford to operate in any other way than excellently, given some of the events that we’ve seen over the last several years.”

Other points to consider included:

- Working with some of the world’s leading companies, what we’ve been finding is there’s the principle of uniqueness when focusing on operational excellence. The best practice that an organization becomes world renowned for, grows up in that unique organization, and it is very difficult to replicate.

- The wholesale transfer, or transplant, of best practices from one organization to another is one of the greatest challenges in addressing operational excellence. We’re very involved in making certain that we understand both the uniqueness of the organization from where the best practice emerged and the uniqueness of the organization that is seeking to adopt said practice. We seek answers to the these and many other questions such as, how mature is the organization? What is their readiness for the kind of change that they’re seeking to make? So, best practices is not the simple concept that it once was. In fact, a better term than Best Practice might be Leading Practice, denoting a more sophisticated approach to taking good ideas and fitting them to the special characteristics of each organization.

- Another significant element of addressing operational excellence is that of employee engagement. The evolved view on people engagement is that engagement, as we have traditionally defined it (telling people what we’re going to do, getting them to understand what we’re saying, and executing), isn’t sufficient for the aspiration of creating Sustainable Operational Excellence. Ninety percent of these types of strategies that organizations conceive of are never implemented, according to our findings. So what we’re looking for, at ERM, is a far higher level of employee involvement. This is where we tap directly into the reservoir of trapped wisdom, and hard-won experience around how an organization really operates and how it must operate in terms of sustainable operational excellence – having the people become directly involved in the thoughtful design and deployment of continuously improving ways of having high hazard operations be sustainably safer, more reliable, more compliant.

“Our work with many of the leading companies in the energy market has meant they have changed focus from Best Practices to Leading Practices, pinpointing ‘what good looks like’ across their organization and mapping their route to operational excellence.”
Africa was highlighted as a key region throughout the conference. ERM sponsored an Insight Breakfast that discussed and explored the economic opportunities presented by the energy sector in Africa. Jeremy Soboil, ERM’s Commercial Director for Africa introduced the breakfast and summarised what is a compelling growth story for oil & gas, mining and power companies operating in Africa in recent years.

To highlight this growth:

- Over the last decade, eight of the world’s 20 fastest growth economies are in Africa, and as a region, Sub-Saharan Africa is second only to the high growth economies of Emerging Asia.
- Substantial investments are already being made in transport and telecommunications infrastructure across the continent.
- With rapid democratisation and more liberal politics there has been a marked reduction in conflict, which has created opportunities for investment in the region.
- Regional integration is critical to accelerated and sustainable growth and is being prioritised through the African Union and the respective Regional Economic Communities.
- There are continually improving levels of skills, poverty reduction and health.

This must be countered with the significant challenges to realising this potential. This includes;

- Political instability and conflict that still exists in some countries, such as Mali and Central Africa Republic.
- Transport and telecommunications infrastructure is still under-developed relative to other emerging regions, and bridging this infrastructure gap is important for sustained growth and development.
- Doing business is seen as challenging in some parts, particularly with respect to dealing with issues such as institutional capacity, bribery and corruption.
- Adult literacy and skilled labour is still low particularly in terms of the requirements for more technical roles the energy sector requires.

For more insights go to www.erm.com.
For additional information regarding ERM’s participation at IHS CERAWeek 2013, please contact our regional sector and practice leaders listed below. Additional content for CERAWeek 2013 is available by visiting our website at www.erm.com/ceraweek.

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