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Privcap Game Change:

ENERGY 2016

A recap of Privcap's third-annual energy conference

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About Privcap
Privcap is a digital media company that produces events and thought-leadership content for the global private capital markets. Privcap offers communications services to market participants.

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Andrea Heisinger
Managing Editor,
Privcap

Resilience on Display

I'm happy to report that the tone at Privcap's Game Change: Energy 2016 event in Houston was less dire than in 2015, with speakers and attendees alike sharing the belief that a new normal has set in and that prices have stabilized.

The consensus seems to be that there are still plenty of opportunities to be had, for both enterprising investors and veterans who have been through previous down cycles.

For the first time, we extended the conference by a half day to Mexico's energy opportunity. The afternoon before the full conference, we heard from players in Mexico's energy market—right on the heels of the country's first-ever auction for deepwater oil blocks in the Gulf of Mexico—who said their investment options are only getting better. And Mexico's deputy secretary of hydrocarbons explained the successes—and challenges—the government and Pemex have encountered since welcoming foreign capital.

We hope you gain insight into the energy market from all of the expert commentary presented in this report. And we also hope you will join us for Game Change: Energy 2017 on December 5 and 6 at The Houstonian Hotel in Houston.

Enjoy the report,

Andrea Heisinger

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Oil & Gas vs. Renewables: What's the Better 10-Year Play?

Traditional and renewable energy investors debate which sectors and strategies have the best outlook

Michael Hoffman
Partner,
Riverstone Holdings

Brian Crumley
Managing Partner,
Vortus Investments

David Scaysbrook
Co-founder & Managing Partner,
Quinbrook Infrastructure Partners

Mark Bisso
Managing Director,
Och-Ziff Capital Management Group

Privcap: If you had to pick one or the other—conventional oil and gas or renewables—over the next 10 years, where would you invest $100M?

Mark Bisso, Och-Ziff: The downturn has had some favorable impacts on the upstream sector—the industry is more efficient, capital structures are healthier, and the general approach to development is more constructive. If you look at the supply and demand dynamics, demand growth remains strong—we should be up 1.3 million barrels per day this year—and supply may face challenges as a result of the significant reductions in capital investment over the last two years.

Brian, what would be your argument for oil and gas as the winning 10-year bet?

Brian Crumley, Vortus Investments: It's still a commodity business, so you have to be the low-cost producer. That's what makes you the winner. And we like the risk-adjusted returns here in the U.S., where we're focused.

Team renewables, what do you think?

Michael Hoffman, Riverstone Holdings: We come with experience on both sides of the house. But we feel pretty strongly we're at a tipping point for renewables. And let me separate renewables into two buckets. Ethanol biodiesel [is] not a good business; you need $80-plus oil. I don't even need to discuss that. On the renewable power side, however, we are at a very different point than we were five years ago in our last fund. Five years ago,

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we needed tax benefits to make these things work. But as we sit here today, a gas plant, a wind farm, and a solar plant are intermarginal, without tax benefits. We do not need a subsidy for renewables anymore.

David Scaysbrook, Quinbrook: It's true that a lot of fortunes have been won and lost in oil and gas, particularly here in Texas—but it's the lost part that we need to focus on. Oil and gas is really a story of volatility. It is true that you could be chasing 3x, 4x, 5x in a private equity oil and gas play, but you could lose your shirt as well. And fundamentally, institutional investors really need that money to be there.

The U.S. could become a major exporter of natural gas, especially to our neighbors to the north and south. Does that change the equation at all for the outlook for your investment strategies?

Hoffman: If the demand for gas [increases]—because we export to Mexico, Canada—LNG exports ... will probably be a good investment. That's only good for renewables, because we're already competitive.

Scaysbrook: This is where our worlds cross over. You can't really be a long-term investor in renewable energy these days without fundamentally understanding gas. And the reason for that is, with the retirement of coal plants at an accelerated rate, and with zero-cost renewables from a fuel perspective like wind and solar pushing gas plants further out, it becomes the price-setting plant. Gas becomes the method by which the clearing prices for power are set in most deregulated power markets increasingly around the world.

There is someone who describes himself as Republican in the White House, and we have a Republican Congress. How does that change the game?

Bisso: There's been a lot of talk on coal, but I don't see it having too much of an impact on the industry given the fundamental economic challenges facing this sector. But, clearly the regulatory environment will improve. On the pipeline front, there's been a lot of news over the last 12 to 18 months given the existing administration's hostility towards several key projects. With the new administration, you will likely see those projects move forward, which should also have positive implications for the midstream sector more broadly. On drilling, the new administration will likely remove a lot of the lingering risks around additional fracking regulations; this will be a relief to a lot of producers.

Hoffman: There's been some hype that the new Trump administration is going to kill the renewable business. On the reality side, the clean power plant is probably dead on arrival. And that would affect renewables way out in the late 2020 time frame anyway. Ninety percent of renewables are based on state mandates, which are only going up. Oregon's [mandate is] up at 50 percent. California is at 50 percent. New York is at 50 percent. So you're seeing the states who have nothing to do with the federal government in this regard increasing the demand. ■

Scaysbrook, Hoffman, Crumley, and Bisso onstage at the event

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Save the Date

DEC 5 - 6, 2017

The Houstonian Hotel
Houston, TX

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Game Change

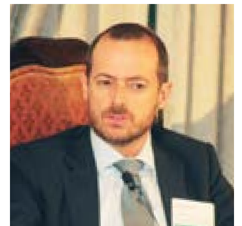
Energy
2017

The Mexico Energy Opportunity

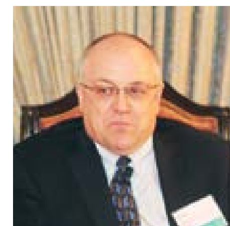
A panel of experts discusses the state of the energy play in Mexico, where foreign investors are partnering and bidding on projects after the state-run oil company Pemex opened the country's market to outsiders for the first time in decades

Joncarlo Mark
Founder,
Upwelling Capital Group

Adi Blum
Managing Director,
First Reserve



German Cueva
Managing Director,
Riverstone Holdings



Ken Evans
Senior Vice President,
SAP

Jorge Dickens
Managing Partner,
ACON Investments

Joncarlo Mark, Upwelling Capital: German, can you talk a little bit about the [energy] reform in Mexico?

German Cueva, Riverstone Holdings: I'm responsible for the Riverstone investment business in Mexico. We decided to open up an office in Mexico three or four months after the reform was finally approved by Congress in Mexico, which was around February 2014.

So, we saw that there was a very interesting change taking place. We decided to become local. And the reason why we did that is quite simply, if you think of each one of the sectors where we spend our time on, it started with E&P. Mexico at one time was one of the 10 largest oil producers in the world, and for the past 75 years, up to that point, everything was under the exclusive control of one company, Pemex.

So just think about that and compare that with what we've seen here in the U.S., in Texas and other places where you first see the majors come in and compete with each other.

Mark: What is the estimated dollar amount of assets that one could imagine being privatized in this entire process?

Cueva: Let's first define it, because the word "privatized" in this context could mean selling a part of Pemex, and that's not happening—at least there are no plans for it to be a public company. So the opportunity really became, you have old Mexico, and the first step the government took was to restrict Pemex's operations to those areas where they already had a certain level of capital deployment.

So they separated that and gave it to Pemex, and then the Ministry of Energy, through its National Hydrocarbons Commission arm, started the rounds of the process to be put up for bids, the energy opportunities. And, really, this becomes the opportunity for E&P companies to go down there and bid for the right to explore and develop assets.

And very relevantly, [in early December] we had by far the most important step of this opening up of this process. And we have a number of majors and national oil companies coming in and [bidding] aggressively for some opportunities.

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Mark: Clearly the opportunity set is in the billions of dollars.

Cueva: Absolutely. The numbers that the government used for this first round was $41B. If you think only of the exploration stages, we're talking about $3 to $3.5B in assets.

Mark: Jorge, can you talk about the niche opportunity that is most attractive to your firm?

Jorge Dickens, ACON Investments: The opportunity is very big. We decided back in the summer of 2014 to put together a platform, a company whose purpose would be to actively participate in what we, at the time, saw as a massive deal flow of assets coming.

And we saw an opportunity for a platform that is institutional to aggregate capital that is of significant size to serve as facilitator and as a partner for middle-market companies that pursues particular technologies to go after the particular opportunities represented in the Mexican market.

As you said, the opportunity is very large, but it's also very diverse. If you look at the universe, if you look at deep water, shallow water, they all require very different technical skills, which are hard to find in one single company and less so in the market that has been closed for so many years.

Our approach was, put together a team. That team is a mixture of Mexicans with some international executives. The mandate is to create a diversified portfolio of assets primarily in onshore and shallow water and offshore fields. We're not touching deep water. That's beyond our scale. But certainly, we think, within the onshore and shallow water space, there's plenty of opportunity.

Mark: First Reserve, in particular your focus is really on the infrastructure side. Can you talk a little bit about that opportunity set?

Adi Blum, First Reserve: I'm in energy infrastructure, really investing in power plants, pipelines, more long-term-type assets that generate strong cash flow.

And we've been in Mexico for quite a while. Some of the companies that we helped build up on the buyout side, like Weatherford and Saxon, have provided services to Pemex going back 20 years. And over more recently, in energy infrastructure, we invested in and built three wind farms back in 2012, and we're building one right now.

And then, over the past three years, we've formed a partnership with Pemex to invest in energy infrastructure. We started that off by building, in partnership with some other companies, a long-haul pipeline that takes natural gas from the Eagle Ford Shale in Texas down through the industrial heartland in Mexico.

[There's] a huge natural gas story in Mexico that you've seen, with power prices that are high historically. From burning diesel and bunker fuel. And now, with the tremendous availability of natural gas to the north, there's been a really large buildout of natural-gas-fired power generation.

Mark: Ken, are these companies well equipped to take all this money that Riverstone and First Reserve and ACON are providing them? And from a financial-controls and tracking standpoint, are they well equipped to expand as expeditiously as these investors would like them to?

Ken Evans, SAP: My concern is, I'm not sure as a country, as an entity of Pemex and the other agencies over there, that they're really prepared to manage the information properly at a country level. The goal of the deregulation was to maximize the value of these assets for the country themselves.

And so if I think about the way that that's done in other areas, there are some real opportunities, and a lot of focus here is on upstream, with all this bidding and stuff, but they [need to] deregulate the downstream markets. They need to be competitive in that space. There is a need for a lot more infrastructure to be opened up to allow a robust ecosystem with trading and movements.

What we see the future to be, the opportunity for Mexico, is actually to develop and leapfrog the rest of the world instead of trying to follow in their infrastructure investments

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and do old-style trading with DTI transactions and so forth. There's an opportunity for them to install the digital energy network and really leapfrog the rest of the country, as far as the efficiencies they could gain from leveraging information technology.

Mark: You are partnering with a government-run enterprise [Pemex] that … may have a slightly different mentality and approach than you do. How do you manage that relationship?

Evans: In any partnership, having interests aligned is very important, and governance is very important. Construction projects are very complicated, let alone an 800-kilometer pipeline with 1,000 different landowners, going through all sorts of terrain. Stuff comes up as you're constructing these facilities.

Before closing any investment, make sure that you have very strong shareholders agreements, not only what's on paper but the interaction and the protocols between the parties in terms of how decisions are made, because in a situation where you have multiple parties, multiple stakeholders, it's very easy for that to go awry.

Mark: German, you're partnering with large corporate entities. Can you talk a little bit about that structure?

Cueva: Our effort in Mexico is private equity, and it focuses on developing what we call buildups, which are essentially startups in the energy space with the right management. So the company that you reference is a partnership we have with EnCap and Blackrock. It's called Sierra Oil and Gas.

And Sierra Oil and Gas was really the first startup in Mexico. The focus for Sierra has been competing in the CMH, so the National Hydrocarbon Commission-led auctions.

Sierra is one of the six entities we currently have in [operation in] Mexico. They were able to—as happens in the oil and gas industry a lot—partner with a large independent national oil company, and now another very large company in the former consortium to be in this deep water and take a small primary position there.

Mark: If everyone's right and Mexico achieves the maximum value of the assets they're selling, then you're generating the best returns for your investments. What is it about private equity that works?

Dickens: With a little bit of [the] tweaks that we have been suggesting, it will not be more attractive for private equity. You're getting into situations where you can get 30-year contracts by bidding and compensating your, in this case, estate to what is essentially massive seller financing.

You don't get that anywhere else in the world—a situation where your money goes actually in the ground. There's no out-of-pocket [cost] to a seller.… You're actually enjoying the benefit of paying royalties out of the oil that is actually produced. So the leverage that is embedded into that formula is very powerful for private equity.

Now, of course, there's the question of what royalty makes sense. And that has been an issue that we, as some participants in the industry, have been very outspoken about.

In a nutshell, as the whole process matures, you're going to see more and more credible players bidding things that actually make sense, that will enjoy this type of economics.

Cueva: When you think of the oil and gas private equity opportunity, it tends to be more focused on asset opportunities that are of the size that are not as attractive to the majors.

At the end of the day, it's not very different from what we saw in the U.S. with the majors having a field. So that's really the bulk of what this would pursue in Mexico on the E&P side. I think in the United States it's different. There's a tremendous amount of need for capital to develop the non-E&P energy infrastructure.

Evans: All the things we're seeing the need for Pemex and the whole ecosystem is this rapid innovation cycle to be able to learn. And … the super majors and the large entities, they can't cycle as fast as the private equities and the startups can. So there's a window of opportunity now for PE to really go in, and then, once it matures, you will see that sort of consolidation. ■

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KEY FINDINGS

Forecasting an Offshore Renaissance

The subsector continues to reel as a result of declining prices, but there could be a few glimmers of hope in the future

Robert Gold
Senior Managing Director,
Ridgewood Energy

Vidisha Prasad
Managing Director,
Guggenheim Securities

- **OFFSHORE DRILLING HAS BEEN BOTH GOOD AND BAD**
  Declining prices have taken their toll on the overall market, and cost compression, particularly for service companies, has been one of the parts of the sector that have been hit hard. On the other hand, there is still a huge basin for production, and the opportunities are potentially fruitful.

- **THE BUY SIDE HAS NOT ALIGNED WITH THE SELL SIDE**
  Despite a down market, there has yet to be true alignment between the buyers and the sellers in terms of prices for assets. As a result, M&A has suffered—a tough financing market constrained PE investors even more because they they cannot lever up to bring enough capital to the bargaining table.

- **FUTURE IPOS WILL CHANGE**
  Companies will need to offer a more even-keeled risk-reward balance. And if you want to be a CEO of a publicly traded company, the market will exist—eventually.

How Will the Regulatory Regime Change?

Private equity firms that invest in energy must carefully watch rules that affect the business of private funds and the business of energy

- **PRESIDENT TRUMP'S INFLUENCE WILL BE LIMITED**
  Anyone expecting a significant rollback in regulations affecting the energy industry, such as curbing methane emissions, should know that changing such policies is rarely easy. In addition, many regulations are at the state level.

- **IT WILL BE EASIER TO LEASE ON FEDERAL LANDS**
  With the new administration, the amount of land available for exploration and production will likely expand. However, what is uncertain is the extent to which energy operators opt to put money to work.

- **THE SEC CONTINUES TO HAVE ITS EYES ON PRIVATE FUNDS**
  Norm Champ of Kirkland & Ellis noted that the commission's interest in fees and expenses at private funds has never been greater. Don't expect a change in focus with a Republican administration, Champ said, although there could be a "ratcheting back" in specific cases.

Grant Davis
Managing Director,
Tenaska Capital Management

Norm Champ
Partner,
Kirkland & Ellis

John Hartung
Principal,
Parthenon EY

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The Day in Photos

Images from Privcap's second-annual energy conference

Attendees network during a break between panels.

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How First Reserve Finds Value Across the Production Spectrum

In a keynote interview, First Reserve's Neil Wizel explains why the firm invests across the energy industry spectrum, and how it finds value by choosing its investments with discipline

Neil Wizel
Managing Director,
First Reserve

Since crude oil prices collapsed in late 2014, private equity firms that invest in energy have used diverse approaches to pump capital into the sector.

First Reserve is one firm whose strategy was to stand on the sideline in regards to new investment activity in 2015. "We assessed a considerable number of opportunities in 2015 but did only one transaction," says Neil Wizel, managing director at First Reserve, a leading private equity firm which is exclusively focused on energy. "In 2016, in contrast, we've invested about 45 percent of our newest fund."

First Reserve invests across the energy industry spectrum. It doesn't drive toward a specific allocation, and this means it can invest in opportunities in upstream, midstream, and downstream. Wizel discusses the opportunities the firm is seeing across the three major energy subsectors.

UPSTREAM: Quality Counts

There are a lot of ways to make money in the upstream energy sector. First Reserve focuses on quality companies where the firm can maintain a defensible position against risk. "I don't want to say [we're] commodity-agnostic necessarily, because that's hard to do in our business," Wizel says, "but where we're not as susceptible to a change in price [is] where we have a value proposition for a customer or a cost advantage."

First Reserve has invested in four exploration and production (E&P) companies in its newest fund. One is Deep Gulf Energy III, an exploration outfit whose management team First Reserve is backing for the third time. Another is Saddle Barnett Resources, which is focused on the development of natural gas assets in the Barnett shale. It's also run by a team that First Reserve is familiar with.

"Given the technical risks in the E&P business, you really need to be partnered with teams who have a shared view of how to collaborate and think about risk," Wizel says. "You don't want to have a mismatch there."

First Reserve's newest private equity fund also has four platform investments in companies that facilitate upstream activity through equipment, services, and manufacturing. According to Wizel, "This is an exciting area to be solutions providers to upstream operators managing risk."

MIDSTREAM: Value Has Moved

First Reserve's stance on the midstream has changed in recent years. "Five years ago we invested in individual assets," Wizel says. "We previously owned terminal companies, pipeline businesses and a lot of private midstream deals. It's become a very competitive marketplace, and we've had a hard time finding value there."

Instead, First Reserve partners with larger companies where it can be more of a solutions provider. In 2016, it invested in Plains All American Pipeline and Western Gas, which are both multibillion-dollar public investment-grade master limited partnerships. The goal is to prefund a significant forward-growth plan. "If you look at the unit prices of a lot of large MLPs, they were hit hard during the downturn," Wizel says. "Unfairly so, we believe given their business models, so we saw an opportunity to invest in the sector with the potential for attractive upside, because we can convert to common stock."

DOWNSTREAM: Opportunistic Deals Are Here

Not every PE firm in energy invests in downstream. First Reserve does. "If midstream is not opportunistic—less steady, if you will, in terms of philosophy and deal flow—I would say downstream is by far the most opportunistic," Wizel says.

In recent funds, First Reserve has made two platform investments in the downstream sector. One is the refining company PBF Energy that First Reserve exited in 2015. The deal backed an executive to build the company during the down- turn in 2009, acquired three assets to establish the fifth-largest independent refining company in the U.S., then took it public on the NYSE. The other is TPC Group, which First Reserve took private in an acquisition at the end of 2012. "Investing in the downstream is a highly opportunistic endeavor for us and for anyone who invests in downstream," Wizel says. "We don't have any downstream investments in the new fund, but it's early and I'm hopeful." ■

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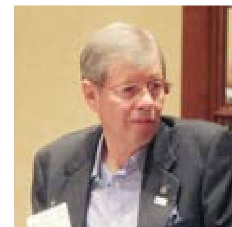
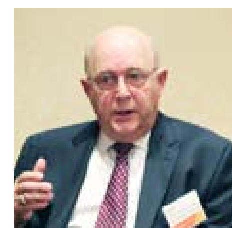
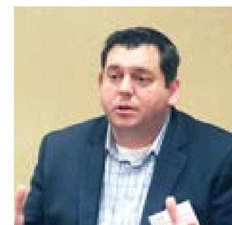
Where PE Can Invest in
Energy Technology and Innovation


Walter Ulrich
President & CEO,
Houston Technology Center

Shirley Speakman
Partner,
Cycle Capital Management


John White
Managing Director,
Kirchner Group

Raj Atluru
Managing Director,
Element Partners


Cory Steffek
Managing Director, North America,
Saudi Aramco Energy Ventures

An array of experts on energy technology, including investors, researchers, and academics, discuss innovation in the oil and gas industry—and why renewables are here to stay

Walter Ulrich, Houston Technology Center: Cory, can you tell us about what you've been doing in the downstream part of the energy industry?

Cory Steffek, Saudi Aramco: Ford announced this summer that they were switching to renewable [soy-based polyurethane] foams [in car production].

But it was a really great example of a portfolio company that had spun out of Cornell almost 10 years ago, and had come up with a novel catalyst system to incorporate CO2 ... where not only is it green, but it's much higher performance.

Ulrich: We've heard during the [presidential] campaign and now from the president-elect some fairly strong, candid, and direct statements about his views of the energy industry. John, what's going to be different in terms of investment opportunities and technologies that are going to be supported by this new administration?

John White, Kirchner Group: I've talked to a lot of people trying to read the tea leaves. But for today's topic I landed on the rhetoric of the campaign versus the reality of what the new administration is going to be facing, as far as making some of the change. I do believe that [President Trump] is going to focus on infrastructure, which I think will help traditional natural gas and oil pipelines, the traditional fossil fuels outside of coal.

Renewables and renewable technologies and sustainability are the things that we all wrestle with, particularly in private equity. But if you look at his rhetoric during the campaign, renewables were too expensive, they're inefficient, they're not reality, we're losing jobs as a result of it. And I think that that was the rhetoric. But his transition team is already talking about looking at everything, fossil fuels, renewable energy, and we just want to make sure we include all of them in our plan.

Ulrich: People within upstream, midstream, downstream, they feel there's opportunity, which means investing in technologies across the board. Is there a Canadian view on this, Shirley?

Shirley Speakman, Cycle Capital Management: I'll take my pragmatic approach, which is we'll work with anyone, anyhow, right? But ... the trends are in a certain direction.

In the province I come from, Ontario, we had a roundtable discussion. Actually, it was a slew of roundtables across the nation. In Ontario they talked about the electrification

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for transportation in order to control greenhouse gas emissions. That says to me there is this very substantial trend that you cannot ignore.

Ulrich: We can talk about a lot of technology developments, whether it's downstream or upstream, whether it comes from clean energy or something else. All this has to be financed. What is the future of financing new technologies in the couple of years ahead?

Raj Atluru, Element Partners: Let's start with the fact that technology just improves and improves and improves. It is inevitable. And so whether it's your cell phone technology, your consumer technology ... energy technologies, they just improve.

I'll give you a great example: SolarCity, financier of solar—residential solar and some commercial solar in the United States. And what changed the game for them is they said, look, putting up $30,000 for a solar system is a big capital expense. And they went for penetration of market share to 40 percent. They changed the model. They are the dominant player in solar as of a couple of weeks ago. [You need to take an] expensive item that is not on the radar for most consumers, [or corporations], for that matter, and change it into an operation expense. That's the one thing that's really changed.

Ulrich: There are organizations that are always looking at new technologies that they can deploy in their businesses—not only financial investors, but also strategic investors. What are the kinds of things they're looking for when making investments in this economy?

Steffek: I would draw a distinction between making an investment and being a co-investor and partner, and, ultimately, liquidity events. I think the latter is much easier to field, which is generally the entire space is investing in innovation to foster new ideas and technologies that can ultimately improve operations. They don't need to own them, they don't need exclusivity, it's purely a collaborative effort to supply new services and technologies.

Outside of that, everyone's looking to collaborate. We're trying to invest in new technologies that have a strategic impact and also generate return on investment. Ultimately, they're the same thing, right? I don't think you can delink the two. Successful companies grow, and often very quickly. Ultimately, a service company or a private equity group can roll it up into a larger platform.

Ulrich: [An energy company] may have technology as a basis, but what it really has is a customer base, a delivery system; it is a business where technology plays a modest but important, role.

Where technology doesn't appear to be of big importance, are there risks by not focusing on the technology component? Is there a chance that a company that has been around for 10 or 12 years that needs private equity might be overtaken by a technology company?

Atluru: The taxicab industry is dead. It's gone. Everyone is using Uber, right? It's an example of how quickly technology can redefine an industry. It happens, and that is a big service. And so I think a couple of things that I would think about, and one is the consumer interface has changed. It's consuming services, effectively, instead of buying services. Instead of buying a car, you consume the transportation.

It's interesting the way this generation thinks. And it's just going to continue on this trend ... because when I think about technology, I think more about service. So what's the service we're delivering? Energy is the service.

White: There's a great example of a rechargeable battery corporation I'm working with. They've been around now for 22 years, and their technology focus has changed, I think, four times. But they had redesigned their rechargeable battery for digital cameras. And they went to market, and then everybody started taking their pictures on their cell phones. All of a sudden this great technology they spent four years on was obsolete.

But that's the sort of change that is brought about by technologies in areas that you're not focused on but impact your company. The technology across the board, in energy, you name it, is moving at such a pace, you've got to figure out how it'll impact your particular company.

Steffek: The fundamental problem with energy investing is the slow rate of production. I gave a great example of technology in the enhancement of [refineries]. Nobody wanted to be the first refinery to actually use it. Imagine the impact, the negative impact it could have on operations. So they went with smaller refineries, and that worked, and they eventually evolved and got a larger refinery.

Speakman: I think the other thing we need to remember is that innovation isn't just about technology. It's about how you do business as well. I recall a presentation done by GE, and they're selling pump time as a service, [saying] "I will guarantee you that your offshore drilling rig will never go down." Communications play a role. We [can't only] think about innovation and new technology. It's also about business process and practices. ■

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Risks and Rewards for PE in LNG Exports

After the ban was lifted on oil and natural gas exports from the U.S., private equity started looking for opportunities amid global challenges

Steve Sprenger
Valuation Services Principal,
RSM US LLP

As the U.S. begins to export crude oil and liquefied natural gas (LNG)—following the lifting of an export ban in late 2015—the need for infrastructure, and the massive amount of capital and expertise required to build it, are attracting private equity investors.

Low oil and LNG prices are complicating those efforts, however, says Steve Sprenger, a valuation services principal at RSM US LLP.

"I don't think there's a huge question of the U.S. being a substantial world exporter," Sprenger says. "There's a question of when it makes sense for the U.S. economy, making sure the infrastructure is there and the market is there.

"The reality is, right now, given weaker prices and weaker demand, it's a little tough."

According to the Federal Energy Regulatory Commission, as of early August 2016, the U.S. had two LNG export terminals. One is in Alaska, the other in Louisiana. As of early August, 10 more had been approved, and six were already under construction. Canada has three approved LNG terminals awaiting construction. And there are also several LNG facilities proposed in both countries, but awaiting approval.

"A lot of infrastructure needs to be put into place to handle the exportable volumes," says Sprenger. He notes that there are extensive pipelines in Texas and the Gulf of Mexico, but other areas don't have the export infrastructure that's needed.

"There are over 100 LNG facilities in the U.S., and the majority of terminals that are operational are designed from an import perspective, but we can leverage off the existing import terminals—they can be reconfigured. But that still requires a substantial amount of investment."

Despite the lifting of the U.S. export ban and approval of terminals to move oil and gas out of the country, there are big challenges on the supply side, says Sprenger. More global capacity is coming online, with Australia—along with Qatar, the world's largest LNG exporter—beginning production of two additional facilities. With the U.S. and Canada jumping in, there's greater risk of prolonging the supply glut.

Further clouding the picture, he said, are slowing Chinese and European economies and slackening demand from Japan and Korea.

A lot of PE firms in the midstream or upstream space are going to factor oil and LNG exports in their investment plans, says Sprenger. However, he notes that there are likely few firms currently investing in LNG terminal construction. "The capital is pretty substantial, billions of dollars," he explains, "but there are opportunities there." ■

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How U.S. Supply Is Disrupting the World

An expert discussion about how energy policy has dictated sociopolitical outcomes stretching from the Middle East to America

Gary Sernovitz, Lime Rock: Why is a decision regarding OPEC's production so hard for the OPEC countries to reach?

John Hofmeister, Citizens for Affordable Energy: You have to go back in time to World War II to really get the fundamental understanding that [President] Franklin Delano Roosevelt promised King Saud that if they produced their oil, the U.S. will have their back. [President] George W. Bush came along and decided that it was an imperative to settle things with Saddam Hussein, and he really opened Pandora's Box to unleash the Sunni-Shia hatreds that have been around for millennia.... And once the Saudis realized they were completely on their own after [President] Obama dropped [former Egyptian president Hosni] Mubarak after 30-some-odd-years of support, they said, "Oh my gosh, what are we going to do?"

The only way they could contend against the hegemony of Russia-Iran was frankly with the oil price. And the only way to affect the oil price was [to] overproduce. So as the Saudis started to overproduce, so did the Russians. So did the Iranians, as they're trying to get back into market.

Jim Krane, Rice University's Baker Institute: I would add that the U.S. and the Saudis, the split between us, has been widening since 1991. Really ... the relationship was also ideologically based—we were both dead set against the Soviet Union. When the Soviet Union fell, one of the key ties that bound us to the Saudis broke. And it's only widened.

Gary Sernovitz
Managing Director,
Lime Rock Partners

Jim Krane
Wallace S. Wilson Fellow for Energy Studies,
Rice University's Baker Institute for Public Policy

John Hofmeister
Founder and Chief Executive,
Citizens for Affordable Energy

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Panelists Sernovitz, Krane, and Hofmeister onstage

Sernovitz: Do Iran and Saudi Arabia still have the same governments in four years if oil is still $60 [per barrel]?

Krane: I'm not one of these guys that thinks the ruling families are fragile in the Gulf monarchies. [Iranian president Hassan] Rouhani has pulled off a major coup with the OPEC deal, because Iran is allowed to actually raise production while everybody else is cutting.

Sernovitz: So you presume regional stability?

Krane: The poorer countries of the Middle East are in more dire straits than I've ever seen in my lifetime. You've got four failed states in the Middle East, and two of them are big [oil] exporters.

Sernovitz: Do you think this era of lower oil and gas prices, [and] more abundance of the cartel needing to restrict production in gas oversupply, makes it more difficult or easier to reduce greenhouse gas emissions?

Krane: It makes it easier with the advent of fracking in the U.S. Prices push down, and that's already allowed us to de-carbonize pretty much painlessly in the U.S. I think it has room to grow.

Hofmeister: There's a big decision to be made in the not-too-distant future to turn more natural gas into transportation fuel. And what I think we would see happening is, if we move from natural gas to not just LNG and CNG but also ethanol, methanol as liquid fuels from natural gas, we will see the same beneficial climate effect from the natural gas [in] reducing greenhouse gas emissions versus oil.

David Snow, Privcap: Where do you see the biggest market for LNG if it's not Russia-dependent Europe?

Hofmeister: It would be wonderful from my perspective to see Africa, instead of building out its generating capacity with coal, to build out its generating capacity with natural gas, because they need huge, huge investments in generation capacity.

Sernovitz: China consumes half the world's coal, [therefore] the biggest consumer of coal is the biggest opportunity for gas. The pace they can do that while keeping the economy growing is probably one of the fundamental questions facing the world.

Privcap: Would you support government subsidies to support U.S. natural gas as a transportation fuel?

Hofmeister: The margins there—natural gas and the price differential between oil products and natural gas products—is so significant that I don't think it would be necessary.

Privcap: How much momentum does the political movement for environmentalism and anti–fossil fuel have?

Hofmeister: The whole education system is informing people of the dangers and the risks of fossil fuels. And so it's changing the way we think. Also, with what we see at the Dakota Access Pipeline demonstration, what we've seen with the Keystone XL Pipeline demonstrations, we've been teaching citizen protest. And it's been successful.

Sernovitz: I think no one has hit upon a solution, with the fundamental challenge of we are all consumers of fossil fuels. There are economic opportunities for people who are fiduciaries, and there is the complete gamut of responses from institutional investors, from very insincere press release divestments to real sacrifices in terms of investment opportunities. ■

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What Tech Breakthroughs Will Move the Needle?

Advancements in technology used in the energy sector have been key to the global energy boom. But what will push the industry further?

- **ROBOTICS WILL BECOME MORE PREVALENT**
  Technology to take over some tasks—like monitoring wells and oil and gas flow through pipes—will not only add to safety for workers, but will make energy production and transportation more efficient.

- **EARLY-STAGE ENERGY TECH IS LIGHT ON INVESTORS**
  Because of the risk, and sometimes cost, involved in developing new energy technologies, some firms like Evok Innovations don't have a lot of competitors for projects.

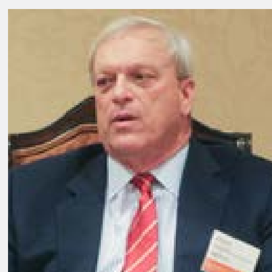
- **TECHNOLOGY INTEGRATION TAKES TIME**
  Skill and training are needed to use some of the new technology. The cost of implementing some electronics or robotics is also high in the short term.

Linda Castaneda
US Oil and Gas Advisory Leader,
EY

Marty Reed
CEO,
Evok Innovations

Jim Sledzik
Senior Partner & President,
Energy Ventures

Dana Sands
Partner,
Energy Infrastructure Partners



Albert Huddleston
Partner & CEO,
Aethon Energy

John Shepherd
Managing Partner,
Strata Energy Investments

The Natural Gas Play

The smart money is looking past the price downturn

- **NATURAL GAS DEALS ARE STILL GETTING DONE**
  There was a natural culling of lesser managers, but those who have been in the business through multiple cycles knew where to look for opportunities during the downturn.

- **INFRASTRUCTURE DOLLARS ARE NEEDED MORE THAN EVER**
  The high cost of projects, the long-term nature of the projects, and the sheer need for export infrastructure make it a solid play for private equity firms.

- **COAL WILL NOT MAKE A COMEBACK OVER GAS**
  Despite talk from the Trump administration that it will bring back jobs in the coal industry, the low cost and environmentally friendly nature of natural gas make it a winner.

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Europe's Energy Opportunity

In a keynote interview, Kerogen Capital's Tushar Kumar highlights what makes Europe so attractive for private equity investments

When looking for opportunities to invest in the energy sector from mid-2015 on, Kerogen Capital had one primary geography they looked at: Europe. And according to the firm's director of investment and portfolio management, Tushar Kumar, that will continue for the foreseeable future.

Kumar outlines why Europe is so attractive for investments. He also explains that the opportunities on the Continent are largely non-shale. "There's a wide variety of reasons why shale is at least seven, eight, 10 years behind the U.S.," he says. "But the focus in Europe still remains—both for us, as well as [for] all our other private equity friends—on the conventional. And there is a very large opportunity set available."

As Kumar explains, until recently, many conventional energy assets in Europe were held by major oil companies, independents, or mid-cap players who now have distressed balance sheets. These players are now being forced to rationalize their balance sheets, look at their portfolios, cut capex, and "hive off projects for which they have no hope of funding in the future," he says. That means for private equity players and others who are capitalized, there are opportunities available.

Tushar Kumar
Director, Investment and Portfolio Management, Kerogen Capital

Three Things That Make Europe's Energy Market Enticing

Entry prices have come down dramatically. Especially for those looking to invest in pre-producing assets.

Taxes have decreased. Kumar notes that in the U.K., where Kerogen has done three transactions in the 18 months prior to December 2016, the tax rates were lower than in the Gulf of Mexico.

Costs are at the bottom of the cycle. While everyone has seen cost deflation, in Europe, because the cycle has not recovered as much as in the U.S., costs are rock bottom. For example, some "fantastic" drilling rigs are available at costs a third of what they were in 2014 and 2015, with facilities costs 30 percent lower than what they were during those years.

While there are some similarities between the conventional energy markets in the U.S. and U.K., there are differences. "There is an opportunity in Europe, which is largely conventional, where you can actually take a longer-term bet. And you don't even have to play the cycle or play a recovery in oil prices. This is largely driven by lack of competition," Kumar says.

Europe is "still way behind" in recovery, he posits, with the capital markets close to nonexistent. That means for Kerogen and others in private equity, there is a "very deep and big opportunity set available" to take advantage of that lack of capital access by companies looking to fund their businesses. Lack of competition for assets also means returns to investors are better.

And what about the fact that previous investments in Europe's oil and gas sector have underperformed? Kumar says that these were, characteristically, in high-cost assets. "It meant that people were factoring in very high costs ... hoping that the oil price would bail them out." Another factor was decommissioning, where a lot of capital went into mature assets—20 or 30 years old—with the hope of fixing the performance and extracting the marginal dollar.

"I think the investors and the industry have learned some tough lessons in what you can actually achieve in terms of taking costs out of this business, the riskiness of this business, and how easy it is to intervene in these massive rusty 30-year-old platforms," says Kumar. ■

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Pursuing Value Opportunities Through the Energy Sector's Dislocation

Industry veterans discuss the current investment climate and how to take advantage of today's unprecedented market volatility

Emanuel Grillo
Partner,
Baker Botts LLP

Shaia Hosseinzadeh
Managing Director, Head of Natural Resources,
WL Ross & Co. LLC

Jamie Brodsky
Managing Director,
Riverstone Holdings LLC

Richard Aube
Co-president,
Pine Brook

Emanuel Grillo, Baker Botts: Probably the least predictable actor in the market now is OPEC. Is OPEC overrated in terms of market impact?

Shaia Hosseinzadeh, WL Ross: Cartels, by design, are established to create price distortions. What's interesting about OPEC in particular is it has to eat its own cooking. When the member countries set a policy for oil, they're bound to live by the price impact, for fiscal and political purposes. When you look at what's been happening with OPEC for the last two years, there's a recursiveness in how the policy works with price, because there are periods when policy sets price and there clearly have been periods when price sets policy. What OPEC is doing for us, at least in the private equity business, is now effectively setting a floor on prices. So from a standpoint of upside, we're probably going to be a range-bound market, but with better boundaries around those ranges.

Grillo: Richard, you've seen a lot of market movement and the setting of guidelines. And then individual countries and producers cheat on those guidelines because they need to grab market share. How do you process all that when you're investing?

Richard Aube, Pine Brook: In some ways it's easier to process, because one of the things that private equity firms do well is figure out what we don't know. What OPEC says about where petrol oil prices are going to be today or tomorrow is, in some ways, noise to our investment business.

It's a testament to how tenuous this market is that a couple of million barrels a day of oversupply—meaning a couple of points—could produce a 75 percent reduction in price. And in that kind of market, the actions of OPEC-member nations are important and impactful.

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But we're focused less on how they can impact today's oil price and more on where oil is going to be over a number of years—our investment horizon.

Grillo: Jamie, what is Riverstone telling investors when you're out there looking to raise funds?

Jamie Brodsky, Riverstone: I'll answer that more from a credit perspective than an equity perspective. Yes, to a certain extent, OPEC will create noise around the futures market and around supply and demand. But when you're doing asset-based lending and you're looking at unit price economics, you can almost take OPEC out of the equation and make sound senior loans that have little to do with what's going on in the rest of the world, especially if you're going to do it on a shorter-term basis and you're testing that value periodically. The one place where we can't ignore OPEC is in the secondary market. And for those who own public equities and bonds, if you watch what happened in the high-yield market over the last two years, it's been nothing short of fascinating, because it's largely been driven by technical factors and noise around commodity price.

Grillo: We're now 18 to 24 months into falling oil prices. How does that change what you're looking at by industry or by company?

Aube: It will come as a shock to nobody that the last two years have been really tough. At a board dinner the other night, we were trying to define what does it actually mean to be in a grind? The last two years were defined by paralysis—on the buy side and the sell side. The capital markets had pulled back, and there was very little activity.

When we think about our investment business, there are really only three types of assets that had value in that market. The first was the core assets—I'm not sure the core of the Midland Basin ever saw a downturn. The second asset that had value was cash flow, meaning assets that were properly capitalized and had cash flow. And the third, which was related to cash flow, was assets that had duration, meaning so much of what the industry got caught up in by the time Thanksgiving of '14 rolled around was in building a business that was on the wrong side of the cost curve, that did not have duration. It was those types of assets that kept you in business for the last two years.

Grillo: From the lending side, when companies are going through that evaluation of assets, how do you work with them to make sure that deals get done?

Brodsky: A lot of what happened in conjunction with guys getting caught on the wrong side of the cost curve, on the wrong side of the marginal asset, was that their balance sheets weren't set up to handle them. To the extent that they had solid balance sheets, even if you had a marginal asset, you could have pulled through the last two years. But it was those guys with the marginal assets and the overcapitalized balance sheet—those are the 200-plus bankruptcies that have played through.

What does change is how businesses will be capitalized going forward, especially from the credit standpoint. Do you still have banks that are willing to provide reserve-based lending capacity or three to four times leverage on a midstream asset in spades? Do the Chesapeakes of the world still get a $4B revolver? Do the LINN Energys of the world still get a $2B revolver?

Grillo: There's been a lot of talk about "zombie companies" out there that continue to produce. They go through restructurings, maybe they de-lever their balance sheet, things like that. Where do you see those assets winding up? People talked about a consolidation, but we haven't seen it yet.

Hosseinzadeh: The trouble with zombie assets is that they're not capable of supporting growth. If you can't drill profitably, what you're left with is a bond where—the coupon gets smaller and smaller over time. There are about 2 or 3 million barrels a day in the U.S. in production from so-called stripper wells. These are wells that typically produce five or six barrels per well. It's not a great business to be in, and unlike an airline company or an auto company, where you go through bankruptcy and wipe out your pension obligations and reject contracts and things like that, a lot of these assets, whether they're in bankruptcy or out of bankruptcy, are going to have the same cost structure, and you can't restructure that. ■

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Why Timing Is Everything in Today's Energy Market

Mitch Fane
Principal, US Energy Transactions
Advisory Services Leader,
Ernst & Young LLP

Oil prices have remained far below record levels for nearly two years, and most players in the market have adjusted, whether by business acumen or by financial necessity. But what does that mean for private equity?

Privcap: How are buyers and operators in the upstream space handling the continued oil price decline?

Mitch Fane, EY: If you look back at the low commodity price cycle, the first reaction for many producers was to batten down the hatches. They focused on minimizing capex and drilling, conserving cash and living off of their hedges in the hopes that there would be a quick rebound in the commodity price. As the cycle expanded and the industry realized low prices were going to continue, many independent E&P companies entered bankruptcy in order to financially restructure their balance sheets.

What are energy asset prices like, and how are the prices impacting buyer-seller interactions?

Fane: It's a pretty sophisticated market. Buyers realize that because it's a commodity, you have to buy when the cycle is low. At the same time, sellers are looking at long-term price curves and hoping they can survive the downturn (and avoid having to sell) until the commodity recovers.

So for companies that can survive, they are not interested in selling. Instead, they are focused on enduring until the recovery. But the companies that have been forced to go into bankruptcy because they have run out of cash and liquidity will likely have to sell off assets. We have started to see some transaction activity as these companies enter bankruptcy and begin to emerge.

What would be the impact of buying these energy assets too soon?

Fane: The fear is buying assets or a business that really doesn't have enough liquidity to survive until the economic recovery occurs. For example, a company could buy assets and, unfortunately, end up going back into bankruptcy. Or, more likely, a company could jump in and buy, and then have to hold on to those assets or business for two or three years before a strong recovery results in positive returns.

Conversely, what are the consequences of waiting too long to buy these energy assets?

Fane: The primary concern is missing an opportunity. There are a lot of buyers out there. And we will start to see some price pressure where other bidders come in and bid up the price before a buyer is able to enter the market and acquire those assets. The healthy tension is that if commodity prices remain flat to modest for many years, the gain is pretty thin. Timing is essential.

Are there other trends you are seeing?

Fane: The amount and the volume of bankruptcies right now is unprecedented. When commodity prices were high, many banks and private equity funds extended capital with very, very loose lending policies. Oil and gas companies were borrowing at $100 a barrel. When prices collapsed to $30 a barrel, 70 percent of the value went away within a three-to-six-month period. Many companies are still struggling with the impacts of that drop—what does that mean for the company, can it survive, and can it survive past its hedges, which are short-term in nature?

From a private equity standpoint, I'd expect funds seeking to increase their energy assets to be very aggressive in screening all of the oil and gas companies. They need to pinpoint the superior management teams in the industry as well as where the better operators are located.■

The views reflected in this article are the views of the author and do not necessarily reflect the views of the global EY organization or its member firms.

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KEY FINDINGS

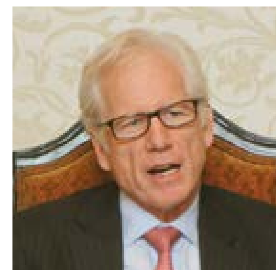
Upstream's New Economics

How do changes to the upstream business impact investors?

- **IT'S STILL VERY EARLY INNINGS**
  Much has been made of the oil and gas renaissance in the U.S., but it's often forgotten how new this phenomenon is. Untapped resources and emerging technologies mean there is a very long way to go before upstream's long-term prospects turn negative.

- **WE'RE STILL IMPROVING**
  New technologies continue to make the impossible possible. The cost of production is still edging downward, and over time the number of profitable sites will grow, even in an enduring era of low prices.

Glenn Jacobson
Partner,
Trilantic Partners



Bob Edwards
Partner,
NGP

Steve Sprenger
Principal,
RSM US LLP

Deal Flow: What Will Drive 2017?

Low oil prices created a choppy deal market. Is 2017 the year opportunities will start to outweigh the risks?

- **THE TIDE IS TURNING**
  It's been a long time coming, but the long-anticipated shakeout of prices is finally resulting in healthy deal flow, as vulnerable firms run out of options. The trick now is to wisely deploy capital amid strong pent-up demand.

- **OPPORTUNITY? IT DEPENDS ON WHERE YOU LOOK**
  Upstream deals may be seeing a resurgence, but some sectors—like oilfield services—are still struggling to adjust to a world of low oil prices. Good deals will still be the exception, not the rule.

Kristofer Anderson
Principal/Transaction Advisory Services,
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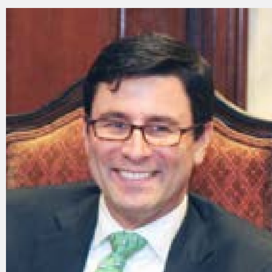
Ryan Devlin
Director,
EnCap Investments



Will Franklin
Managing Director,
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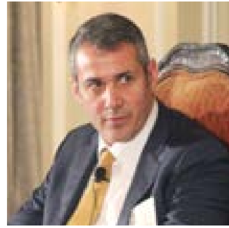

Mark Proctor
Partner,
Vinson & Elkins LLP

Noah Keys
Principal,
AlpInvest

Chris Tehranian
Principal, Real Assets
Coordinator, Head of
Infrastructure Research,
Meketa Group

Lars Pace
Vice President,
Real Assets
Investment Team,
Hamilton Lane

Has the LP View of Energy *Shifted?*

In a panel discussion, four expertstalk about whether limited partners' outlook on energy-focused private equity strategies have changed, whether they have lowered return expectations, their appetite for co-investments, and what energy sectors are drawing the most interest

Mark Proctor, Vinson & Elkins: What are the most attractive investment opportunities in energy right now?

Chris Tehranian, Meketa Group: We've seen a lot of very interesting opportunity sets, whether it's midstream or on the upstream side. But with that said, there's been a lot of volatility, and this has been a period where we've spent a lot of time focused on our partners and the sponsors alongside of that. We've also seen some interesting spaces within renewables.

Proctor: Noah, what opportunities are you seeing?

Noah Keys, AlpInvest: Our mandate's largely in traditional oil and gas. A lot of what we're doing is on the upstream and midstream side, certainly some services. We're taking a fairly measured approach these days. We like the diversification of investing across the energy value chain. And when we look at investments, obviously location is important and in certain areas, there's a lot of competition, so we're often looking for maybe other areas that are not quite as expensive to get into. We're deploying a fund model and making fund commitments and investing across the asset class.

As we go forward, there's a lot of capital continued to be needed, and that creates opportunity for us as a participant in the private equity space, but also we go out and buy on interest in the secondary market. There's been a decent level of LP fatigue in this space. That's creating some interesting opportunities for us. It's also creating some interesting co-investment opportunities.

Even where we're not an LP, there have been opportunities to participate and commit capital and invest in opportunities where you have some of that fatigue and folks need third-party capital to come in and execute on some of those transactions. We're seeing a decent amount of that.

Proctor: And are you seeing better values in certain areas?

Keys: What we like to see in our existing portfolio is exposure to certain areas of the Permian [Basin] and

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the SCOOP and STACK. When you're looking forward and trying to deploy capital ... the A&D market over the last couple of years has obviously been a little bit challenged, slower to develop. We're starting to see that open up a bit; bid spreads are narrowing, from what we can tell.

We're seeing some interesting opportunities on some of the areas that may not be as popular, but where you can get similar economics and go in at maybe a lower price point and take advantage of going in and deploying some interesting technology, completion techniques and the like.

Lars Pace, Hamilton Lane: If I think back over the last couple of years, we were pretty active in deploying capital into equity energy funds in 2014 and early '15. And then, since that time, we transitioned to more credit opportunities in the energy space in '15 and even in [2016].

We also have seen some large funds being raised in the power infrastructure side. So we've been deploying capital there as well. We think it's a good long-term space for investors who are seeking yield and inflation protection.

Proctor: Do you have any views on natural gas versus coal versus renewables? Are you supportive of investing in all three different areas, or are you more focused on traditional oil?

Keys: We're not spending a lot of time on the coal sector these days. We'd like to see the renewables sector develop in some form. Most of what we're doing is on the oil and natural gas side. We think there's plenty to do there for a long period of time.

There are some interesting opportunities in met coal, but more of the traditional coal that's used for power generation we think is fairly challenged right now. It's not an area where we've spent a lot of time.

Pace: Some of our diversified energy managers have been investing in met coal, but beyond that it's pretty limited. In renewables, there's good opportunities. The return profile is a little bit challenged, especially for developed assets. So we're selective with looking at opportunities in pure renewable funds, but we like it as part of a diversified play. Most of our exposures have been on the upstream oil and gas side.

Tehranian: I look back 10 years ago, and I worked at one of the biggest, baddest coal plants, and we were looking at developing a nuclear facility. So it's interesting how, if you just wait a little bit, how tides change. And going from import to export of natural gas, it's been interesting. But I agree, we spend the majority of our time on the oil and gas side. And I think there's a lot of opportunity there, and there's a lot of development.

Proctor: Do you have a preference for diversified managers versus managers that are highly focused on one specific area?

Keys: We don't care, as long as they're the best at whatever area they're focused on. So to the extent there is a diversified manager who is very good at upstream, midstream, and services, that's great. In many cases, you find that some of the specialists are indeed specialists and have a little bit more expertise in certain areas. We like to have a mix.

Tehranian: It all comes down to the team and the deployment and execution. It just depends on what the mandate is—if we're able to go in different areas during different cycles, that's a positive thing, but you do need to have that specialization on hand.

Another unique factor is, in certain cases, our clients want to do one to two opportunities in a given year, and some of those more generalist opportunities provide that level of diversification that they wouldn't be able to, in terms of a multi-manager approach, in terms of a standardized pacing per year.

Proctor: Do you see your clients generally increasing their allocation to energy, decreasing their allocation to energy? Where are they?

Tehranian: I'd say that there's definitely been an increase ... not specific to energy, but in terms of real assets and going into some of these inflation-linked areas.

Before, a lot of these were more focused in on zero to 3 percent, and now we're seeing allocations that are getting up to 7 percent to 8 percent, and that's going to continue to increase.

Pace: We're trying to maintain a steady state. So we work with our clients to develop strategic plans to invest capital, both in private equity and energy, and then deploy that capital over a period of time. So for the clients who have established portfolios, really, they're just looking to maintain their allocation to energy.

Where we are seeing increases [is] in clients who either have new portfolios or haven't historically invested in the U.S. energy markets. So, for example, some of our foreign clients are enquiring about how they can get into the U.S. energy and infrastructure space, just given the fact they think it's a good place to deploy capital over the next five years.

Proctor: Are there areas where you see clients looking to get into U.S. energy from offshore?

Pace: Yeah, they're looking to get [an] upstream energy focus, as well as other asset classes within energy. It's

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primarily from Asia and the Middle East—a bit of everything, some larger investors who are just looking to build up portfolios, and then some who have established portfolios and [are] just looking to build out their U.S. presence.

Proctor: Are there areas where secondary markets are looking attractive?

Keys: If we go in and evaluate a portfolio of assets and work with the manager to understand the values and form a view, that's very different than the view of someone who wants to sell out of a position, and no one wants to sell at the bottom of a market. There are certain structural challenges some LPs face that require them to sell, and we're seeing some of that now in areas that you wouldn't have seen previously.

In the run-up you had many more managers, much more LP participation. You're starting to see some of that work its way through the system, and certain LPs are fatigued, and we see it kind of across the sector, most notably in the upstream side, where you certainly see folks come out and if you have a portfolio that's somewhat challenged because there was maybe a little bit too much leverage at the wrong time in the cycle.

Proctor: Are you seeing more co-investment opportunities?

Keys: Co-investing for us is probably the piece of our business that will grow the fastest over time. We're not doing a ton in that space now. We've executed a couple of transactions over the last few months. There are certain scenarios where you need capital or the managers need capital and the LPs are kind of tapped out on energy and don't really want to put up more capital.

Tehranian: There's been a lot more interest on the energy and infrastructure side. We've seen that activity increase over the last 18 months, and it fits the profile of these types of investors that we work with as well. One area that we probably haven't looked this hard at, and we'll probably be looking at a little bit closer in terms of some of our partners, is on the upstream side.

Pace: We have a dedicated co-investment fund that invests across private equity in energy that's about $1.5B that we're deploying right now. And so we're just looking to build a diversified portfolio, which would include upstream and midstream opportunities.

Outside of that, a lot of our client separate accounts have the ability to invest in energy. So we're just looking at investments on an opportunistic basis to see if it fits into that client's mandate. We try to solicit as much co-investment deal flow as we can and determine if it would fit our client portfolios.

Proctor: What are some lessons learned from the downturn? What did it do to your portfolios?

Keys: One thing that's been certainly highlighted during the downturn is valuation approaches vary significantly from manager to manager, even across similar asset classes. So what we spend a lot of time trying to do is calibrate with the GPs and making sure we understand how they're valuing investments—not just for our secondaries practice, but as forward-looking investors in a fund, if we're going to make any new commitment to a fund. On the asset side, specifically, you've certainly amplified certain notions, such as location is important, and focusing on the lower end of the cost curve.

More importantly, capitalization is critical, and as we look at portfolios today, there are certain leverage issues across a number of portfolio companies out there in the energy sector.

Proctor: Lars, were there any mistakes that you saw managers make during the downturn that you think had an impact on the portfolio?

Pace: The managers have to deploy capital within a reasonable period of time. So it's not fair to expect them to invest in 2013, '14 and then not expect valuations to be impacted by the decline in prices.

Some of our clients who are newer to this space were taken aback by the volatility in the market, but really, if you've been investing for a longer period of time, you realize that energy has a useful place in the portfolio, but you have to understand that there's more volatility than a generalist private equity fund.

The one thing is, we have good established relationships with managers who have been in business for quite a long time, and so we're maintaining those relationships, but we're looking for up-and-coming managers as well.

Proctor: Are you seeing more or fewer managers who are just starting out?

Pace: In 2015, there were several new managers forming, and there's always managers who are coming up from various entities, so I don't know if it's more or less, but it seems like there's a little bit more new teams forming than we've seen.

Tehranian: We live in a very forgiving sector in certain cases, and so the glass is always half full, even if it's spilt over. And you need these cycles to test the mettle of your portfolio and to know where you're positioned. ■

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What's Next for **Mexico's Energy Market?**

Aldo Flores-Quiroga
Deputy Secretary of Energy for Hydrocarbons, Mexico

In a keynote interview, the country's deputy secretary of energy for hydrocarbons talks about why private investors are getting excited about investment opportunities now that Mexico's energy sector is open to their capital

Following the country's most recent auction of energy rights in December, Mexican officials find themselves even further entrenched in an unprecedented regulatory reform. Allowing foreign players into the country's energy sector in an effort to boost overall investment has prompted a significant opportunity for private equity.

"Most companies are asking about the future of our policy," Aldo Flores-Quiroga, Mexico's deputy secretary of energy for hydrocarbons, says. "I think it is fairly well established that we are serious about our intent, that we have been very transparent in the presentation of our objectives and the implementation of the reform, and that we will not settle for less than competition and a very open process.

"The opportunities are plentiful. It is time to pay attention to Mexico."

Investors, speaking with their capital commitments, seem to agree with Flores-Quiroga: He says eight of the 10 blocks presented in December's auction were scooped up. Government officials were equally as pleased with the large and varied royalties offered, as well as with the diversity of the companies from around the world that invested in the opportunity.

"All in all, it was a success," Flores-Quiroga notes. "That said, we know that we have to continue improving the model, the regulation, the process."

Mexico is very much in the early stages of what will be a long process of opening the country's exploration and production, he explained, pointing to the development of energy infrastructure as a particular area of potential excitement for investors.

"It is a growing market," he says. "It is integrated in North America. It is an economy that is as open as the British economy."

Flores-Quiroga says investment in Mexico's burgeoning energy market is just scratching the surface and very much in the nascent stages. The next test will come in 2017 when deepwater exploration may become a reality. With that will come new regulations for a number of issues, including storage of energy products. The government is also keeping its eye on how these reforms continue to impact the citizenry of Mexico, including at the gas station.

"The immediate next big event is the opening of downstream markets," Flores-Quiroga explains. "The gasoline, diesel markets will be open starting in January [2017]."

That's not all—in addition to oil and gas, Mexico is open to expanding its investment opportunities for foreigners to renewable energy.

"The potential Mexico has in wind, solar, and geothermal is huge, and as this market continues to develop, the more bidding rounds [there are].... We expect to see much more activity," he says.

While action is not right around the corner, renewable energy is one topic the Mexican government will continue to discuss. Until then, the government will carry on leveraging its oil and gas resources with the creativity of investors.

"On a daily basis I get to talk with entrepreneurs inside Mexico that have many ideas and projects that look very interesting and attractive," says Flores-Quiroga. "The fact that this very large opportunity that is the Mexican energy sector is now open for the creativity of the private sector is going to yield very positive surprises." ■

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