



### Mapping the horizon

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#### Welcome

It feels like we are at an inflection point in the energy and natural resources industry. There are all sorts of changes underway. Not that long ago, we were wondering whether we had reached the point of peak oil, the tipping point at which we had produced over half of the recoverable oil in the world, and were starting our way down the decline curve. The shale revolution and the use of hydraulic fracturing moved that peak well into the future.

The development of more efficient and economical sources of renewable energy has shifted the inquiry from "peak oil" to "peak demand." Given the commitment to address climate change, and the use of new technologies to lower the cost of generating and distributing solar and wind power, perhaps the demand for hydrocarbons will peak well before the availability of hydrocarbons peaks. That said, most projections show that the demand for natural gas as an energy source grows faster than demand for any other source of power.

Regardless of how we manage the sources of our energy, the fundamental demand for energy will be increasing at a dramatic rate. There are going to be a lot more people in the world, and the quality of life for the world's citizens is also on the rise. It will take a lot of mineral resources, water, and energy to keep the world's population healthy and happy. Political instability and the rise of nationalism could impair the ability of the energy and natural resources industry to meet those needs.

Finally, the digitization of the energy and natural resources industry creates new opportunities to find and deliver these resources to the world. As our industry embraces new technologies, and integrates them into resource extraction, generation and transmission of energy, and related commercial arrangements, we see new ways to meet the demand for energy, power, water, mineral resources, and infrastructure.

In this series our lawyers look at a range of issues, from the evolution of energy storage and the Asian LNG spot market, to modernizing infrastructure and investing in Africa. We hope this work will help you as you navigate your company past the inflection point, and toward the horizon.



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# Offshore wind comes to the U.S. — but not without challenges

Offshore wind, an industry long dominated by Germany and the UK, is finally starting to gain steam in the U.S.

And yet the U.S. faces a unique set of challenges when it comes to developing this resource. Without any federal mandate, there's an ongoing struggle with offtake as developers are forced to navigate a patchwork, state-by-state approach. While certain states, like Maryland and Massachusetts, have implemented mandates for offshore wind, the policies in other states are still evolving.

Developers of U.S. offshore wind projects also must parse through a complex web of local, state, and federal regulations that can prove challenging. For instance, the Jones Act, which requires that transportation between two points in the U.S. be undertaken by a U.S.-owned and U.S.-built vessel operated by a U.S. crew, will present significant logistical barriers — as the dozens of European ships equipped and crews trained to install offshore turbines cannot be used in the U.S.

These additional challenges means it's even more important that players in the U.S. offshore wind market take into account the lessons learned in Europe. Principal among them is the importance of preparation of starting with a deep understanding of all relevant applicable norms and standards, followed by thorough scope and interface planning, intensive onshore quality controls, and a robust construction schedule. On the water, any delay, no matter how minute, can have dramatic consequences. If offshore vessels sit idle, they can still cost up to US\$400,000 a day. And because weather conditions are such an important factor, if you slip into bad-weather periods, a delay of a week can be magnified to one of months.

Many in the U.S. have experience with onshore wind projects — but it would be a mistake to think that knowledge smoothly transfers to offshore projects. As the industry continues to grow, it's crucial that developers get the right counsel and do extensive preparation. If they do, the possibilities are vast; if they don't, the consequences could be costly.

### Need to modernize your pipeline? Here's how.

Aging infrastructure and increasing regulation have made modernizing the tens of thousands of miles of U.S. pipeline facilities a matter of great consequence.

But modernization is easier said than done. For federally-regulated interstate natural gas pipelines, it requires navigating a patchwork of new regulations issued by the Pipeline and Hazardous Materials Safety Administration, the Environmental Protection Agency, and the Federal Energy Regulatory Commission (FERC). It also costs billions of dollars — dollars that pipelines are entitled to recover from their customers if they can properly justify the need for, and cost of, modernization.

The stringent regulatory landscape has made modernization slow going so far. FERC's recent Modernization Policy Statement — which allows companies to recover modernization costs outside of the traditional ratemaking process — should, in theory, speed up the process. Meeting its standards, however, is still a complex task involving numerous stakeholders, including the pipeline's customers and their advocates, state utility commissions, and other federal regulatory bodies.

Still, we expect more and more pipelines to try to implement their plans this way. When they do, here's what they need to keep top-of-mind:

- Understand what the plan is and paper it. Figure out where and what needs to be upgraded, clearly delineate it, and support it with documentation, research, and analysis. At each stage in the process, companies need to be able to demonstrate that everything they propose is grounded in regulatory requirements.
- Develop a shipper engagement program. Companies will want to strike the appropriate balance between seeking stakeholder input while simultaneously ensuring the company maintains control over the modernization projects it needs and the execution of the strategic modernization plan.
- Prepare the filing strategically.
   Companies must lay out a comprehensive modernization plan that not only details the programs envisioned along with a timeline for implementation but also ties the overall program to regulatory requirements, thereby increasing the likelihood the Commission

In short, companies seeking to successfully utilize FERC's Modernization Policy Statement must scrutinize their own plans as carefully as others will.

will approve it.





### Electric vehicles charge ahead

As the electric vehicle (EV) revolution continues, EV charging infrastructure stands poised to emerge as a wholly new investment asset class. But the range of revenue streams and technologies currently available means potential investors must understand the risks associated with the differing business models available in the market.

Potential charging revenues, for instance, include direct sale and installation fees, user charging fees (on either a pay as you go or subscription basis), a wide range of retail revenue opportunities "while you wait" (such as the sale of traditional forecourt items, advertising, parcel collection, connectivity, and media services), alignment fees from automotive sector players keen to support roll-out, as well as vehicle to grid (V2G), vehicle to business (V2B), and vehicle to consumer (V2C) electricity off-take and services revenues.

Debt financing offers huge potential to support the scaling of EV charging infrastructure to critical mass — but for deals to be bankable, lenders' exposure to demand and technology obsolescence risk will need to be effectively managed or mitigated.

With that in mind, commercial and public utility fleet solutions offer the best solution for debt financers. Debt can be used to support the installation, operation, and maintenance of EV charging points at fleet depots or charging hubs with demand for the charging infrastructure underpinned by a long term commitment from the credit worthy fleet host.

Obsolescence risk will also need to be managed to ensure that demand for installed charging infrastructure does not materially reduce or evaporate due to better charging solutions being available within an acceptable distance.

EV charging success will come in many different forms as distinct approaches to residential, workplace, commercial, fleet, filling station, and on-street charging solutions emerge. The winners will be those best able to manage and mitigate key EV project risks while enabling them to scale by attracting investment and finance.



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#### The Asian LNG market diversifies

Demand for liquefied natural gas (LNG) in Asia has traditionally been the province of a small number of North Asian countries — but this landscape has changed. New infrastructure technologies — like Floating Storage Regasification Units that are quicker and cheaper to build than traditional onshore receiving terminals — have allowed a raft of new players including Bangladesh, Pakistan, and Vietnam, to enter the market; meanwhile, traditional Asian producer countries have begun repositioning themselves as producer-buyers.

As the buyers' pool has diversified, so too has the sellers'. Pure LNG trading companies have emerged as middle men, and buyers — particularly North Asian companies unsure about future levels of domestic demand — have also entered the trading market. At the same time, sellers have moved away from traditional point-to-point sale to portfolio

sales, opening up a greater opportunity for LNG trades. The number and nature of LNG sellers has itself diversified.

One factor behind these changes is the view taken by the EU and more recently the Japan Fair Trade Commission in relation to destination restrictions and similar provisions, which both bodies consider anti-competitive.

Moving forward, we should expect to see LNG sale and purchase agreements structured so as to allow more flexibility for trading — for instance, take-or-pay and seller shortfall clauses done on a cargo-by-cargo (rather than annual) basis, and greater diversion rights, even as more and more long-term agreements are entered into to support new production facilities required to meet predicted demand. This will result in much more complex agreements.

The plus side of these changes? More liquidity in LNG trading, and the market will support competition. The down side? There will likely be a lot more credit and reputational issues, as new buyers and sellers with less history and financial security enter the fray.



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More complex agreements are on the horizon.



### Get in the driver's seat: Social license to operate

For the companies working in the energy and natural resources sector, sustainable development and the social license to operate lie at the heart of their enterprise.

The development of energy and natural resources can be the engine that lifts an impoverished nation into a developed economy. The key is to use the capital generated from the development of natural resources to build a sustainable economy.

#### Sustainable development

In 1987, the World Commission on Environment and Development, also known as the Brundtland Commission, provided the foundational formulation of the idea of sustainable development in a report called "Our Common Future"<sup>1</sup>:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

One of the key messages in the Brundtland Commission report is that the impediments to sustainability are interlocking and complex, and require similarly complex strategies and approaches to achieve sustainability. In *Breaking New Ground*, a research report drawing on two years of consultation and research, the Mining, Minerals and Sustainable Development Project describes four pillars of sustainable development: Economic, Environmental, Social, and Governance<sup>2</sup>. In implementing a strategy for sustainable development of natural resources and energy production, operators, governments, and other stakeholders must look at all four of these factors. Such a strategy will, by definition, be interlocking and complex.

#### The social license to operate

As lawyers, we know how to get the licenses and permits and concessions necessary to have the legal right to operate. Our clients are better served if they also have a social license to operate — in other words, a commitment from the stakeholders and communities affected by the project that that this project is socially beneficial. Having the social license to operate minimizes conflict and protest, and allows the mutually acceptable, cooperative development of natural resources.





### Mexico election report: What private investors need to know

Since the dawn of his campaign, Andrés Manuel López Obrador's (a.k.a AMLO) — Mexico's now President-elect — has consistently sent mixed messages to the energy industry regarding private investment in the Mexican energy sector ushered in by the 2013 reforms. Recently, Obrador called the denationalization of the oil sector "a rotund failure" only to meet with investors days later to discuss ways to better facilitate private sector investment.

Despite these mixed messages, investors would do well to remain prudent and focus on governmental actions, not words. After all, AMLO's victory didn't change the country's desire to more aggressively exploit existing oil and natural gas reserves, modernize pipelines, and expand power generation. Doing so will require significant private investment.

What's more, the fact that Mexico has already entered into several free trade agreements providing vast investment protections (including a recently re-negotiated NAFTA) will make it difficult for AMLO's administration to reverse the 2013 reforms or unwind existing investments without triggering important foreign investment protection commitments. Thus projects are generally expected to go forward.

That being said, the incoming administration will bring new challenges to the sector. As projects move forward, there will likely be heightened scrutiny, for instance, when it comes to various compliance matters and the protection of local communities. While the government will necessarily increase investment into oil exploration and production to cover real needs, it remains to be seen whether investors will be able to continue to come in as partners of, or service providers for, the government.

Given these challenges, investors considering new opportunities in Mexico should proceed with caution. They should not, however, sit on their hands. Investors can prepare by laying the foundation in Mexico: thinking through the various legal and practical issues, mapping risks, and performing specific diligence of potential projects.

The aim is that investors be able to act swiftly when opportunities come. The energy sector in Mexico is evolving in real time, and new projects will be seized on a first come, first served basis.

# How should energy storage be regulated?

With the global market for energy storage expected to surmount one billion dollars by 2025, a debate around how to regulate this resource has begun to heat up — and it could have major consequences for countries looking to keep pace with U.S. output.

Fundamentally, this debate revolves around whether to (i) regulate energy storage as a *generation* unit, or (ii) regulate it as part of *transmission/distribution* networks. Mexico and some European companies, for instance, treat it as the former. The U.S., on the other hand, has begun — at least in some regions — to treat it as the latter.

While there may be no definitive answer, the two options provide different incentives to different players, which may lead, of course, to different results. Treating storage as generation can induce generation companies to build integrated storage solutions and storage at scale, to shave peak loads. Conversely, treating it as part of a transmission/distribution network gives transmission operators (TSOs), whose responsibilities are to the safety and reliability of the network, more tools at their disposal. Even policy makers have

shown signals that TSO's will need to include storage in their planning.

One answer may simply be to have specific regulations for both activities: for instance, restricting generators' ability to build up storage capacity may impact peak-shaving alternatives. Or perhaps the ultimate solution would be to have TSO's and generators coordinate to enhance the potential of utility scale storage.

Amid debates like these, it's imperative that stakeholders not lose sight of an even more fundamental issue with energy storage: the environmental costs of battery production. For while energy storage is typically thought of as an environmentally-friendly solution, the carbon footprint associated with exploiting lithium and other minerals for batteries has proved a significant counterbalance. It'll be a long time before we have the technology necessary to reduce these costs.

As industry players evaluate the range of developing issues associated with energy storage — be they regulatory, technological, or environmental — they'll need to remain open-minded, adaptable, and well-prepared if they want to stay on the cutting edge.



# To tariff or not to tariff: China's alleged intellectual property theft from the United States

As of this writing, the United States recently halted trade negotiations with China particularly as related to trade tariffs for alleged "unfair trade practices" under Section 301. Though it may be popular to label the Trump administration's latest tariffs on China as part of an ongoing "trade war", the response elides a significant point: that imposing tariffs may be one of the only "strong ways" to force China to stop what the U.S. President alleges are "unfair trade practices" by improperly taking valuable U.S. intellectual property (IP). Much of these trade tariff enforcement actions by the U.S. President are in efforts to force China to implement more fair laws and procedures for U.S. entities operating within China's borders and to reduce improper actions by China individuals or entities within the U.S. borders.

The "unfair trade practices" by China with respect to alleged intellectual property theft are estimated to cost the U.S. between US\$22.5 and US\$60 billion dollars a year — whether it is a Beijing-based wind turbine company stealing trade secrets from a Massachusetts company

or a string of large U.S. chemical companies investing in China with the risk of losing their IP rights as part of current Chinese law.

Of late, China has given exceptions to certain industries in areas where it believes it lags behind — electric vehicles or downstream petrochemical companies, for instance — but energy companies investing in China need to be up to date on these exceptions. There also are ways in which organizations can structure investments so as to reduce the risk of losing significant IP rights to China. For one, when negotating joint ventures (JV), companies need to consider terminating the JV when it wants to withdraw and thereby terminating any associated IP license associated with the venture — otherwise, Chinese law dictates that the JV may be able to continue to be able to use the IP brought in during the JV formation.

A second way to consider reducing risk would be to license the IP into your own company in China to the extent China allows the formation of your own entity there, so as to



### Internal investigations in the #MeToo era

The energy industry has historically been known as an "old boys' club." Men toiled in the oil patch while, back at headquarters, more men oversaw other aspects of the business.

Over the years, the industry has made progress in hiring and promoting women. But in the era of #MeToo, the legacy of this gender imbalance has made the sector particularly ripe for harassment claims. Those who feel that they have suffered harassment are already more willing to come forward, and the reputation of the industry — rightly or wrongly — bolsters complainants' beliefs that the mistreatment they perceive having suffered is gender-based.

In order to minimize liability and do right by their employees, companies must conduct well thought-out and thorough investigations. With that in mind, here are three must-dos for conducting internal investigations in the #MeToo era:

Determine the potential scope of the investigation and the best type of investigator

- Rather than rush into an investigation blind, it's crucial that in-house counsel first determine its potential scope. For instance: How many interviews might there be? How much data will need to be collected? In light of the allegations and players, could the case uncover further wrongdoing, result in litigation, or attract attention from government agencies?
- The higher the risk of these outcomes, the more likely the company should engage external counsel to conduct the investigation.

### Collect, preserve, and analyze a broad spectrum of information

- It's not just e-mail anymore. Investigators need to look at phone data, various digital messaging platforms, and, of course, information obtained via in-person witness interviews.
- And don't stop collecting data individuals may still be communicating about the events while the investigation is ongoing.

Think carefully about your investigation report

- An investigation report can be a critical tool for management to assess the findings and recommendations, and can serve as potential evidence to defend claims of harassment.
- However, attorney-client privilege has
  to be carefully preserved be aware that
  selective, affirmative disclosure could result
  in an argument that privilege has been
  waived over the entire report.

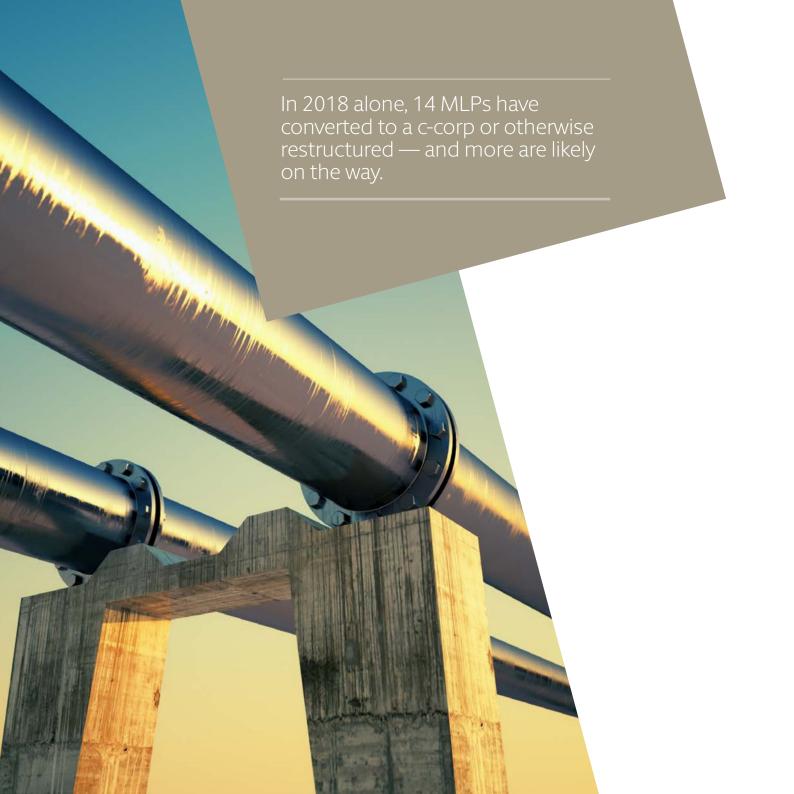


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### Evolution of MLP structure

For most of the new millennium, U.S. oil and gas exploration has been booming. As the tides rose, so too did Master Limited Partnerships (MLPs) — especially within the robust midstream sector.

An advantageous tax structure, which allows MLPs to be qualified as a partnership, combined with historically low interest rates made the structure attractive to investors seeking yield. In turn, MLPs were given relatively easy access to new capital to reinvest in growth.

Recently, however, that momentum has begun to wane. In 2018 alone, 14 MLPs have converted to a c-corp or otherwise restructured — and more are likely on the way.

While tax reform and recent Federal Energy Regulatory Commission rulings have played a role, the main driver is structural. In a traditional MLP, the general partner/sponsor holds incentive distribution rights (IDRs). Provided that quarterly distributions to limited partners meet certain thresholds, the holder of the IDR is entitled to an increasingly large percentage of such distributions. To meet these thresholds, however, the MLP must constantly increase cash flow by acquiring new assets — which, in the highly competitive midstream space, has become increasingly challenging.

What's more, these disproportionate distribution rights — along with a perceived lack of transparency — have made it harder for many MLPs to raise new capital.

Existing MLPs should carefully evaluate their current situation. If they're confident with forecasted cash flows and the ability to raise additional capital, an MLP sponsor may conclude that the traditional structure will continue to best meet its needs. If, however, the MLP sponsor concludes that a change of structure is appropriate, there are a range of options. For example, it could convert or merge into an affiliated c-corp, or maintain its tax efficiency but eliminate the disparate distribution by converting IDRs into limited partnership units.

As for new ventures, the future is less clear. MLPs remain tax efficient and, depending on overall industry conditions and interest rates, they may continue to be attractive to investors. What is clear is that moving forward, sponsors of a new MLP may want to consider potential adjustments to the traditional IDR structure.



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## For Australians, Africa can be a gold mine — literally

As the Australian mining sector continues to perform strongly, there's a rush for gold among Australian mining companies — and no one wants to miss the boat.

With a high degree of competition for domestic options, Australians are looking overseas for new assets. Given their stability, jurisdictions such as Canada might seem like the natural choice. Yet for a variety of reasons, we expect Australian investment in Africa to not only continue, but grow.

The foremost of which is that African assets are more numerous, less expensive, and less competitive to attain; whereas projects in more developed markets may be less challenging, projects in Africa potentially offer greater long term financial upside.

Potential investors need to acknowledge that working in Africa presents its own set of challenges. For example, investors need not only understand the technical risk at hand, but the individual country's risk: the political regime, the policy/regulatory structures, infrastructure constraints, and, significantly, how to get buy-in from local communities. Investors that succeed in investing in African

jurisdictions are patient — they know that working through complex requirements and red tape, at all levels, takes time.

Australian investors understand these issues, demonstrated by the deep history of Australian mining investment in Africa, which this year will exceed A\$40 billion over a decade. It helps too, that Australia has a uniquely strong relationship with Africa. Australian investors clearly recognize that Africa is a continent, not a country. They understand that there are distinctive regional, national, and local attributes that don't necessarily apply to the continent on the whole. As a result, Australia's government and NGO spend efficiently supports safety, security governance, and human capital development at all geographic levels on the continent.

Understanding these various dimensions takes time and requires investors to take advice from a wide-range of sources and practice areas. But it doesn't mean they should avoid investment in the region. Given the current state of play, mining for gold in Africa is well worth the challenge.



### Energy and natural resources

The energy and natural resource industry is dynamic, diverse, and global in scale. Companies in this sector demand comprehensive and creative legal solutions. We serve as an ally to major energy companies, natural resource developers, financial institutions, and governments and their agencies.

Whether you have a complex transaction, energy project to finance, natural resource to develop, regulation to navigate, a dispute to resolve, or intellectual property to protect, we will work as part of your team to solve your toughest legal issues. We understand that markets, technology, and regulation are major business drivers in the energy and natural resources sector.

Our network of over 400 energy lawyers spans Asia, Africa, Australia, Europe, the Middle East, and North and South America. We think and act both locally and globally. We use our knowledge of local markets and our familiarity with international best practices to bring you practical solutions that can be implemented wherever your business takes you.

#### Areas of focus:

- · Oil and gas
- LNG
- Conventional power
- Renewable power, including wind, solar, waste-to-energy, hydroelectric, and biomass
- Interconnectors and transmission
- Nuclear generation
- Energy trading
- Mining
- Water
- Timber







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