

Boston College Chief Executives Club
Booms, Busts, Sustainability – Navigating Today’s Energy Landscape
Remarks by Ryan Lance – Oct. 22, 2015

Thank you, Eric, for that kind introduction.

I’ll add some detail. I started working on drilling rigs at age 18. It paid my way through college at Montana Tech. I’m a petroleum engineer, or as I call it, cement head. I spent 11 years of my early career in Alaska, then moved to California. I’m a big outdoors fan, and enjoyed living in both.

Then I lived and traveled internationally. ConocoPhillips is active in 25 countries. So I’ve learned to take a global view of major issues. I’ve seen the poverty and hardship caused by energy scarcity. But I’ve also seen cities overseas with serious air pollution. ConocoPhillips takes very seriously our multiple responsibilities – to supply abundant and affordable energy, in a sustainable manner.

The discussion at my table during lunch was around the current oil and natural gas downcycle. That’s appropriate, because my topic is “Booms, Busts, Sustainability – Navigating Today’s Energy Landscape.”

I’m going to talk to you about some characteristics of the industry, what caused the downturn, how companies are responding, the long-term future of oil and natural gas, sustainability, and I’ll close with the need for crude oil exports.

Speaking of navigating, if anyone ever invents a GPS to plot a course through business cycles, I want one. Our business is easy when oil’s at \$100 per barrel. But it’s really tough at half that.

I just read an analysis by Credit Suisse about the current downturn. It seems that those who presume the world economy is benefitting from today’s lower oil prices are mistaken. The analysis looked at commodity-related capital investments. These make up 30 percent of global capital expenditures. The oil and natural gas downturn has impacted that. Cutbacks in other commodities have too. Altogether, these reductions have cut both U.S. and global gross domestic product growth. The impact is about a full percentage point over the last year. That’s quite an economic hit. In turn it has cut oil demand growth and slowed down oil market rebalancing.

In my 31 years in the industry, there have been several incredible booms – and deep busts. Name another industry with a 60 percent drop in revenue in less than a year. Probably not many. In the past, we’ve seen hurricanes and geopolitical concerns cut supplies. But more recently, we’ve seen innovation bring new supplies online. Such as the U.S. energy renaissance of the past 10 years. It was unexpected, and it was also transformational.

On the drive to the hotel, I saw gasoline in the low \$2 price range. That's about 37 cents in 1970 terms. It's the good old days all over again. Oil industry technology had a lot to do with that.

I'll share a few facts. First, we probably rival NASA in both complexity and leading-edge technology. Here's an example. To process our seismic data, ConocoPhillips owns one of the world's top 30 super-computers. It has 2.9 petaflops of capacity. In understandable terms, it performs three trillion operations per second. We also run sophisticated computer models. They analyze producing reservoir performance, engineering designs, economic simulations and a lot else.

We have a large and talented workforce. It includes graduates of the world's finest universities, among them Boston College, Harvard, MIT and a number of others here in the Northeast. Collectively, the masters and PhDs earned by our people number in the thousands.

We have massive mechanical capability – like horizontal and directional drilling. We could start a well from – for example – MIT. We could drill down a mile, then steer the drillbit, and bring it back up right where I'm standing.

And we are a job-creation engine. Last month we celebrated the startup of a facility in Canada. Building it took 48 million man-hours of construction. There were nearly 5,000 people onsite at the peak, and they did it safely.

Our business is sequentially complex. We first negotiate for leases on exploratory land. Then we drill a wildcat well, evaluate any discovery, drill producing wells, design and build facilities, lay pipelines, start up, transport oil to refineries or deliver natural gas to distribution companies, and so on.

There are some challenges unique to our business. For example, natural reservoir decline. As you produce from a reservoir, its pressure goes down. So production declines by 9% a year on average. We have to run hard and reinvest heavily just to stay flat – much less grow.

We are highly capital intensive. ConocoPhillips reinvested \$17 billion into our company last year. That's nearly \$900,000 per employee. So we are a business of big numbers – in assets, capital expenditures and operating expenses, and sometimes profits during the good times.

We are also fiercely competitive. Our industry is highly fragmented. There are several thousand independent producers. Most are small, but some range in size up to ConocoPhillips. We compete against each other and against the far larger major integrated companies – the ones with famous names. But the true giants are the national oil companies owned by overseas governments. Like Aramco in Saudi Arabia or PEMEX in Mexico.

Today finds all of us in an oversupplied market. A big part of the reason is U.S. liquids production. It's up five million barrels per day since 2008. Meanwhile, we've found so much natural gas that the U.S. and Canada together now hold a century of supply.

This abundance was long thought impossible. North American oil and natural gas was considered mature and in decline. Some even called us a “sunset industry.” But it was our recent growth and job creation that helped lead the U.S. out of the 2008 recession.

Getting back to the market, there are other factors in the oversupply. Energy demand growth is weak. That’s because economic growth has slowed down in China and the developing world. Meanwhile energy efficiency standards are rising for cars and trucks, appliances, housing and commercial buildings.

The combination of supply growth and weak demand has driven down oil prices to half what they were a year ago. OPEC hasn’t cut its production to rebalance the market. Take for example, Saudi Arabia. They account for about one-third of OPEC production. They’ve increased their output to maintain market share.

The low prices have certainly impacted the U.S. Our liquids production just turned down. That’s for the first time since 2008.

There are about 800 onshore rigs at work here now. That’s down from over 1,900 a year ago. Many areas just aren’t economic at \$45 oil. The rig count reflects that. But there’s still drilling in the “sweet spots” in the best shale fields. Like the Eagle Ford and Permian Basin in Texas and the Bakken in North Dakota. So the energy renaissance isn’t over. It’s just slowed down.

Meanwhile, North American natural gas remains a bargain. Gas is the leading energy source in Massachusetts. It’s the top choice for home heating here. Its cost to consumers in your state has fallen by nearly half since 2008.

As CEOs and company officers, you might ask – how do we plan to succeed in this volatile, cyclical business? There’s a quick answer – cutting costs and improving efficiency. Both were badly needed. Service and supply costs were up by a factor of four in recent years.

Capital budgets are falling industry-wide. For ConocoPhillips, by nearly one-third. We’re focusing on projects with a low cost of supply. That’s essential for profitability today. And we’ve lost some jobs. I’ve said goodbye to some longtime friends and coworkers. That’s not easy.

Our near-term strategy is ensuring capital flexibility. This means we can ramp spending up or down in response to the price signals. We’ve cut back in some areas, like deepwater. Exploration and development there can take 10 years as well as billions in capital. Instead we’re focused on shorter-lifecycle projects – like onshore shale wells. They can come online in six months. Our view is that responsive companies will come out of the downturn stronger than those who move slowly.

But even as we respond today, we're mindful of the long term. I'll share some insights. World oil demand is currently 93 million barrels per day. The oversupply is only 1.5 to 2 million barrels a day. That's one-fifth the surplus we saw during the 1980s.

So the market could rebalance much faster now. In fact some of the surplus is already bleeding away. Historically, low prices have always forced cutbacks in investment. We're seeing that now. Drilling goes down – we're seeing that too. This reduces production – as I've mentioned. Meanwhile, low prices stimulate demand. Historically, this combination soaks up any surplus. So low prices sow the seeds for the next upcycle.

We could also experience geopolitical events, like political unrest in producing areas – or wars. These could take oil off the market. That would also drive an upcycle. On the other hand, we could see counteracting events, like more oil coming onstream from Iraq or from Iran. These could depress the market. Or, we could have fluctuations between these two scenarios, particularly if OPEC doesn't take action to maintain or restore balance. Onshore production here in the U.S. could cycle up and down. It would be responding to supply and demand shifts and price signals.

Production here is now very resilient – it has a relatively short cycle time. That's thanks to shale's high resource potential and easy accessibility. Production can ramp up fast if prices improve. This would help limit any price shocks. In fact our increased production in recent years has already helped hold prices down. It has offset big supply disruptions in the Middle East and North Africa. This saved U.S. consumers about a dollar per gallon at the gas pump.

So if anyone invents a crystal ball to predict commodity prices – I want one of those too.

Some might ask – why worry about oil and natural gas – renewable energy can take over. It will in fact play a major role in the future, and we do expect continued technology improvements. But a world of seven billion people today – growing to nearly nine billion by 2040 – will need all energy sources.

IHS here in Boston has studied the timespans historically required for meaningful energy infrastructure change. For example, replacing the fleet of electric power plants takes 40 years on average. Replacing the shipping fleet takes 25 years, heating systems 20 years, and light vehicles 15 years.

Building major-scale infrastructure from scratch can cost hundreds of billions or even trillions of dollars. It can only happen gradually. That's even with dramatic technology advancements. Take the changeover from hard-wired telephones to cell phones. It's already taken 50 years and there are still growing pains. Cell phones don't work everywhere. If the energy system had the reliability of cell phones, we'd all be in trouble.

That's why natural gas is so important in the energy mix. First, as a major source itself. And second, gas-fired power plants are highly flexible. So they are needed to back-up intermittent solar and wind power.

New energy sources also historically take a half-century or more to assume major scale. Meanwhile, demand generally remains high for the older sources, or even increases.

Both the IEA – the International Energy Agency – and IHS have studied the energy mix required by 2040. They examined scenarios that would reduce greenhouse gas emissions. These would limit maximum global temperature increases to no more than 2 degrees. They concluded that renewable sources must grow. They were 13 percent of supply in 2012. They'd need to supply about 35 percent in 2040. Use of fossil fuels would obviously fall on a proportionate basis. They were 82 percent of supply in 2012. But they would still supply over half of world energy in 2040. They would still be needed as part of the solution.

I've mentioned that ConocoPhillips believes our responsibilities extend to ensuring sustainability and environmental stewardship. We've reduced our air, water and land footprint, such as by reducing methane emissions, expanding water treatment, recycling and reuse, and siting multiple wells on a single drill pad – instead of separate pads.

Regarding climate change – we recognize that human activity contributes to increased concentrations of greenhouse gases in the atmosphere. We've held our greenhouse gas emissions flat since 2009. That's despite rising production. This averted 6 million metric tons of emissions.

Nationwide, in the electric utility sector, natural gas has displaced a lot of coal. By comparison, natural gas has a lot to offer. It emits very little nitrogen oxide and sulfur dioxide. These contribute to acid rain and smog. It produces virtually no soot. And using natural gas in power generation – instead of coal – cuts greenhouse gas emissions in half. As a result, U.S. emissions from energy use have fallen to early 1990s levels. The country is actually on track to meet the proposed 26-to-28 percent reduction targets. These will be discussed at the Paris conference next month.

As part of our own long-range planning, ConocoPhillips incorporates a variety of future market scenarios. Some assume carbon constraints. These would come from more stringent government policy on greenhouse gas emissions. We try to prepare for any possibility.

As you could surmise, we obviously disagree with the “divest fossil fuels” movement. This would force major institutions to sell their stocks in publically owned oil and gas companies. But the top 50 companies together represent only six percent of the world's remaining potential emissions from fossil fuel. We're small compared to the national oil companies. Also when compared to the holders of coal reserves.

So we believe that our industry, government and consumers must all recognize a key point – we'll be interacting together for a long time. We'll need to find common ground on issues. And we'll need to develop solutions together.

At ConocoPhillips we've had success with a collaborative approach. We've worked with the EPA on some of their rulemaking on drilling regulations. We've also worked with the Bureau of Land Management on wildlife protection.

Beyond government, we've met with other stakeholders concerned about carbon asset risk. We learned from these exchanges, and the stakeholders gained confidence in our approach. Hopefully we'll see greater collaboration in the future.

This brings up my final point – a case in which collaboration could help. For several years we've advocated a logical next step in the U.S. energy renaissance. This would be exporting the domestic crude oil that cannot be economically processed in U.S. refineries. Most oil exports have been banned since 1975, with only a few exceptions. This forces American crude oil to sell at a discount to the already-low world oil price. But the discount isn't passed along to consumers. Gasoline and diesel fuel are sold here at global product prices.

But what the discount has done is to further decrease investment in domestic exploration and production. This has further harmed the national economy – as I mentioned earlier.

Some 200,000 oil industry jobs have been lost over the past year. Allowing exports would encourage renewed investment here at home. It would help save existing jobs and create new jobs, increase production of American oil, further improve our trade balance, generate tax revenue for government, and produce savings for consumers at the gas pump.

Virtually all the studies by universities, think tanks and even government agencies agree. There's strong bipartisan support in Congress. Now, if we could only get the Administration to act. That's number one on my wish list.

Hopefully, I've given you some insights into the oil and natural gas industry – the challenges we face, what the energy renaissance means to our country, the opportunities at hand, and the path ahead.

Oil and natural gas are foundational to the U.S. and global economies. This will continue far into the future. We recognize that oil and natural gas must be developed and used safely, cleanly and sustainably. And at least on the part of ConocoPhillips, we stand ready for engagement and collaboration on all these points.

I look forward to your questions.

Thank you.

END