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A CONVERSATION WITH MARVIN ODUM
PRESIDENT OF SHELL OIL COMPANY
Penn Sustainability Review’s editor-in-chief, Sasha Klebnikov, recently had the honor of sitting down with the former president of Shell Oil Company, Marvin Odum, to talk about the future of energy, the push for a price on carbon, Shell’s role in the global energy transition, and how to ensure safety in an era of low oil prices.

Odum spent more than thirty years with Royal Dutch Shell in a variety of roles. Most recently, he served as the president of Shell Oil Company (Royal Dutch Shell’s U.S.-based subsidiary) – a position he began in 2008. He joined Royal Dutch Shell’s Executive Committee as the Upstream Americas Director in 2009.

Odum oversaw a number of significant projects during his tenure, including Shell’s Deepwater Gulf of Mexico business, shale assets in Canada, Pennsylvania and Texas, heavy oil operations in Canada and offshore exploration in the Alaska Arctic.

Odum received a bachelor’s degree in mechanical engineering from the University of Texas at Austin and a master’s degree in business administration from the University of Houston.

The following are excerpts from our interview. Note: Shortly following this interview, Odum retired from Royal Dutch Shell.

Sasha Klebnikov: Shell is a company that has a lot of different aspects to it. How would you describe it? Is it an energy company? An oil company? A gas company? An engineering company?

Marvin Odum: Shell is an energy company, but also a company that’s always looking forward. We think about not only what makes up the business of today — for us the vast majority of that is oil and gas — but we also look at the future around the energy transition to see where energy is going. The thought process in the company is focused on developing skills based on what the future picture looks like, given how things may transition. So that might mean renewable energy to a degree and that certainly means new business models around how to supply customers and how to deliver products to customers.

S: Where do you see this “energy transition” going?

M: Well I think you’d want to start from the premise that states very clearly that the energy transition is happening and it will continue to happen. The big question is around how quickly it will happen. There are a couple of aspects around this. Phase one is supporting government policies to put in market mechanisms to drive the transition. Technology is certainly another—how quickly it will take to drive down the costs.

The third, and maybe the most important piece, is that any energy transition is not a simple equation. There is an enormous
amount of infrastructure supporting what we have in place today and changing that by definition is a long term issue. I think if I could shift one mindset of the general population, it would be the simple thinking that, if you had the willpower, you could move away from hydrocarbons. It is just not that easy to do.

S: How is Shell adapting to that? Specifically, Shell seems to be shutting down the unconventional sector (Shale Oil, Arctic Oil and Tar Sands) and moving more to a Natural Gas model.

M: Well, I have to fix one thing you said, and that’s us shutting down the unconventional sector. That’s exactly not what we are doing. Inside the company we tend to call it ventures, one of which is shale. We are actually just mainstreaming that into the global structure. The things where Shell is active right now in terms of the transition is first and foremost shifting to natural gas. As a company we have now crossed the point on an energy equivalent basis as we produce more natural gas than oil. So that is a significant piece, knowing that in the future natural gas will be a preferred fuel considering that it is a cleaner fuel in that respect.

The other thing is that we are working on Carbon Capture and Storage (CCS). It is very expensive, but like any other technology or any manufacturing process, it is something that you have to do enough to bring the cost down in order to make it a viable thing. So the question is how do we get more of these CCS projects going around the world to make the technology more viable. Let’s take the extreme case of how we get to zero emissions from a global standpoint. I would say it is virtually impossible to do that even over a long period of time without some type of carbon capture and storage, so we see that as a very important part of the equation. Even coming out of COP21 in Paris, CCS was a very important part, so I think that is good validation for it as a key environmental tool.

We’ve also moved into biofuels: of all of the integrated oil companies we are one of the largest in biofuels. That is primarily in Brazil for us, but it is a big business already. It think the thing about biofuels goes back to what I said about the complicated answer about the transition—that there is not one answer for the world. Biofuels are something that have worked extremely well in Brazil because it has the right biological and geographical attributes. It is simply not going to work in a lot of other places in the world. So we look at this on a more local and regional basis, rather than simply a global basis.

We have a wind business of close to a gigawatt in the various projects we are partnered in, but that is a business which we are asking how to ramp up in places where it really makes sense. For example, the Netherlands is looking into offshore wind as a viable program for the country. Wind is not going to work everywhere, but there are some places that it will work. The business models will shift as you move through various energy sources; when we think of a slightly longer term basis for our business, it is almost certainly not going to be manufacturing solar panels and competing with the Chinese. That is not going to be our business model. But there are a lot of other aspects associated with integration and power supply that you could support and find opportunities for.

S: Looking at CCS (Carbon Capture and Sequestration), one of the major goals for new CEO Ben Van Beurden was to push for price on carbon. How does something like CCS fit into that picture?

M: The underlying element of the energy transition is ultimately that you recognize the price on carbon.
If it is an environmental driver, it’s clearly a societal shift. Putting a price on carbon in the market needs to happen, so that advocacy continues and you continue to hear that from Shell. We place an economic burden of $40 a ton on every Shell project, so when ideas from around the globe are pitched to us at the executive committee, we know which proposals are better or worse due to the potential price on carbon.

So for us it’s a pretty simple equation: we need it and the world needs it. If you had an ideal case you would have a blanket price across the entire world and it would be across the entire economy. Not just in fossil fuels or whatever, but across the entire economy. So our perspective as a company is that we should and will support carbon pricing on a much more localized basis by country, or in the case of the US, by state. While we have a preference for a carbon price, it could be a market based system. You could invest in lower cost mitigation opportunities and it would offset the higher cost of operations. We are pretty much open to whatever the regional or local government wants to do. So if that is a carbon tax, then
fine, we will make a carbon tax work. If that is a cap and trade system, great, we will make that work. So we are very flexible in terms of how we do it. And we approach it from the philosophy that it will probably start local and then it will expand. So let’s think about putting a system that might link to other systems.

S: You mention the $40 per ton cost of CO2. Is that what you see to be the social cost of carbon or the likely cost that will be implemented by other countries? Alberta is setting their price at $60, whereas in the US it is still $0.

M: I would look further into Alberta’s program, because $60 might be the ultimate goal, but it is a long way to get there. I think $60 for us is the convergence of how high the price has to be to actually get real action and have real mitigation opportunities. But also important to us is what is considered a reasonable price for a social and economic standpoint, as well as what can people afford, and for us, that converts to $40 a ton. And $40 a ton is a fairly broad playground across the economy. You can do a lot of mitigation with that price. That doesn’t mean the price will stay there forever, but for an economic planning case for us, and certainly what we see in the European Trading System, it is far too low [ed: the ETS is currently between ~$4 and $9 per ton of CO2], while a price of a $100/ton is probably not very realistic. No one is going to put that burden on their economy. So $40 looks like somewhat of a sweet spot.

S: The price of oil has plummeted recently, causing a lot of pain in a lot of different places. What safeguards are you implementing to ensure that that increased drive to make projects economical is not going to impact the safety values?

M: You need to start with exactly that premise as the foundation on which we have any discussion inside the company. Safety is so absolutely critical to this business, and the success of this business, that I literally start every conversation with the idea that safety is the number one priority. There will be no compromising about safety. And now, let’s talk about what else we need to do to make the business work.

You need to keep that priority, that key principle first and foremost: Safety is absolutely clear, undeniable, and if you violate that, you are not going to be working for a company like Shell.

To continue on, it is all easy to say in theory, but in reality, when the pressure is on, and you need to cut costs, you know people are conflicted. So as a leader you need to recognize that that pressure will be there on individuals, on the front lines, on operations that are spending money, and you need to go above and beyond, and completely out of your way to come back to make that point again, so that individuals in the company, even under that kind of cost cutting pressure, do not need to make that kind of choice around safety.

S: Do you worry that companies that don’t have the same corporate structure of Shell might cut those corners?

M: Sure, all the time. One of the risks we live with as an industry is that in some cases if one goes, the whole industry goes. So I absolutely worry about someone in the industry making a bad choice. It’s a big deal for us. That’s why you won’t hear me shy away from saying “I think that degree of regulation, really well designed regulations, are absolutely critical for this business to be successful.” We want to create a level playing field, but we don’t want others out there doing it the wrong way.

S: When you say safety, do you see that as human safety, as lives and industry? Or as environmental? And how does environmental concerns fit into this whole picture?

M: When you ask me about safety, my answer is in terms of that very comprehensive view of personal safety and process safety, meaning that plants don’t blow up, wells don’t leak, and i the environment is protected. If you look at the acronym inside of Shell, it’s HSSE, which is Health, Safety, Security and Environment.
that's the whole package that we think of when we think safety.

S: There has been some criticism of Shell for being both a very outspoken advocate for both better regulations and carbon price, but also continuing what many advocates call environmentally sketchy practices in both Alaska and Canadian Tar Sands. How does that reconcile, especially when you start considering the impact of a carbon price?

M: This is where conversations like this are so important. Let's first reinforce the premise that we do support a price on carbon, we are looking for some reinforcements for the energy transition. If you look at what we did and what we are hoping to do in Alaska, it is to produce oil from offshore Alaska. The reality is that that would be some of the lower carbon intensity oil in the world, as it's relatively straightforward production. Its oil simply coming out of the ground, through these wells, into a pipeline. There is not a lot of processing and bother associated with it. So from a relative sense of oil across the world, it's lower in CO2 intensity than other forms of oil.
So let's take the opposite of that, which is the oil sands from Canada, which are some of the highest CO2 intensity oil in the world. We just last November started up the first Carbon Capture and Storage project associated with oil sands, which captures a million tons per annum of CO2, to address that. So it's entirely consistent with our advocacy with where we have to go with the price of carbon. So I don't see these projects as different, I see them as fully consistent.

S: A lot of universities around the country are proposing what are called ‘Fossil Fuel Divestment’ proposals. How would you respond to that?

M: I think it’s an incredibly simplistic argument. Here’s my thought process on that program. First of all, think about what you really intend to accomplish. If it's a symbolic move, which is saying that symbolically, this is our way of showing we want to transition, then fine. But where it’s overly simplistic is that this is not about everything being fine if we just turn off the taps of oil and invest in a bunch of renewable power. If you break down the doors, the scale of the system, the time it takes to produce, the fact that you have very, very poor countries that have the opportunity, through the development of hydrocarbons, to bring prosperity to their country, you can’t just ignore that.

There’s another moral question on whether you should allow them to generate that power or not. So there are those elements of course, but it currently ignores the fact that it’s a very complicated system that will take time and effort to implement. I think those efforts are better spent getting the right policies in place to allow that transition to happen.

Sasha Klebnikov is a senior studying mechanical engineering. He serves as the editor-in-chief of the Penn Sustainability Review. Long fascinated by energy and sustainability, Sasha plans to work at Royal Dutch Shell's Deer Park Refinery & Chemical Plant in Texas this coming summer.