

THE LEADING OIL AND GAS PUBLICATION IN THE MIDDLE EAST SINCE 1996

ISSUE 245 / NOVEMBER 2017

Pipeline

OIL AND GAS MAGAZINE / WWW.PIPELINEME.COM

Official Media Partner



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TOTAL LOOKING TO THE FUTURE

Exclusive: Patrick Pouyanné
Total's Chairman and CEO
talks about how the French
oil major is looking at new
energies and is betting on gas
as the fossil fuel of the future

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TOTAL LOOKING TO THE FUTURE

Total's Chairman and CEO Patrick Pouyanné in a wide ranging exclusive interview with *Pipeline Magazine's* Julian Walker talks about how the oil major is planning for the future by looking at new energies as well as betting on gas as the fossil fuel of the future. The French IOC will push for profitable growth by remaining disciplined and ambitious at the same time

Total has strong ties with ADNOC. How do you see this relationship evolving in the future?

Our partnership with ADNOC has quite a special place in Total's history. Renewing the ADCO (now called ADNOC Onshore) concession in early 2015 was a key step for us and for our partnership with ADNOC. The oil business in Abu Dhabi fits well with Total's overall strategy. Indeed, one of the pillars of our strategy is to have access to low-cost oil, with low breakeven, whether it is onshore or offshore. In addition, I would say that Total was born in the Middle East in 1924 and that we came to

Abu Dhabi in 1939 for a 75 year concession. So in a certain sense, Abu Dhabi is part of the DNA of our company. It's not a question of being "emotional," but loyalty to a country that matters.

You have been very active recently in the Middle-East, against a backdrop of geopolitical tensions. How do you manage working in the region?

Again, the answer lies in the identity of our company. Total is a diverse multinational company, a mosaic of more than 100 nationalities that does business in an open economy. And our job is to do the best for each country in which we operate. Since 1924, when La Compagnie Française des Pétroles first produced oil in Iraq, a "pioneer spirit" has always propelled Total beyond its domestic borders. This pioneer spirit is now part of our values. Total has strong legacy positions in all the Middle East countries and our first duty is to be excellent in each of them so as to honour their trust. That's our philosophy. The role of a company like Total, which is a commercial company, is to build bridges and not walls.

How do you see the oil market at the moment, in terms of supply/demand balance? Is the OPEC/non-OPEC deal working?

The market is still volatile even if it is rebalancing





The "Christophe de Margerie" ice-class LNG carrier (Yamal LNG mega project in Arctic, Russia)

month after month. First, because demand is strong, supported by the low prices: +5 million bpd in 3 years! On the supply side, the OPEC/non-OPEC deal is working. The coordinated move by Saudi Arabia and Russia last year was a historic one. It was the first time in the history of the oil industry that Russia accepted to consider cutting its production. Saudi Arabia and Russia are aligned on the strategy on the oil price and the market. I think it's a strong alliance. Pairing the 11 million bpd of Saudi Arabia and the 11 million bpd of Russia represents 25 percent of the market. So the market is rebalancing slowly and it's helped by the OPEC policies. But as far as Total is concerned, our job is not to bet on the oil price, our job is to make our company profitable whatever the price is. So for us, the best answer is lowering the break-even of the company.

What does the takeover of Maersk Oil mean for Total?

This deal demonstrates that we do what we say and that you can be at the same time disciplined and ambitious. We'd been saying that we would look to benefit from the low cycle conditions in order to prepare our future growth. This US\$745 billion move, funded in shares and debt, is just that. Secondly, we said that our future growth will give priority to play to our strengths rather than to fill some

“ Our motto is to deliver energy that is affordable, reliable and clean ”

gaps. And from that perspective, Maersk Oil is a perfect fit: a wide production base in the North Sea, offering synergies to lower break-even (lower than \$30) and an area in conventional offshore we know very well, that will allow us to become the second largest operator in the zone.

With all the talk of new energies, you remain convinced that fossil fuels have a future?

Without a doubt. Have a look at the International Energy Agency's scenario limiting climate change to 2°C. It anticipates that the energy mix will become less carbon-intensive, but oil and gas will continue to play an important role, accounting for more than 40 percent of the mix, compared to 60 percent today. Total will still be an Oil & Gas major in 30 years' time. Without Oil & Gas, rising energy demand cannot be met. But we need to concentrate on low cost resources in order to be able to face markets' evolution. Because low cost resources will be produced! This is why, in the past years, we have been investing to add 4 billion barrels of low-cost reserves to our portfolio. With ADCO (now ADNOC Onshore) at the beginning of 2015, and since then with Al-Shaheen, South Pars 11 in Iran, in Brazil, in the North Sea, etc. And Maersk Oil's production, combined with our organic growth of 5 percent over the next five years, will allow Total to join the "3 million barrels club."

It doesn't worry you that oil and gas is a declining market?

Oil consumption will peak sometime, that's a fact. What it means, is that the most expensive oil will not be produced. Therefore, it is important to focus on producing the "low break even" oil, in other words the competitive oil. Strengthening the competitiveness of the oil we produce is what we have done lately. Typically, by investing in the Middle



Construction of an LNG plant (Ichthys LNG mega project in northwest of Australia)

East, where the barrels are very competitive. And also by pairing Total's and Maersk Oil's businesses in the North Sea: we drive down our breakeven, to lower than \$30 per barrel, and create the North Sea's second operator. And bear in mind that on the other hand, gas is a rising market.

Is that why Total has been aggressively developing its LNG and gas strategy?

Exactly. There is a rising demand for gas, stimulated by the increasing flexibility of the LNG market. Gas is the fossil fuel of the future. It is flexible and an ideal partner for renewable energy, which is intermittent, and will remain so until the industry finds a workable solution to store the energy produced by renewables. Promoting gas is a must. But to be effective in this market, you must be an integrated player. Producing gas is not enough, you must be able to open new markets. Hence our drive to be able to quickly and flexibly answer new demand, for instance by building FSRUs, as we did in Pakistan and Ivory Coast lately.



Yet a couple of weeks after the Maersk Oil deal, you bought into Eren RE, in a move that seems to indicate you are diversifying your portfolio?

Yes, because our ambition is to remain an energy major in 20 years and we think we need to position ourselves today on these new energies which will offer high growth. Total is not a new comer in new energies. Total has been a pioneer in the low-carbon sector, through SunPower, which made us a world leader in solar and through Saft, a world-class battery maker and storage specialist. And now Eren RE, which will be renamed "Total Eren," will develop wind and solar power capacity and target 3 GW in 5 years.

How quickly do you intend to diversify in these new businesses?

When we went to face our investors in September, I got the feeling that they understood the bottom-line: our ambition is to become the responsible energy major, and to prepare Total for the future. We are a 100 year-old company and intend to still be around in the future. This is why the company has developed its 20-year vision, around our motto which is to deliver energy that is affordable, reliable and clean. Total is anticipating the changes in the energy mix, which we welcome as an opportunity to grow. Our vision implies that low carbon energies will account for 20 percent of our portfolio in 20 years. But we only invest where we see a business case and with exactly the same capital discipline as for the rest of our assets. We aim for profitable growth.

You recently signed up, alongside Statoil and Shell, to join a CCS scheme in Norway. How significant is this for Total?

Carbon capture, use and storage has until now been limited to experimental and small scale project. Total has been a pioneer with its own pilot in Lacq, in the south of France, which helped ascertain the validity of this technology. This Norwegian project is exciting, as it is the first of its kind on a commercial scale. It is very important for Total, a company that integrates the climate challenge into its strategy, to be part of it. The aim of the project is to develop a viable and reproducible commercial CCUs model, in view of carrying out other major projects around the world. We're glad to be partnering with top companies like Statoil and Shell. CCUS is critical to help reach the goal of limiting the rise of temperatures

DELIVERING CASH-ACCRETIVE START-UPS

→ 700 kboe/d additional production by 2020

Major start-ups % progress

		kboe/d	Share	100%
2017	Kashagan	370	16.8%	<div style="width: 16.8%;"></div>
	Moho North	100	54%	<div style="width: 54%;"></div>
	Edradour-Glenlivet	35	60%	<div style="width: 60%;"></div>
2018	Libra Pioneiro	50	20%	<div style="width: 20%;"></div>
	Yamal LNG	450	20%	<div style="width: 20%;"></div>
	Fort Hills	180	29%	<div style="width: 29%;"></div>
2019	Tempa Rossa	55	50%	<div style="width: 50%;"></div>
	Ichthys LNG	340	30%	<div style="width: 30%;"></div>
	Timimoun	30	38%	<div style="width: 38%;"></div>
2019	Kaombo North	115	30%	<div style="width: 30%;"></div>
	Egina	200	24%	<div style="width: 24%;"></div>
	Iara 1*	150	22.5%	<div style="width: 22.5%;"></div>
	Kaombo South	115	30%	<div style="width: 30%;"></div>
	Martin Linge	80	51%	<div style="width: 51%;"></div>
2019	Culzean*	100	49.99%	<div style="width: 49.99%;"></div>
	Johan Sverdrup 1*	440	8.44%	<div style="width: 8.44%;"></div>

* Subject to closing

2017 Strategy and Outlook

to +2°C, it is at the heart of our drive to become the responsible energy major.

How much emphasis is Total putting on R&D?

Last year, at Group level, our R&D budget was \$1.2 billion, of which \$500 million was spent by our subsidiaries Hutchinson, Sunpower and Saft and new energies. If I take oil and gas, our core sectors, it was about \$700 million and 10 percent should be dedicated to CCUS. Technology is absolutely key, and we are maintaining our R&D investments, despite the drop in crude oil prices that started in 2014. Our spending has even increased by an average of 5 percent per annum over the 2015-2017 period. But it will come as no surprise to you if I tell you that the drive for innovation is not just about spending money, it's about spending it right. Innovation is made of technological breaks that require you to spend money, and of a number small things, that can be costless.

So in your mind, there's more to innovation than just R&D?

Innovation and R&D go hand in hand, but are not exactly synonymous. Innovation is not just about products. It is also about the right frame of mind, having an open attitude towards the new challenges that come our way, new work methods and more. This is why I think innovation involves everyone, and everyone is a potential innovator. Total's history goes back almost a century, and the fact that we are still here is testament to our ability to develop new concepts and reinvent ourselves.

How do you approach digitalisation?

I like to joke that you can't digitise oil or gas. They are hard commodities. But what we see happening is that a lot of services related to this business can be digitalized. For instance, we are launching a gas and power distribution service in France that will be available through an online platform. It's easy, because

Average Total cash margin at 50 \$/b

CFFO -\$/boe

25

~2X

Production base

Start-ups from 2017

Maersk Oil cash margin in line with Total start-ups



Patrick Pouyanné Chairman and CEO of Total meeting with H.E. Dr Sultan Ahmed Al Jaber CEO ADNOC Group at ADIPEC 2016

“ The oil business in Abu Dhabi fits well with Total's overall strategy ”

customers now expect this type of service to be easy. Being digital-based, the service will be very competitive. It's a great example of how digitalisation can make energy more affordable. In the solar business, we are seeing more and more customers being drawn to distributed systems, where a solar panel on their roof is paired with intelligent software, helping them manage their consumption. Digitalisation is spreading as our customers are getting more familiar with it. They are starting to expect us to be able to deliver in digital form. So it is really a topic that we are taking seriously. I don't see it as a threat; I see it as a field offering opportunities

Are you betting on artificial intelligence?

Artificial intelligence is a tool, a means to an end. At Total, we need to acquire and process all kinds of data — from seismic acquisition or about our customers or the way our plants operate. Processing data is slow and complex, even for Total, which has the industry's most powerful computer, Pangea. So I believe artificial intelligence, big data management, machine learning, etc., have a role to play there. They are productivity enhancers, that's for sure. Machines can replicate, accelerate processes. But at Total, a company of scientists and engineers

through and through, we will always need the creativity and insights of the human mind.

The theme of ADIPEC this year is forging ties and driving growth. How does that relate to Totals' business?

In this industry, your competitors are also your partners. Primarily, we work together, not against each other, because we need a collective drive to face the challenges that lie ahead. I've mentioned our partnership with Statoil and Shell on CCUS and I've mentioned our long cooperation with ADNOC. I could mention many more. This industry is all about forging ties, sharing experiences and coming out stronger together. This is why I value the opportunity to attend ADIPEC so much. You get to meet your peers, exchange ideas and insights, listen to inspiring talks about the industry's challenges. I always look forward to the event, and always leave full of ideas and energy, and very optimistic about our industry's future.



Tension Leg Platform on the Moho Nord project (Republic of Congo)