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FP.PA - Full Year 2018 Total SA Earnings Call

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OVERVIEW:

Co. reported 2018 adjusted net income of $13.6b.

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PRESENTATION

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Good morning. Good morning, everybody, for traditional state of union. It is season here in (inaudible) for either the outlook that I will present you together with a -- your preferred [P2], and I will say together as well with all the executive committee members, who are today in the room and will join us for the Q&A session.

This tradition will be a little varied. There will be some novelty like always into town because, this afternoon, after if you agree to stay with us, after lunch, we'll innovate by presenting you our first-ever energy outlook 2040 markets on all markets, gas -- natural gas markets and power markets and will be followed by our climate presentation, which logically comes after those market trends.

So -- but let's begin, first, of course, with these results and outlook presentation. You will have no surprise, I think, as always, there's in line with our message. We think we have demonstrated in the last years, and 2018 was another proof that we are consistently executing and delivering onto our strategy. And so it's another year, I would say, of strong delivery on most if not all our objectives, and in particular, outstanding production growth, more than 8%, finally. So you were right last year when you told me "You're a little shy on your growth." So we'll not be shy for next year, you will see.

But also, not only -- and there is no change in our speech today. It's not volume above value. It's value over volume, and -- but also a strong profitability ratio. And we are pleased to see that our return on capital employed is next to 12% this year. Of course, we are at $71 per barrel, but it's a strong improvement. And all that has been done because we also managed to -- we maintained also a strong discipline of spendings and CapEx and OpEx.

This growth and discipline allows us to have growing cash flows, and it underpins the plan we delivered to you last year in the same room, in February '18, about shareholder returns. We executed it, and we have a strong visibility, which will be the main message again today, like I delivered to you in last September: strong visibility, a better growth -- cash flow growth, which underpins our higher shareholder returns.

We have also, of course, in 2018, continued to build the future of the company. And we have this strategy, which is to integrate the value chain of all -- of natural gas and our low-carbon electricity, which is more material today after the various M&A business we have done last year. And so we have in our hand an attractive portfolio to deliver this strategy post-2020, and one of the -- you will see, by the way, that our renewables or reserves has been quite -- is quite high. So no parity for the next year, for 2019. We'll, of course, deliver this production, and with most of the projects that we'll launch, projects should deliver the cash flows, shareholder returns but also to launch the new wave of future projects.

So just before I leave the floor to Patrick to describe you the results, a few words, as always. First on safety. I like the films that you've seen. Safety, of course, is a question of human behavior, but it's also a matter of technology. And it's nice to see that all these AI technology can be applied to safety, and I think, not only in a smart way. And there is a strong enthusiasm about the -- among the teams in the company. So question for us now on this AI story and digital stories is to be able to scale it all this proof of concept.

But in terms of safety, I think this slide is interesting. As we -- on the right-hand side, you can see. And we took the example of Saft. We acquired this battery company in 2016. Around 4,000 people working there. You can't see, but the total recordable injury rate was quite high, above 12. And in fact, if you would have put on the slide 2014, 2015, 2016; it was 12, 12, 12. So no improvement in Saft.

We came in. We told them this is clearly not acceptable. We need to implement in your company the same way we work and the same recourse, by the way, one of them being that total recordable injury rate is an objective and as an incentive to people. And you can see, and when you speak about safety culture in the company, I think this is a very good example and demonstration, but in 2 years, it went down from 12 to less than 3.

It seemed to be impossible when we told them that last, if I remember, but it's a strong discussion every year, and I'm convinced they will reach a level of 1 that we have in the company. Because a company like Hutchison, which is another manufacturing company in the group, is less than 1. So there is no reason to -- so let's prove it. When we speak about value and culture, this is really -- this is viable.

And so those the results, like you can see, at the group level, we are plateauing at 0.9. We have set a target of lower than that for next year because we think there is no reason to stay there at this level. There are some peers which are a little better than us.

Rest of the businesses are good, but there were some shadows. In particular, we suffered an accident. There were 4 fatalities this year: 1 driver in Ethiopia in marketing business; 2 operators in an explosion of a storage on a depot in Egypt, clearly about mismanagement, mis-operation; and 1 (inaudible) in Congo, in E&P activities. So this is much too high. We have -- and of course, it's proof that we need to permanently remind to everybody and to -- that safety is a value and is a top priority.

So after that, few or 2 words about the markets to set the scene. Oil market, I will not give you any guess about what will be the oil price. Everybody is wrong in this market. We have also the strong volatility in 2018, pricing going up to $85 and in 1 month going down to $55.

I think there are some fundamentals, which makes me optimistic, I would say. First is that the demand is continuing to grow at a high pace, in particular, because we observe a sensitivity to the price and saw it $50, $60 per barrel. The International Energy Agency is announcing first 1.4 million for next year. By the way, we just reached the 100 million barrels of oil per day in the last quarter of demand. So the demand is there.

Of course, there are some, I would say, question marks about the impact of trade wars on the emerging market growth and instability of financial markets. But fundamentally, what we observed is that when the price is reasonable in the $50, $60 range, emerging markets, which need more energy, in particular, Southeast Asia, Africa, are -- we have a strong demand.

On the supply side. It's of course, I would say, some trends there -- opposing trends. I think OPEC countries, Russia have taken a good lesson in 2018. In June, they tried -- they thought they were able to stop quota of being -- relaxing the quota. We've seen the impact there, also the impact on the market. So the decision we announced in end of November on breakdown being with Saudi Arabia is a demand we executed. They already implemented but also the other countries.

Of course, we have key countries like Venezuela, we'll not comment on it now, which are not in a very good shape to increase our production; or export from Iran. People have been surprised on the high side, but the decision of the U.S., maybe we'll see some restrictions coming by May.

Libya is up and down. The industry, globally speaking, still does not invest a lot even if it's true that $1 today is, in terms of volume of investments, is much more than the $1 yesterday because the costs have been driven down by 30%, 40%. And we have, of course, the U.S. shale supply, which today, as -- we've seen a big growth in 2018. There are bottlenecks of pipeline. Bottlenecks will be out by second half of 2019, most of them. So we should see more U.S. shale oil coming into the market. So we are opposing trends. So it's difficult to anticipate. I will not do it.

We continue to drive the company by sanctioning the projects at $50 per barrel. We have -- keeping our permanent eye on the breakeven and the $30 per barrel, $50 with dividend. So there is -- fundamentals are strong because it's our jobs to -- we'd like to be excellent of what we control. And then as the prices are higher, we will be able to deliver, of course, higher returns.

One market which is clearer to us is the LNG market, where, clearly, we are always short of forecasting the increase of demand. And when I look to the last 3 years, it was -- this year has been again 10%, was 11% last year. So it was 5.9% as an average. We always say it will be 5% for the next 5 to 10 years, but in fact, for the time being, markets are growing very quickly, in particular, driven by, of course, the policy in China.

China has grown again this year by 40%. It was 40% last year. It was almost 40% 2 years ago. So it's -- I don't know if it's permanent, but it's -- and anticipation are still very strong. Natural gas and the LNG mix of China is still low. But for, I will say, environmental issues, air quality in the cities of China -- big Chinese cities, very strong momentum for LNG. 55 million tons have been imported there this year.

Japan, still stable at around 80 million tonnes despite the fact that nuclear is a little more available. It should be stable. But we have other countries, like India, which have seen a growth also of more than 30% this year and reaching 25 million tonnes. So we have a strong momentum there.

And with all the environmental trends and the fact that LNG is more and more a commodity, many points of productions, so easier to -- also to be cost-efficient in term of delivery to the customers, makes us still quite optimistic about this market that are by the way, it's an axis of the strategy of the company.

And you can see that, on this, on the other side, that there is, by 2025, if you want to continue this demand -- to match this demand, we have room for another 100 million tonnes of projects and another 150 million by 2030. So of course, there are many projects around the world, but it's -- there's obviously room there to develop low-breakeven projects in LNG.

So having said that, to set the scene for the markets, I will leave the floor now to Patrick to give you the results of 2018.

Patrick de La Chevardière - *TOTAL S.A. - CFO*

Good morning, everyone. I'm quite happy to be here once again. The news is good, and you know when the news is good, the job is easier.

Let's have a look to the strong result. We are continuing to deliver consistently strong result with 2018 adjusted net income increasing by 28% to $13.6 billion. The E&P segment, at the bottom of the chart on the left, increased its contribution by 71% while Brent increased by 32%. And this reflect, of course, the benefit of the 8% production growth and also the benefit of our portfolio management.

You can see on the left, also, the new integrated Gas, Renewables & Power segment that we will give you the data quarter-after-quarter. It's a new reporting format. It increased its contribution largely on the strength of better result for integrated LNG and natural gas. But we can also say that GRP, Gas, Renewables & Power, without the LNG, delivered a result 56% higher in 2018 compared to 2017.

In contrast, of course, you know the environment for Downstream was weaker. Nevertheless, we are well positioned. And the combined Downstream generated $5 billion of adjusted net income with the ROACE above 25%. And basically, total Downstream is the best-in-class.

Let's have a look -- sorry, I did not comment the right side of the slide. On the right, you have the average capital employed, where TOTAL is close to 12%. And once again, it's the best-in-class. This reflects, in part, our efforts to reduce our nonproducing asset and capital employed by half from 2014. We are around 24% today.

Let's move to the cash. Cash flow is an important metric for us. Our new high-margin Upstream project are making a strong contribution. We generate $24.7 billion of cash flow from ops, coming from Upstream, of course, an increase of 54%; and Downstream, up to $6.5 billion.

Working capital, reversed in the fourth quarter and basically is neutral over the year. Our portfolio is quite resilient to the long time, you saw that the past year, and is increasingly able to capture the upside.

The cash outlay, we are about in line with the guidance. CapEx was $15.6 billion; first-year buyback was $1.5 billion; dividend with the 3.2% increase was at $7.7 billion. And of course, we are investing in the future. On an organic predividend basis, we have reduced breakeven to less than 30 billion -- sorry, $30 per barrel.

Let's move to exploration. From the left to the right, we start with some positive news this year from exploration. The budget is stable at $1.2 billion, and in 2019, with the same amount we do. Thanks to cost structure, we will do more well in 2019 than in 2018.

On the left, following the Glendronach discovery last year, we announced the Glengorm discovery in January, which appears to be the largest gas discovery made in the U.K. over the past 10 years. And remember that Glengorm, we acquired it from Maersk, which is adding value, of course, to this acquisition.

Next, we opened new world-class play offshore of South Africa with the Brulpadda gas condensate and light oil discovery with the potential resources of about 1 billion barrels. On the right, thanks to our partnership with Novatek, where we own close to 20%, 19.6% exactly -- 19.4%, sorry. Novatek made one of the largest discovery of the industry in 2018 on the Yamal Peninsula. This underlines the importance of Russia as an LNG supplier.

While exploration was playing a great role, we highlight the significant success achieved through M&A. 2018 was extremely active in term of M&A, and we grew in high grades of 2 periods of base. The Maersk Oil acquisition, which we did with shares, was by far the largest for us last year, $7.5 billion. It contributed strongly to the 2018 1P reserve replacement that we will show you.

In term of M&A for E&P, we sold $3.2 billion of asset with the breakeven at around $40 per barrel, and we acquired by $4.5 billion in cash of assets of higher-quality low-breakeven below $30 per barrel assets. We basically reallocate capital employed from asset with a breakeven above $40 to asset with a breakeven below $30. This is including Maersk Oil.

We move at the right time and at the right price. The net effect was to contribute to the 1.4 billion barrel increase in 2P reserve, which represent for us 20 years of production. Our portfolio management has played a role of -- in concentrating our 2P reserve within 8 countries, including 4 OECD countries, which are Australia, Canada, Norway and the U.S.

Then have a look to the Downstream. Downstream, I remind you, it's a best-in-class downstream among the major reserve oil [chief], above 25%. We show a cash flow contribution of $6.5 billion, in line with our guidance of about $7 billion, despite the volatilities, weaker environment. And I'd like also to remind you that, since 2015, we already sold $8 billion of assets in the Downstream. So achieving $6.5 billion in a weaker environment after having sold $8 billion of assets is quite an achievement.

You can see the well-balanced split on the right between Refining, Chemicals, and Marketing & Services of the cash flow. We are managing this balance of diversity and resilience from the future by investing in advanced feedstock petrochemicals in core area for the Refining & Chemicals and fast-growing new market for Marketing & Services. We believe that we have the best-in-class downstream, and I'd like to point out that, in 2018, the profitability of Refining & Chemicals was 31%; Marketing & Services was at 25%.

I do consider that the balance sheet -- the strong balance sheet is an important part of supporting our strategy. We have a very strong balance sheet despite of all the acquisition we have made. Gearing, far below 20% at 15.5%. It's -- I'll remind you, also, it's an element of the executive composition scheme. I am happy to report that this gearing is completely under control. On the right, you see and you know that there will be a new IFRS 16 to be put in place by 2019. Side effect of this IFRS 2016 (sic) [IFRS 16], the gearing will increase by around 3%; capital employed by $5 billion to $6 billion; and the cash flow by about $1 billion.

So this is a summary of all the objectives we set and what we have delivered. 2018 was highlighted by very successful portfolio management in a very volatile environment. Two points I'd like to have -- to show you specifically: We outperformed on cost reduction. We were a little short on OpEx at $5.70 per boe instead of $5.50, which was the target. This is due to the integration of Maersk, but we will have this $5.50 target for 2019.

Downstream cash flow, still strong in term of free cash flow generation; and profitability was good, also, due to good operational performance. The strongest performance obviously was the production growth at 8%, and now the stage is to set for 2019 to be an even more impressing year. And of course, we started our share buyback program by buying $1.5 billion.

So once again, it's a slide we show you every year, where TOTAL is obviously the best. We specifically, dedicatedly choose the criteria: Production, Downstream ROACE, group ROACE, which is the best-in-class; gearing, of course. And that's a great achievement to be made and made by TOTAL for the past 3 years, every year we show you this slide.

Compared to our peers, I'd like to say that the story had been largely derisked. The executional risk for production growth is minimal at that point. I remind you that our objective is to create value and that the increase of volume is a secondary effect. So the 9% production growth we post for 2018 is a secondary effect of our main target to create value. And of course, we are on track to the shareholder return program.

As you know, I am retiring this coming summer. This will be my last presentation. I became CFO in 2008, so it was a long time ago, 11 years. I think I'm done at that time. So it's time to pass the floor to Patrick, and, tentatively, to Jean-Pierre Sbraire in the future.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Patrick is not gone. He's still there. I still hope you'll say, yes. But I will (inaudible) reverse for the next AGM and Q2 results. But yes, it's true. Because there was news in the newspapers. March, said December. No, it's during summertime. And Jean-Pierre, which you're beginning to know -- I think he should probably be the room, he's there -- will, yes, will be the next CFO of TOTAL. It's clear. It's approved by the board. And it will be made public very soon.

But let's work. And we'll have a real opportunity to say to Patrick all -- but we appreciate, all of us, and I know also our shareholders. Obviously, we have been fortunate to have him during the financial crisis, when he took his job and then the collapse of the oil price with myself. And so we'll have opportunity to celebrate that, even if we'll be sad to see him leaving the company.

But -- so I'm coming back to -- so for 2 parts: the first part will be to tell you what is exactly the -- I already describe it in my introduction, but the program for the next year; and then to give you -- to update about the strategy for 2020.

So the keywords, like we said just before, is discipline and cash flow growth. I would say it's growth -- production growth and profitability, again. But this is our cash flow, of course. Our production growth is feeding our cash flow growth, and so it will feed our return -- IR return to shareholders.

The cash flow, yes, it's outstanding, and like Patrick said, it's derisked. So we are, in fact, comfortable to say -- to tell you that we'll be -- do more than the growth of 9% because most of the key projects are started by end of the year: Egina is December 30. That sits very nice with us; Kaombo

North -- and will be followed by Kaombo South by middle of the year. The FPSO of Kaombo South is already anchored on the site, so we are on time; and of course, the 2 large projects, LNG projects: Yamal, which has managed to start it the last trains, a third train, 1 year in advance compared to our plans. So of course -- and this is done in a very smooth way. It's a remarkable achievement by Novatek teams, together with our engineers, which were there in Yamal; and Ichthys was a little long, but now it's done. At a higher cost, but it's started. So for us, this represents more than 100,000 barrels per day, Ichthys, or 26%. And the ramp-up is moved today. So that means that most of this growth is in our hand.

We have some few start-ups of giant projects coming in front of us: Kaombo South, I've mentioned; Culzean from the Maersk Oil portfolio in the North Sea; Johan Sverdrup, our operator is better informed than myself, but I'm confident they will deliver this project by -- as they said, by their timetable; and Iara 1 is in Brazil, on which we expect also as a start-up in this year.

One of the characteristics is that we'll have a strong growth of LNG production, more than 40% increase in LNG, which is the reason why we decided to change our reporting, to give more clarity on the LNG figures. And so you will see the production being reported to you through E&P tomorrow and from iGRP: E&P being most fundamentally all the oil production plus the domestic gas; iGRP being all the integrated gas LNG. But it will give you more information about this growing business as it is one of the key areas of growth and investment for us in the future. I think it's good that you have a better -- more data about this segment.

Another characteristic which is underlying the production growth of more than 9% is that, as we told you, we have some short-cycle projects, and we begin to sanction some of them. It will contribute 60,000 barrels per day, which is a way, in fact, to manage our decline rates, in fact; and which were quite low, around 3%. So this is an outstanding production growth. We're confident the 5%, [17, 22] but I will come back on this later in presentation.

It's combined with keeping the capital investment discipline. I got some questions from you in September, "Do you change your discipline with all you know?" And by the way, we're right because then we see the price going down. So we keep the guideline of $15 billion, $17 billion. In fact, for 2019, we are on $15 billion, $16 billion, including $1 billion to $2 billion net acquisition for 2019. Last year, we told you it was an average of net acquisitions, so I mean, acquisition minus sale, around $2 million as an average. We've done 3 this year, so we target a little lower this year of $1 billion to $2 billion, giving priority to more organic CapEx.

You can see with the split -- and there's one of interest, I think, of the new reporting we put in place, is that you have a more balanced vision of the CapEx figures. And in fact, we invest more as 20%, $3 billion into Downstream. It's quite stable. We invest $4 billion in iGRP, integrated Gas, Renewables and Power. It's $2 billion to $3 billion for LNG and $1 billion to $2 billion for low-carbon electricity, more or less, depends on the year. And E&P -- traditional E&P represents around 55% of the investments.

So we are in line with the guidance. We've maintained discipline, and this will allow us to prepare the future growth of the company, as I will show you.

We keep in place all our cost-savings program where, again, despite some discussions, where the price was higher. We are right to do that. In fact, we even delivered more than what we showed you last year. We were -- our target was above $4 billion. We have delivered $4.2 billion. We are confident for 2019 with the target of $4.7 billion, which means that our program was targeting globally $5 billion of savings between 2020 and 2014. We'll probably, at the end, land above the $5 billion.

And Upstream and Downstream are both contributing to these efficiency gains. And it's obvious results in fact. Because in our industry, again, so margin -- the defining margins or the marketing margins or upstream price, we do not -- does not follow the inflation. And so as we have some costs, in particular, our salary base, which take inflation, we need to permanently look for more efficiency. And it's possible from -- for also, by the way, all these digital technologies can help us and will help us in the future to manage these savings.

You can see that we are best-in-class in OpEx per barrel. It's -- we are around $5.50 per barrel. It's true that Maersk Oil in the North Sea was a little more expensive, but it's minimal, in fact, when you look at the impact. And we have internal targets but because of the savings but also because of the synergies on Maersk Oil, on which we are online, in line to deliver the $300 million cost synergies, which will help us to go down to reach 5.5% again. We have a competitive advantage that we want to maintain. It's also a choice, as Patrick told you, in our M&A activity of selecting the

assets which are fitting with the strategy and fundamentally, which is to permanently look carefully to a breakeven of the company -- price of the company.

So we have, thanks to this growth and thanks to this discipline, a very clear visibility on the cash flow growth. I'll just update the figure we gave you in September for 2019. You can see on this chart that we'll have more debt-adjusted cash flow at $60 per barrel in 2019, but what we -- so $26 billion we delivered in 2018 at $71 per barrel, in fact, more or less -- a little less than $2 billion above the figures of this year. In fact, there is an increase of $6 billion of cash flows between 2017 and 2019 at $60. And 2020 will be $8 billion. So this is why we are confident and we put in place a more active and often dynamic shareholder return policy.

This cash flows is coming again. It's visible from projects which started already: Kaombo, Ichthys, Egina represent, in 2019, $3 billion of additional cash flows at $60. Like the acquisition which have been completed now, represent $2.5 billion, it will increase to $3 billion next year with some start-ups, which I've been mentioning. And we have a sensitivity to the oil price, which is increasing. If we realize the liquid price an increase of $10, we have $3.2 billion extra cash flows.

So this -- came to this slide that we introduced to you last year for the first time with the board discussions and approval, which is priorities the cash flow location. There is no change. We execute it, and we gave you that picture for the next 3 years. So we are in this plan.

Capital investments, again, we are in the range. It's a priority of the company. Then the dividend increase, second priority. So we announced that, for 2019, we intend to -- we have -- we will increase our quarterly interim dividends and then to buy another 3.1%, 3.2%, EUR 0.08] per year, which will make 6.5% globally from '17 to '19. And we will reach the 10%, as planned by 2020.

Gearing is, of a sense, part of a strong balance sheet, our third priority. Patrick explained to you that gearing is under 20%, under strong control. And I hope Jean-Pierre will keep the same policy. And of course, the board is adamant to maintain our grade A credit rating. And as Patrick said, by the way, it's one of the key parameters of the executives' valuable pay.

And then the share buyback, which has been introduced last year as a way to return more to shareholders. If the price is higher -- we told you beginning of February that we were planning to buy back 1 billion at $60. The price was obviously higher, it was $71, so we increase the buyback to $1.5 billion. And by the way, you've seen in the chart of cash flow allocation that Patrick showed you that we generated $26 billion, $1 billion for payments of interest payments. So $25 billion. And the $25 billion were perfectly split to $16 billion for capital intensity -- $15.6 billion for capital investments; and all the rest returned to shareholders. So this was executed exactly like planned. So we increased it. And this year, in 2019, at $60, we'll buy back the same amount that we've done in 2018 at $71 for $1.5 billion. If the price is different, we'll have the same flexibility for returning more to shareholders through share buybacks.

At this stage, there is no reason to change the $5 billion program. We'll see what the price will be in 2019, but again, the last 3 months have demonstrated to us that we need to be humble about this type of forecast. But we are exactly executing the shareholder return plan as explained last year.

So having said that, so there is a strong visibility again and confidence of the Board of Directors and myself as Chairman and CEO, and of course, all the executive team about what will happen in the company for the next 2 years. We look forward for our duty today and -- to prepare the future growth.

And of course, this future growth -- again, you know that slide. I would present it again this afternoon, but it doesn't change. It's fundamentally, the strategy of the group is in line to potential anticipated market trends. We don't know if the world will be able to make a 2-degree scenario. There are some doubts around the world. But in -- whatever will happen, there are some market trends in term of new technologies, which we need to take into account. And that means that we need to focus on oil, which is, again, low-breakeven oil because we could face some situation where the oil demand will be slower than decline.

On the contrary, there is a strong space for seeing a growth for the gas -- natural gas. That's why we invest more and more in all the chain of the gas value chain. And the overall characteristics of the demand of energy is about electricity. Demand should almost double in the next 20 years, coming either from natural gas or from renewables. So it's why we invest in this low-carbon electricity business.

We also play to our strengths when we speak about oil and gas, and we have some areas of expertise. We want to stay integrated company business model, so we are of course producing -- in particular, we have a strong footprint in deepwater, and I will come back on it; but also, LNG for natural gas; and then petrochemical, which is the integration Downstream and retail and lubricants. And we have some key geographic areas where we have put most of our efforts, where we are very confident and our teams have the right skills to develop projects in a profitable way, which is Africa where we are market leader; Middle East and North Africa, for the last 3, 4 years, have demonstrated as we are a partner of choice; and the North Sea, which we have enforced with the Maersk Oil acquisition.

We have been, that's true, very active in the last 3, 4 years. We acquired $24 billion of assets. We sold $16 billion or $17 billion of assets in cash, by the way. It was -- we bought $16 billion, $17 billion. We sold $16 billion, $17 billion. But on the top of it, we had the shares and debt acquisition of Maersk Oil, which allow us to make quite a lot of move or rotation in our portfolio. And among the -- in the production, the E&P production, the [freemium viable] prediction of 2019, more than 20% of this production has been acquired during the last 3 years, but some have been sold as well. So we acquired 7 billion barrels of reserves of less than $2.50 per barrel as an average. They would we generate more than $4 billion of cash flows, so it's what I showed you on the slide; and with a ROACE of $60, around 10%.

A word about the Engie LNG deal, which was also a landmark deal on this activity -- of M&A activity in 2018 because it allowed us to become, by far, the second publicly traded company in the LNG world. We have a portfolio of 20 million tonnes per year. This would generate $300 million, $400 million per year and a ROACE of 20%. And payout is around 3 to 4 years. So -- and we begin to see the positive effect on our portfolio, LNG portfolio trading management since middle of the year in 2018.

But all of that, of course, all this activity has given us, and Patrick showed you this big improvement of the portfolio of 2P reserves and the 1P renewable rate of 157% is very high. Now we are -- mainly of the activity for us -- and the main focus we have in 2019 will be to clearly sanction all these projects, to transform these reserves and production in order to feed the growth.

We have -- and you know this slide, and I will go through, you have more than 700,000 barrels per day of potential production to be launched by 2020. Just by sanctioning all of that, we have already, in our portfolio, a growth between 2020 and 2025 of more than 2%. Do not misinterpret, but it's a minimum growth that we will do, but I don't think we stopped -- begin to slip. And so we will have opportunity to select more new projects, if they are value accretive, I would say. So we have already embedded more than 2% growth, which is more than the hydrocarbon markets.

When you look to -- and these projects, as you can see, have a weighted average, I told you that we manage the company at $50 per barrel to sanction the project above 15%. Not all of them are above 15% because I would lie to you if I was to tell you, but LNG projects are above 15% or LNG projects are quite capital intensive. But we -- they are -- cash generation is also very strong and stable. So we sanction them on all the parameters. But globally speaking, we are adding this global project would be -- we have a profitability of above 15%, which will enhance, of course, the return on capital employed in the future.

When you look to the map, you can see that we have sanctioned, in 2018, around 7 projects: 3 in the North Sea, 2 in Africa and some in -- Al-Shaheen Phase 2 in Argentina. In front of us, what are the characteristics for the year to come, we have a lot of projects in Brazil. So it will be a deepwater Brazilian year. The Mero 2 which should be sanctioned by middle of the year, it's the Phase 2 of Libra. You know we have $3 billion to $4 billion of reserves in Libra to be developed with at least 4 FPSOs.

We have Iara 3, which is a new phase of development of this license in which we have entered this year for the strategic year with Petrobras. And Lapa 3, which is a new phase of development of the presold field that TOTAL operates now in Brazil, first -- we are the first presold operator. And we will build on it to extend this life of the field. So this is Brazil in the quarter.

We have also characteristic of -- we have some projects in the deepwater in the Gulf of Mexico, North Platte that we operate since we made the acquisition at a nice value of the Cobalt assets. But also the projects which where we are partnered with Chevron. We made a strong alliance on exploring together with Chevron, which is a successful operator in the Gulf of Mexico.

We have discovered Ballymore. We should be able to -- we are launching -- we should be able to connect in the first phase Ballymore to existing Chevron infrastructure. Anchor as well that we -- is another discovery on which we have launched engineering studies and going to sanction that in 2020. So they are good projects.

And the other characteristics as it says LNG on this map, where -- and I will come back on the LNG projects. We have 5 projects in the LNG business that we want also to sanction. So this will be the priority for all of us, for our teams to put in action and to transform all these resource into production.

On the top of it, it's not only this, I would say, medium and long-term projects. It's -- we have also some -- we focus also in some short cycle developments which are very flexible. We have sanctioned, and we plan -- we have and we plan to sanction around 400 million barrels of reserves. We identified more than 1 billion. These are highly profitable projects, more than 20% at $50 per barrel because they are marginals in existing infrastructures. And the CapEx under $7 per barrel. We have some few examples there on this chart. And it helped, of course, to manage the decline rate, which is again the 3%, probably one of the best-in-class.

Integration is important. And by the way, this is a way to illustrate it in this company. In TOTAL, we produce 1.6 million barrel of oil per day. We refine 1.9 million and we market 1.8 million.

When we speak about integration, it's not physical integration. It's economic integration. We are a little of a refiner, but you can see that, economically, we are well balanced, and we intend to maintain this balance along the value chain -- oil value chain.

One field that Pat, I think, mentioned of areas of interest is to grow in petrochemicals, in particular, I would say in advantaged feedstock petrochemicals. You don't see TOTAL investing in any new naphtha cracker because there is no competitive advantage. But you see us moving and being quite aggressive.

And 2018 has been an excellent year, by the way, for the refining and chemical business unit led by Pinatel, Bernard because not only we delivered $4.3 billion of cash flows and ROACE of 31% but also we have been able to launch new projects. So new cracker in the U.S. It has been sanctioned together with Borealis and Nova. It's not only a new cracker. It is also a big increase of PE capacity.

Our success story in Korea with Hanwha, each year, we make -- we built on new capacities, PE and PP based there on propane extension. The propane will be imported from the U.S. And then we have 2 new projects in the Middle East, North Africa region where we can have access to advantaged feedstock, one being in Saudi Arabia, the strong and big -- not very large extension of SATORP. Speak about the $5 billion projects investments. It's a mixed feed cracker with some ethane and some advantaged -- overadvantaged liquids and stuff, which we benefit from the policy of Saudi Arabia together with Saudi Aramco.

And then in Algeria, where we have launched this engineering study together with SONATRACH of a new propane dehydrogenation unit to build on polypropylene business, which will be new for Algeria. Part of it being for the domestic market, but the other part being exported with the knowledge of the teams TOTAL.

I would not mention petrochemical without saying a word about this alliance which has been just announced recently with 30 other companies on the end of plastic waste. I think it's very important when we speak about being responsible. And I think a sustainable development petrochemical by the whole industry and not only the production, producing industry but also our customers together with us think seriously about the way to manage all this plastic waste is a matter of recycling. But it's decision we cannot take alone because we need -- for example, when the plastics a, to be recycled is a color. So we need to convince Procter & Gamble to stop selling to the women of the world pink shampoo bottles because we cannot recycle them. That's very strong. But it's a question of -- just an example of -- and I think this alliance will be strong -- a strong commitment.

Clearly in the world today, it could be I think when we speak about petrochemicals and we speak about the growth of around 44%, one of staple could be this issue of plastic waste. So it's a strong commitment within the company and for the refining and chemical division to develop more projects in recycling also bioplastics as we've done recently in Thailand.

A word about Marketing & Services. 2018 has also been a great year for them because they delivered $2.2 billion of cash flow from operation growing another $100 million like they promised to us. So net result is stable, but the cash flow is a little higher. But also because we've implemented under the leadership of Momar, the strategy we see to enter into some large growing markets in retail. And we are there making some in particular Mexico, Brazil and India. So in Mexico, now we have I think 200 stations with an alliance with local partners we increased the growth to 400.

In Brazil, we make an acquisition. It's an interesting market, the biofuel dominated market. We have made 300 stations. We intend to grow in Brazil. It's not only an upstream business, but this is a large market with source of us downstream market but want to benefit of.

India, we have identified an Indian private partner, the Adani Group, which has been very active and successful in India. And in order to set the JV, which will in fact encompass some LNG regas terminals but also retail network of more than 1,000 stations over the next 10 years in India.

And last but not least, we are everywhere in marketing and services in Africa except the country which is one of the most important one for us in Angola. It's a sign, by the way. It's a sign of the opening policy of the new President of Angola, the fact that we have been able to set this JV downstream, and 50 stations will be shared with Sonangol and with more to come. It's a positive signal for investors, I think, for investments in Angola.

So M&S is steadily growing. The target is around 2.5, 2.6 CFFO by 2022. It's not -- less cyclical -- or noncyclical, which is of course, good for the company.

Then I come to the last part, which is not the oil and gas. It's more the -- even if we speak, again, about the LNG, this new gas renewables and power business, which is a combination again of LNG and the gas value chain, I would say, integrated gas value chain and low-carbon electricity.

So it's true that it's important for me that we can disclose you this type of more precise data because it's an area where we will continue to invest. So growth investment will be around $4 billion per year for the next 2 years. But it's also an area where the growth with cash flow are growing quite quickly. And you can see that, between 2019 and 2018, if you take the high side, which is $70, the white line is at $60, you can see that there is an increase of more than 60%, which is, of course, led mainly by the increase of the LNG production but also by the growing volume of LNG trading we can do since we acquired the ENGIE portfolio.

So we will reach by 2020 a sort of balanced situation, where we should be able to invest new segments, some growth segments around more than $4 billion of cash flows and investing more or less $4 billion. This is now our plans for the future.

LNG focus more precise data with integrated LNG. Again, we grow from a $2 billion, $3 billion in 2020. It's a 60% growth. It's a strong contribution from the 2018 start-ups: Yamal, Ichthys. Cameron will come onstream by middle of the year for the first train. That's what we have in our portfolio.

And you can see that we have also -- I was mentioning 5 projects to be sanctioned, which are all -- which are just quite, I would say, a large task to be done. Two of them in the U.S. together with Sempra. We managed to enter into a discussion, and that's one of the good consequence of the deal with ENGIE is that it's not only joining Sempra and Cameron and Train 1 to 3, but it's entering where it is now utility company in the U.S. to more projects. And in particular, this Energia Costa Azul project, which would give us the position in the Pacific Coast. It's that we would avoid a lot of logistic cost by [those train] from the Gulf Coast through Panama channel but directly for the Pacific coast to China, Japan or Korea, through Asia. We save a little less than $1 per million BTU, which is quite interesting.

But we have also the extension there, of course, of Cameron LNG trains 4 and 5, which could have mentioned Tellurian, which is taking shape. We are 20% shareholder of Tellurian. And I know that our colleagues are progressing on this project. And then we have Arctic 2 together with Novatek, which is moving forward. Feed and sanctions planned by the second half of the year. And then we have Papua LNG, together with Exxon and Oil

Search, which is a key target to be able to finalize the agreements, and we announced the feed as well there in November. We have the technicals team which has today agreed, which is efficient in particular because we will expand in fact the existing plan and not create a new LNG plan.

And then Nigeria LNG extension is probably one of the best projects because there, again, some brownfield projects, and it's a question of the sanction in Nigeria, which might be complex, but all partners are today in line to move on with this project for 7.5 million tonne per year.

About low-carbon electricity business. So 2018 has been a year where we really shape it in a sizable way, and we have a better visibility in what we want to do. It's a segment where we will invest $1 billion -- $1.5 billion to $2 billion per year. It will depend on opportunities. Fundamentally, we have on one side production capacities because we want to be integrated. So a few words of gas to electricity are in fact in our hand because we have signed a deal with [Keke]. We have a new deal coming in -- with Uniper, EPH by the end of the year. And the rest of the portfolio, so it's 30% natural gas, 70% renewable production capacity worldwide.

We have many -- we have several subsidiaries working on that in order to make profitable business. I will come back on that. Then we have some supply training activities. And the marketing, the distribution, we have now 4 million customers in France and Belgium in 2018. We want to grow this base in France and Belgium to 7 million customers with the full direct LNG, which is a very active company. We manage to get this year a number of new customers and to reach our objectives.

A word about renewables because there are many, many questions in my roadshows about, how do you make money with renewables? So let me guess, so it's the business model we apply in the company in TOTAL. It is clear that when you bid to make a large solar farm or an offshore wind farm or onshore wind farm, generally, it's a utility business. A project is around 5% to 6%, 7%. That's true. This is base.

Then of course, price in particular in this environment to which we'll leverage all these projects because when you have 15, 20 years PPA, you can leverage these projects. And so you can enhance the profitability for this leverage. And you can also -- if you are ready to take on your balance sheet the CapEx until completion of the projects, you can then farm down in a very efficient way to financial investors. We've done that on many projects and we managed to reach this 15 -- more than 15% rate of return.

That means at the end of the day, we are to keep 50% more or less of the project. So if I want to reach my 7 gigawatt capacity, I need to in fact develop 15 to get 7. But this way to leverage financial interest rate and then to farm down to other investors, we see some interest to get 7% instead of -- is the way to in the end get an acceptable equity return, which is matching the rest of our portfolio because, of course, for a company, we intend and we have some objective of return on equity of 12%, [$60]. Lease activity should not be of course a burden. So this is a way we want to develop for this renewable business. I hope it clarifies to you how we will manage the portfolio that we have in our hand.

All these strategies contributing to -- and we want to be a positive player to tackle the climate change. We show you this figure. We'll come back this afternoon on this climate section because I know that there's a lot of interest from many investors. We showed you this slide last September.

Our ambition is to diminish gradually the carbon intensity of all the products, energy products we sold to our customers. Obviously, our sales carb-free approach for all of you who understand, who knows that. We want to -- we have the ambition to reduce this by 15% between 2015 and '30 to grow -- by 2040, 25%, 55%, difficult to anticipate because there are new technology. It depends also on the government policies.

We'll come back on that. But fundamentally, the road map is a matter of, of course, being accountable about our own emissions. And this afternoon, I will give you -- we will set a target to our own emissions in order to decrease them and to be committed to that. But also natural gas is part of the future mix and is a positive add-on to the energy mix. It's a good complement to renewables; low-carbon electricity business; biofuels, which are also contributing positively to this road map of lowering carbon intensity of our products. And last but not least, we invest in carbon sink businesses, either natural carbon sinks or CCUS. I will come back also on it.

And being responsible is also a question of -- and we have also quite a lot of this question during the roadshow, do you share the added value of TOTAL? So this is the image of the company, and I think there are many debates today around the world. A company like TOTAL will take an average of 2010, 2018. We generated $50 billion more or less better than average of added value.

Half of it has been reinvested in the company. We are highly capitalist -- capital-intensive business. So priority is clearly to invest in the company, to continue to be able to deliver more energy to our customers, affordable and clean energy.

The second -- and then the other half is more or less a split into 3 thirds, so 1/6 for each of them. In fact, the salaries of employees are a little higher than that. $12 billion were given back to employees, but the employees are fundamental because, see, without them, there would be no profits and no dividends. So that's -- we are not very -- a business which is highly intensive in terms of number of people, but they got 1/6 of that. The states on this period have taken another 1/6 of it. So we are a business where we delivered around $10 billion per year in the rate of taxation. It was lower the last 3 years, but it's increased again this year. And then the dividends, which is the last share, 1/6 of it, around 8 to 9 -- $8 billion per year as an average.

So this is the image of the way we share the company. This company added value and cash flows through our various stakeholders for the benefit of all our 15 million customers that we serve daily around the world.

So finally, as a conclusion to this presentation, I think you are not probably surprised by the message. It's also good to be consistent. It's a message we deliver to investors. We don't try to surprise you. You began to know -- we know our strategy well, so it's a question of execution and deliver. The next years will be clearly a benefit of an outstanding production growth. We maintain our discipline because it's fundamental to [look] with the breakeven permanently.

But we are also doing in the same time growth and profits -- and profitability, which is we're able to combine both because the discipline, of course, helping us with this ROACE of 12% that we manage to reach this year. We have strong cash flows that underpins our shareholder returns. So maintaining the policy on increasing dividend, ending the scrip option and maintain -- and developing the buyback program. And of course, the activity will be also to shape the company for the future beyond 2020 with an attractive portfolio we have in our hands.

Thank you for your attention. And so I propose that Patrick, Arnaud, Momar, Bernard and Namita will join me on the stage.

QUESTIONS AND ANSWERS

Brendan Warn - *TOTAL S.A. - SVP of IR*

So while the executive committee join Patrick on the stage, we got about an hour of questioning time before we pause for lunch at 12:00. If I could remind you we're going to have a lot of questions. If we could have one primary question and then a follow-up. Everyone's available for answering. I'm going to start at the left-hand corner. If I start with Oswald and then followed by Michele and then Thomas.

Oswald C. Clint - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Research Analyst*

Thank you very much Brendan. Patrick, you just mentioned you don't like to surprise investors and you haven't today. But I guess, the one number that's missing through this presentation is the CapEx after 2020. You've shown significant growth projects. All of them fit in your LNG deepwater portfolio. The returns are attractive, but there's no line of sight on the 2021 CapEx, which could be a surprise. So hopefully, you could just talk about where you're thinking at least the Upstream CapEx might end up as we look into the next decade, please. And then just secondly, quickly, on the LNG portfolio, perhaps it's one for Philippe, the $2 billion cash flow going to $3 billion by 2020, the 40% increase in production volumes coming through this year is, it looks like it's just the volume driving that cash flow up. So therefore, are -- you're not assuming any arbitrage contribution as you scale out this portfolio, perhaps you could talk about is that additional upside we should start to think about as the portfolio gets bigger just in terms of modeling?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Okay. The CapEx. The more I give you, the more you want, of course. So this will be for September this year, more precise. But you know we have better clarity on the production. Again, it's -- but let me be clear, this 2%, the math is still the same. And you will maybe end to '17 and not to '16 but not far from that, so it's still the range more or less. We will invest, I would say, Downstream of $3 billion is stable fundamentally. $4 billion for iGRP, I think is the right figure. And with that, we can deliver the projects there. You have some leverage on these projects or its [part]. And then we have to grow if you want to grow by at least 2%. We will be a company that, what we have, 3.1 million barrels of oil per day, so it makes -- takes declined 5, and we need to make 5% per year. 150,000 barrels per day. We take the metrics more or less of 40,000 -- 50,000 barrel per day per -- dollar per barrel per day. You take -- you find $6 billion, $7 billion, plus some maintenance costs, renewable at the end -- renewal of reserves, you'll reach more or less $17 billion. So it's maybe not $15 billion. It's more $17 billion, but not very far different from it. And there is something fundamental to that is because I mentioned it during this presentation. $1 of CapEx this year, it's not the $1 that we spend in the last 5 years. With $1 of CapEx, I make 30% more volume or 40% more volume because the costs are down. And one of the key target why do I say we want to focus now to sanction the project because we -- in the international oil and gas business where we are mainly very [syndicated] in the U.S. shale, but the costs are quite low. We made the tenders recently for Uganda and for other projects. We have been always surprised with what we obtain because there is strong competition there. And so if we can't sanction this project today, we capture this 30%, 40% lower cost. And so when we spend $1, we make the 15 -- I would say, in E&P if we spend $12 billion, it's the equivalent of $16 billion, $17 billion of yesterday. So when we give you a range of $15 billion, $17 billion, it's $21 billion to $22 billion compared to the yesterday. So that's a fundamental driver. Why? I'm confident that we will stay around these type of figures. But again, I take your point, and again -- but to be clear, we thought we told you we have at least 2%. We can do more, we'll see. But I take your point, we'll have better clarity. But again, this is for me the timing is of essence. We need to sanction now to capture these low costs. That's the key priority for Arnaud and his teams. And I can tell you, we are all working hard to launch this Uganda projects, and we will take time on this PNG project because it's the right time to do it. And then we'll keep the discipline. Philippe, about additional upside portfolio?

Philippe Sauquet - *TOTAL S.A. - President of Gas, Renewables & Power and President of Strategy-Innovation*

Yes, so on LNG, our portfolio, as you noted, is nearly doubling between that, '18 and '20. The equity part, so traditional, let's say, liquefaction project are increasing from $11 billion close to $20 billion. And our portfolio is nearly doubling. So the pure -- both LNG trading portfolio from $10 billion to $20 billion. What is clear is that, in the figure that you see, the increase from $2 billion to $3 billion is coming in cash -- is coming from the E&P liquefaction project. And we have for the time being be rather cautious in term of additional LNG optimization. There is some that have been included, but yes, we try to be cautious on that. You know that the optimization arise from market conditions. The second half of 2018 was very profitable in term of optimization from -- at the time when we speak, market is favoring all LNG deliveries coming to Europe in a great way, next time, there is additional demand in Asia or additional cold front in Asia, you will see additional opportunity to optimize. So some optimization, but yes, we can hope that it will be much more.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

But for example, maybe you've seen that in paper, there was a tender in Taiwan for delivering more energy and the 2 companies who make -- who win are Shell and TOTAL. But why? Because we're much more -- we are able today with the portfolio to offer flexible contracts to our customers. And we can optimize the sources of productions and the destinations. So for me, it's just a point, but this market is commoditizing. And it's a larger player. At added value, we'll be able to gain more contracts. So that's an example of what just happened very recently. Other questions?

Michele Della Vigna - *Goldman Sachs Group Inc., Research Division - Co-Head of European Equity Research & MD*

Michele Della Vigna from Goldman Sachs. Patrick, 2 questions, if I may. The first one is on CapEx. If I look at your budget, it looks like, organically, you will spend about $2 billion more in 2019 than in 2018, and I was wondering if you could give us some of the moving parts there, in particular, how much more you will spend on high profitability short-cycle developments. And then the second question is on the LNG market. You project a very bullish view long term. But I was wondering over the next 1 to 2 years as the U.S. export projects are ramping up very fast after a few years of delays and the Chinese demand growth in gas continues but slows down from the exceptional level in 2017 and '18, if you feel that actually, for 1 to 2 years, we could face an oversupply in LNG market before tightening again in the early 2020s?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

So the first the CapEx. It's true, your calculations are very good. It's going from 12.5 to 14. That's clear. I will say in fact, the 14 is not only in particular in LNG because in the figure -- in LNG figures, iGRP will benefit for another $1 billion this year, so it's part of this increase. So you show it on the map. You see 2 to 3 in terms of organic CapEx. The E&P that Arnaud can comment on it, that's true that we have sanctions from, I would say, short-cycle projects. Do you have any indications to give to Michele on it?

Arnaud Breuillac - *TOTAL S.A. - President of Exploration & Production*

Yes, I mean, just to put things in perspective, when we put the break on investment, 2, 3 years ago, the first CapEx project we could put on the backburner we have the short-cycle infill drilling. So we have all of them on stock. And as you know now, drilling rigs are half the price they were 3, 4 years ago. And we have optimized the development all of these. So we have as was shown in the presentation actually a stock of very good infill projects that we can sanction. And now it's really the time countercyclically to sanction them. So we see them in East Africa -- in West Africa with Akpo. We have Moho Bilondo. We see them, of course, in the North Sea. We are doing some modeling in Southern Gabon in the Northern North Sea assets. We see them in the U.S. ground, so we have plenty of opportunities to do very efficient tiebacks that clearly now we are taking sanction. And as you saw, we are going to be sanctioning between '18 and '19 about $400 million barrel of oil that will be -- oil equivalent that will be sanctioned during the period.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

About LNG, I mean, I'm optimistic about this market. I think I see -- we are moving our thinkings about LNG to 1.5 years ago it was oversupplied then booming. I think the Chinese policy is very strong. It's fundamental to them. It's not totally a question of price. It's a question of air quality, of social unrest in China. So that's true that we benefited from huge increase, 40% during the last 3 years, so maybe that's 40%. But they are at 55 million tonnes. I think Japanese are at 80 million. I would not be surprised to see them even importing more of them to Japan by end of next year. I think it's clearly 2020. I think it's clearly a strong policy. And even I'm surprised -- to be honest, it seems that there is no real impact of the higher prices that we observe this year on this policy. So this country I think, it's really embedded into very strong governmental policy. Of course, the U.S. will ramp-up, but these aren't the only projects which will ramp up, by the way, during this next 2, 3 years. In fact, the rest of the world, Australia is down. Russia is down. Qatar [has to rest]. So yes, that's true there will be some ramp-ups from the U.S. But I think it's also -- there is also a market today which is more gas which is Europe by the way. And Europe is -- production in Europe declines. So you have there potential for gas. Philippe, you're optimistic or not?

Philippe Sauquet - *TOTAL S.A. - President of Gas, Renewables & Power and President of Strategy-Innovation*

I do admit, I'm very optimistic. I've always been.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I'm not, I will...

Philippe Sauquet - *TOTAL S.A. - President of Gas, Renewables & Power and President of Strategy-Innovation*

But as you've seen, we are forecasting and planning our assumption on the 5% increase between 2015 and 2030. And as you know, the 3 last years, we've been way above this -- we've got at 10%, but so again, in 2018. So yes, I remain optimistic -- cautiously optimistic, but very optimistic on the LNG growth.

Thomas Yoichi Adolff - *Crédit Suisse AG, Research Division - Head of European Oil & Gas Equity Research and Director*

Thomas Adolff from Credit Suisse. I've got 2 questions as well. Firstly, Patrick, you've been the CEO of TOTAL for now just over 4 years, and you started at a very interesting time in the industry. If we go back to the start of the period and think about the ideas you've had for the company, have they all gone according to plan? What are the key lessons learned from the past 4 years? Secondly, also going back to LNG, if we say LNG demand growth doubles by 2035 from 2017 levels, that's roughly 16 million, 17 million tonnes per annum of demand growth. Over the past 3 months, we've seen around 30 million tonnes of project FID. And you plan to sanction about 30 million tonnes in 2019. The math doesn't quite add up. So the question I have is do you intend to take FID without project funding and signing long-term contract? And does the service industry has the capacity to do so many projects at the same time?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Two good questions. The first one, no, not everything was planned, to be honest. By the way, because -- as we said, the environment changed very dramatically, so we had to focus to get where we were -- me too and all the executive committee on changing the momentum in the company from pure growth story to a more value and cost and discipline story. To be honest, one of the strong lesson is that this company is able to react in a very strong way, maybe people discussed. But once it's done, they execute in an absolutely superb way. And the fact that we are able to continue to deliver these cost savings programs, reminder first discussion has been even better than what I was expecting. So I'm very confident in the capacity of execution of this company and the group everywhere in all businesses. I think it's a trademark today of capacity to execute in terms of -- its a lesson for me because, again, we are an industry or company with a financial holding. So we need to be able to execute. That's the first characteristic. The second one I would say is that, yes, we had in mind -- I had in mind that this could be the nice time to make M&As if you are able to be countercyclical, right. I learned that when I was in this company that it's better to move when it's -- we are really countercyclical. I remind that one of my colleagues, by the way, one day I will give you the name, said that during an executive committee beginning of '15 I keep that in mind. The question when is to be able to be opportunistic. That's more. You don't plan that. It's a question of looking around. And from this perspective, we have been able to again, one of the lesson which was mentioned by Patrick, the strong balance sheet is absolutely fundamental because we could have been more active beginning of '16 when the price went down to $30. If we had the balance sheet. We didn't have that back time, so we waited, and I know the first 2 years, we said, okay, priority is to have a stronger balance sheet and then when we use it in '17 for Maersk Oil and other deals. That's the second lesson there. But it isn't -- there, again, we have been able to do it and to manage this balance sheet, including by the way, you've seen this year we have some [knee] caps on working capital. Finally at the end of the day everything came back into the leadership of the executive committee members and Patrick. So these are the 2 lessons. And so it gave me confidence that we can -- we have a strong basis to move forward to be offensive. And I would like to tell you that I would have seen the company being today at having increased its production by 40%. The Total (inaudible) have been down -- but it has been done. The part which has been -- which was not clear to be fully honest was this low-carbon electricity and renewables. We are only in 1 solar plant at the end of business. We are, I think, clarified today that we want to do, and what we don't want to do. And so I'm much more comfortable, and I think we are more comfortable with the strategy we want to develop in that diversification area, but I was probably away because 4 years ago, (inaudible). But in the same time, I think this idea that to be a progressive player in this climate change, I think is more and more clear to us that the future of the oil and gas companies is to be oil and gas and contributing to be active if we want to offer to investors longer future. That's what I think the investors are waiting from us. Second question was about LNG. Too many projects being sanctioned. Some are right. Some are wrong. But I agree with your point. I see that. But there was a lack of sanction during 5 years. Now today you have another way. It's clear, but there is better risks, to be honest. It's a question that I'm asking to Philippe. He's tackled these projects. I hope that some of them will not take off. Because it's a question of, again, being able to be disciplined in terms of what type of project do you sanction in terms of breakeven for each of them. I think that we have -- and the question is, do we have a long-term contracts for them? Yes, for some of them I would say, and we want to maintain this discipline to have -- we are ready because we have changed our position with the portfolio we have. And we are building as well a portfolio company who are ready to take part of the risk ourselves on the portfolio but not all of it. So -- and it depends of course of the risk of the costs of the project. But I think a project like PNG probably will be launched if it's sold. And we have enough buyers to sell. It's very attractive to many Asian buyers. There is a discussion today about Arctic 2 with Novatek about what is the amount of LNG we want to sell. But you will see partners coming into the project from Asia because they want also the LNG and as part of the (inaudible). And then you have the question about the U.S. projects. Honestly, on Energia Costa Azul, we want to keep the volume for us. They are very good volumes. We prefer to market them ourselves. On Cameron LNG, we'll have to see if we want also to find some buyers. So it's a mix I think as the market is changing, it's moving to more commodity projects from a pure long-term contract and ourselves, we consider that we have the people and the capacity to take value out of managing a larger portfolio like another peer that I mentioned already. I think it's a question of

balancing the risk. But we are ready to probably take -- we are ready to take more risk than before, not on all the full projects. This could change, by the way, I think when you look around the world, the various projects which are being developed, probably it will be a question mark for some of them, that pace of development.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay, before we move to the right-hand side of the room, we'll pick up Irene and then followed by Jon.

Irene Himona - *Societe Generale Cross Asset Research - Equity Analyst*

Irene Himona, Societe Generale. One question on effectively costs and CapEx. Your CapEx discipline has been very strong and commendable. But some of your peers are saying that the industry has a lot of very material potential ahead for costs to continue to step down. In fact, one of them refers to the field of the future as having 30% lower capital costs and 50% lower operating costs. If all the available technologies today were to be utilized, such as automation, digitalization, do you share that view, Patrick? And if that is the case, where is Total? What are the obstacles standing in the way to implement that today and to step down further?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

You should ask to the guy who said that because, for the time being, the people who have the lower OpEx per barrel is Total. So maybe we are not genius, but at least we deliver. Now, I think of course, honestly, I think we should not exaggerate that. Of course, these technologies are more -- have some potential, and we are looking to that. I said to my colleagues, I want LNG CapEx per tonne to go back to 500. We're still not there. We're at 600, 700 even in the U.S. I remember that we delivered Yemen LNG for $300 million per tonne and not for 500 or 700. So the question is, of course, and it's back to your question, by the way, is probably because in the LNG business, you have quite a lot of projects, so you are -- at the end, it's a question of for service, of course, services companies who are able to deliver your projects, to build the projects. We answered -- I don't know where the magic come from, the 30%. Maybe we are more cautious. But again, we think that we can reach to 15%, 20%. But again, it's -- I think that -- why don't we implement today? It's a question of being able to scale it or not. We have plenty of proof of concepts like we've seen the robotics there in the company. And one, for example, we delivered an AI system in the U.K. You can -- about optimizing the maintenance costs and the way we managed all the mature wells on the manual wells, so it's -- and it's proven it worth. The question that I asked when I discovered that, it's beautiful, okay, nice, I say to Arnaud, okay, why don't we do that everywhere? And then it's a question I think the talents in the company. And one of the different ways is to attract in the oil and gas industry all these guys with LNG to a world. If you are a new digital engineer, I think you prefer to work for Google or for Samsung maybe than for Total. We have one chance in France. We have a strong basis of engineers who are doing it still. So we intend, one of the decision we have taken very recently, beginning of the year, we decided that, with Arnaud and Bernard, we will establish a real digital division aside your exploitation and project teams. Because as well -- as long as we don't have a strong team, 40, 50 people who are able to move forward to scale up, this will remain only the nice examples but not at the large case. So I think the question for us is to scale up. To do that, we need to attract the people and to establish strong teams and not to leave to the traditional methods. The fact that you need to work on it so they do things but not quick enough to answer. So if it not be today, maybe it will be tomorrow. But I will -- I ask my colleague what is his recipe to (inaudible) by 30% but at least being disciplined. And again, it's not a question -- by the way, on digital, one figure, we increased our budget on digital. I think we are spending -- it was $400 million? $400 million on digital technologies and developments in the company. So it begins to be quite sizeable, in fact, in the company.

Jonathon Rigby - *UBS Investment Bank, Research Division - MD, Head of Oil Research and Lead Analyst*

It's Jon Rigby from UBS. Your CapEx, the way you describe CapEx sort of acknowledges that there is portfolio churn going on the whole time with the net number that you talk about. Can I just look at 2 areas? The first is on the disposal side. It felt to me over the last probably 3 or 4 years, you've got less enthusiastic about Canada. And I just wonder, with the effect that it had on the Upstream in the fourth quarter and the fact that you didn't get the benefit in the Downstream that a number of your peers did through light-heavy spreads in North America, whether that encourages you further to think that, ultimately, you need to exit that region? The second is it seems to me that there are 2 examples of you addressing a strategic

gap in your portfolio over the last couple of years that have been addressed differently. So the Gulf of Mexico, where you had an obvious shortfall for a long period of time, you seem to have been able to address within the scope of the organic process. But LNG, you decided to step out of that organic and went inorganic. So I just wondered whether the other obvious gap in your portfolio, which is shale, you think you can do within the organic in a slow, measured fashion or whether it requires a somewhat more daring move? And if I could treat that as the first question, just one very quick one is on Papau LNG, is it my impression that it's slipped back a little bit? It seemed to me that it was probably the best brownfield project globally at one stage, and it seems to have slipped out of 2019. You're shaking your head, so I guess I know the answer.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, no, it doesn't step back. It's just a matter of again, we made a -- it's a little far away from Europe and from the U.S., I think, so to go there, and you have -- in Papua New Guinea, you face a country where not so many people are being able to decide. So I mean it to be involved with a high level. But we made a strong move forward in November when we signed head of terms because we solve fundamental points about the future framework. And we are drafting all the agreements. Next target is by April. I think I plan to be there again. So I'm -- no, I think we have -- 2018 was a very important year on this project because we have in mind the views, technical views of Total and Exxon on the same project. We know what we want to do, and I can tell you between Darren and myself, we perfectly agree. We know that we want to expand the plant with 3 additional trains, 2 trains for the gas coming from oil reserves, 1 train for the gas coming from their reserves. Discussions are the government wants to have 2 discussions, one, with Total leader, one with Exxon leader. We'll do it like that, but we are aligned fundamentally. And when we went there, we, together with some of the colleagues of Exxon, we were agreeing. So since that's done between us, no, this is only a discussion with the government. And we settled most fundamental issues last time. So no, we need to draft. But in some countries, there's some difficulties when you need to draft complex papers because we speak about billions of dollars and you have fiscal issues and it takes a little time sometime to align the people. So -- but we have a -- it's one of the projects -- I don't think we have been slower. I think we -- we spent some time that we tell you I said that Total -- between ourselves, between both companies. We could have saved 6 months between us. But it's done. So -- and no, let's move on fundamentally. And all the share cost issue between Exxon and Total has been settled. So that's good. We are behind that. So maybe we could have been a little earlier -- quicker between the 2 majors, but it's done. So I'm positive. Then coming back on your points. You are not surprised by my -- we make the same answer on the second question, is very easy. Where do you find that it can be organic in shale oil? You see some people of Total in the field. So there is nothing organic. And I will not begin to buy some land pieces by pieces in the middle of Permian would be. So obviously -- and this is again, I hope so what happens but you know my answer. It is clear that you have there some sizeable resource and potential production. The question for us is the cost of access. And the cost of access, I mean notionally, cost of access, capacity will develop, look, having access to a machine, human resource machine. So if we move, it can be only done in quite a sizable way. Otherwise, it makes no sense for me to make an acquisition of $5 billion to have 30,000-barrel per day in the Permian just to fill the gaps, and to tell you I'm there. What is the added value for Total? So it's either sizable or no. Having said that, the question mark for the -- I'm the CEO of the company and with us -- all of us, is this the best way to allocate the capital expenditure of Total? Is it that? Or should as we have other opportunities? We keep a little bit clear. I would not tell you we don't like it. It's not a question to like or not to like. It's a question of best allocation of capital. We keep a permanent eye. What I have observed, by the way, is that the value of your asset begin to diminish there. I don't know if it's for long. So maybe we have to be patient to wait for the next cycle. But again, for me, it's not a question of just filling a gap. It's a question of doing it in a proper way and comparing that option to other options. And in the U.S. where we are investing quite heavily, and Patrick mentioned to you that the U.S. are becoming one sort of top-8 country in terms of reserves, are more comfortable to invest in LNG like we are doing in several projects because there we know what we want to do, it's fitting well with strategy planned there. But again, I'm not in the same situation like some of my peers who inherit from some lands, which is very prolific, so that's the point. So let's -- organically, no, I don't think it's our best way to do that. Then Canada, I don't know what -- why you want us to (inaudible). But I mean, it's a permanent question. Of course, we have an issue with Canada. We have 100,000 barrel per day, I think, in Canada. We invested quite a lot of money. The integration, by the way, is not so right. We have a capacity to treat 50,000-barrel per day in Port Arthur if we want to do that. And we have the logistics to go down to Port Arthur. So we have a (inaudible) of integration, in fact. So it's not true that we are not fully integrated. We do it. We don't do it, depends on the market issues. But that's true that the oil price in Canada was quite low. By the way, various issues in Canada. In Venezuela, maybe it will give, again, a good -- a better valuization to Canada to feed all these refineries in the Gulf Coast if we stop exporting from Venezuela to the U.S. Gulf Coast. We are not in a hurry, and there is no way for me to accept to -- I'm not desperate to sell Canada. We have invested. So if there is a good value proposition, we will study it. But for the time being, it's not the case. So we are in a waiting mode.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. The next question, we're going to start on the right-hand side here with Jason Gammel and then, Shannon, if we can then follow with Chris, please. Chris Kuplent.

Jason Gammel - *Jefferies LLC, Research Division - Equity Analyst*

It's Jason Gammel with Jefferies. I had 2 on the Upstream, please. First, you've got a pretty deep inventory of deepwater projects sitting in the Q. I was hoping you could address how the cost structure has improved in the deepwater over the last couple of years; where we're at on break-evens and the scope for further cost reduction through standardization, et cetera? And the second question I had was on the exploration program. Clearly, been in an area that has added quite a bit of value this year. Can you talk about the level of investment you'll be making in exploration in 2019 and where your activity will be directed please?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Okay, Arnaud will answer to you on the deepwater projects. On exploration, we are at $1.2 billion. We maintained that. We think it's a good level of effort. There is no scale effect, but we're -- I'm very -- and to be honest, it's one of the good news of the year that we had last year discovered Glendronach, now Glengorm, now South Africa. So maybe we are enjoying the positive cycles. Again, it's not a question of spending more and more money. In fact, it's more a question of having the right ideas. I think we have been able to -- we have some areas of interest in our portfolio. I think about the Guyana licenses that we will begin to drill around the discoveries of Exxon and ESS since this year. And we have other projects, but we are -- Arnaud is more able to me. We plan to drill 20, 25 wells this year. So again, the fact that this discovery in South Africa is interesting. It's a new province. And we have, by the way, quite a large acreage which was acquired, so we will look at it. We will have some opportunities. We have also -- the Gulf of Mexico portfolio which has been rebuilt is of interest. With -- we have -- together with Chevron, I think we have quite 2 new wells being this year. So Gulf of Mexico, Guyana, will begin. We have also taken some acreage on West Africa in Senegal and Mauritania were quite large. And we intend to begin also to drill there. So we have prospective areas, but I would say what changed is not the pure giant quite low probability that we try to target during a certain period. It's more around identify prolific areas like Senegal and Mauritania, like Guyana to try to put more money there. We will see. It's exploration, so I'm always prudent on that. But I see all that as a positive sign, and if on the top of what we have been able to do and being demonstrated we have been very active and demonstrating our capacities in having access to -- and develop a discovered resource, we are able on the top of it to also have a positive exploration (inaudible) then it will, of course, make our future even more brilliant. Arnaud, about deepwater improvement, Brazil, Gulf of Mexico?

Arnaud Breuillac - *TOTAL S.A. - President of Exploration & Production*

Yes, most of you will remember that, at the last meeting, we had in September, there was actually a focus on deepwater, and we were able to explain to you that, in our portfolio, in fact, we've been able in the last few years to work on either design the standardization as you mentioned. We happened to have also in our portfolio a lot of subsea tieback opportunities to existing deepwater infrastructure. So what we see in deepwater is a repeat in a way of the story we had successfully in the North Sea or in the U.S. gone where we can tie back to existing infrastructure discoveries. We see that in Nigeria with the Preowei that will be tied back to Egina. We have (inaudible) also, these very significant discoveries that will be developed as subsea deepwater development, subsea tieback very efficient, very profitable. And clearly, we have also worked. We are working on optimizing deepwater developments. Brazil, which is, as was mentioned in the presentation, the coming next wave of large FPSO development. Libra is a -- the field is called Mero now, but it is a case in study because this is 3 billion to 4 billion barrels of the same oil from the same reservoir with excellent characteristics, and I remind you up to 50,000 barrel of oil per well. So this here, we see again economies of scale. And so we can see that we have been able to make a deepwater extremely competitive in terms of return on investment.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Yes, I think Brazil is around $35 per barrel of breakeven, more or less. I mean, we learned a lot, by the way, from Petrobras in order to be able to be efficient, cost efficiency. I mean, it is -- I can tell you these teams are quite good in the way also to replicate FPSOs and what from me one of the

lesson coming back to your question, is that all teams in charge of deepwater have really been able to put themselves into question. If we want to make these projects now, we need to simplify the well structure, and we've seen Egina from this point of view. We managed to save $1.5 billion on the drilling program by simplifying all the wells. And I think our duty now as management is to keep them being stable, being simple. We have a program in the company, be simple, but we need to be sure that they stay simple. And the same on FPSO. When we look, for example, the way we imagine to develop with -- in the Gulf of Mexico, the North Plateau discovery, the way our teams are thinking through that, it's a very simple platform to try to -- it's not the giant nice-to-have platform. It's much more simple. They know that if we want to develop this 350 million barrel of oil, we need to be able to simplify and to make it efficient. And that's the thing, a mindset as well. So that's a good lesson. Other question maybe?

Brendan Warn - *TOTAL S.A. - SVP of IR*

The next question's going to be Chris Kuplent and then followed by Lydia.

Christopher Kuplent - *BofA Merrill Lynch, Research Division - Head of European Energy Equity Research*

Chris Kuplent from Bank of America Merrill Lynch. I think I only want to ask you one question, but you're probably going to tell me there is 3 questions in there. And it's about your 2030 and 2040 carbon footprint targets. It sounds quite far away, but even just a 15% cut from here to 2030, doesn't leave you a lot of time. And I wonder whether you could fill the void a little bit. Your presentation today is focused on next year and 2020. You're spending around $2 billion on your low-carbon electricity efforts. Is that something that makes you confident that level that you achieved already a 15% cut in your carbon footprint out to 2030? Or is there a message that, within the next 10 years, actually, your -- well, I suppose, ambition to keep at the very least replacing your black oil production at some stage will go? Because you gave us earlier a calculation that Upstream $8 billion to $10 billion of CapEx, you've got Downstream commitments in Refining & Chemicals. That in the end doesn't leave you a lot more room to actually step up your low-carbon budget. So I know it's a convoluted way of asking you how you feel about the next decade and perhaps a slight shift in priorities in terms of capital allocation.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, I will -- I mean, we come back this afternoon on that. But if we came -- you can imagine that the way we manage the company, if we came out in September with such schematic, it's because, behind that, there was a lot of work how does it fit with a growing oil and gas company but being also able to manage these [carbon footprints]. So there is no message I said that in September that we intend to stop growing in oil and gas. That's not at all the case. But by being -- and it's a lot of work behind it. It's a combination. And we will -- on all operations, finding new scheme of development, for example, one of our peer is in advance from this point of view, electrification of the process, developing of the fields in another way. It's a -- you can slash down easily 5 million, 10 million tonnes of CO2. We will announce the target this afternoon, but if you are focusing on your own operation. So there are ways to do it internally, stop flaring, but electrification of process, so it's mixed by the way the technology -- and that, we need to be active now, to stop -- to integrate this technology and not waiting by through by 2025 to begin. That's one point. The second point is natural gas is helping us to reach the target because, if we -- in natural gas, and one key target will be to be more efficient in the LNG technologies in terms of efficiency -- energy efficiency. Low-carbon electricity is part of it but with $2 billion per year during 10 years, it's fine. I can do a lot with $20 billion if you make the math. And that's true that there is an ambition which is to grow in this area. But I don't think we'll do much more with that. The math -- it's okay. We can do that. When we have biofuels, which are something which it could be efficient, it's why we move in Brazil. There are ways to do -- to improve our mix of products. And the last thing but not last -- last but not least is what we mentioned about natural carbon sinks. We have less than $10 per tonne. You can do a lot in developing some businesses with -- in the rainforest, so they weighted lands, and that scenario in which we will invest, we intend to invest $100 million per year. And with that, we can generate also some offset of our footprint. So it's a mix of a combination. So we have -- what I can do, no, there is no message that we intend to stop our growth in oil and gas. We are -- maybe we'll produce probably more gas than oil but linked to the market. But it's a combination of gas, oil and low-carbon electricity. To describe you, one of your colleague asked me, you didn't give me the CapEx for 2021, so I will not describe you the CapEx between 2021 and 2030. I will make sure before (inaudible) we'll give it more clarity over the next what is beyond 2020. That's clear. But then honestly, the 15% is an ambition. We have decided yesterday at the Board of Directors that we'll have an objective on the Scope 1 and 2 to reduce our CO2 footprint, and that's a variable pay of the CEO and the top executive will be linked to the Scope 1 and 2 adoption. Scope 3 are different matters because there are some

-- but this is something on which we believe. And 15% are achievable without shifting the dramatic strategy. But keeping in parallel the 5 routes, and I will come back on it this afternoon.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Lydia, what was your question?

Lydia Rose Emma Rainforth - *Barclays Bank PLC, Research Division - Director & Equity Analyst*

It's Lydia Rainforth from Barclays here. Two questions, please. On the capital-allocation side, clearly, over the last couple of years, production has been better than expected. Costs have been better, cash flow has been better. But as an observation, it does appear that those incremental improvements are going into higher CapEx in the portfolio development side. Can I just ask what is the right balance between those and looking at whether you would increase the share repurchase scheme and at what point that might trigger? And then secondly, probably another one for Patrick, can you just comment on the Venezuela sanctions and the impacts there?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Good. Patrick will speak -- will answer you on the first question because I spoke a lot. Venezuela, just -- Venezuela for us is 50,000 barrel per day, $200 million of cash in 2018. So you have the magnitude of the problem. It's not huge. At $60, it's 1 50. But we will obviously observe the sanction very strictly. We are in this, trying to understand what it means legally. Probably we'll have to manage Venezuela not from the U.S. but from Europe, but for the time being, the priority has been clearly the safety of all our people, and everybody has been evacuated since last Monday. So that's the first priority. So in terms of impact of Total, it's not very big. I write papers so I prefer to give you the figures, so took care because of somebody with papers that we were the very hit, no, we'll not be very hit, so we have to manage it and -- in the portfolio. Patrick, the first question?

Patrick de La Chevardière - *TOTAL S.A. - CFO*

Yes, okay let's answer on buyback first. The idea we had at the Executive Committee level 1.5 years ago was to return more cash to the shareholder in order to rerate the share price of Total in comparison to the other. That was the objective. Then how much will we return? So we designed the $5 billion buyback program in a sense at, at $60, we can make it, first; second, that the cash payout of the company, dividend plus share buyback, was consistent with what we can see on the market from the other. But I remind you that the main objective for us is CapEx. So we designed our capability to share buyback $5 billion because we have in our portfolio enough to develop $16 billion, $15 billion of CapEx. So one, then there are 2 linked. And obviously, at $60, the math works. We can invest $15 billion, $16 billion a year, then having our share buyback program, plus the increase of the dividend. So it's all an equilibrium. It worked at $60. Of course, if we are at $80, we could review our targets, but that's another story, something I learned within the past 11 years, if all of our forecasts are wrong. So...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

(inaudible) We will not reduce the target despite all your push because the Board of Directors is comfortable with that level. And again, it's not the end of the world in 2020. There is a follow-up and the cash flow will continue to be there after that. So obviously, like you said, it was 1, 1.5, 2.5. That means that this policy -- and I think we have fundamental idea we use the buyback in order to share with you the additional upside of the price. And we keep steady the dividend because we never -- none of us -- and it kind of needs a strong commitment, when we increase the dividend, it's a permanent commitment. We don't, there is no willingness at all to cut dividend where we didn't do it in 30 years. So I will not begin to do that. And so it's a combination. And -- but again, the table I showed you, like Patrick said, priority is investments in the company. So if we have the feeling that we can do -- we have a better opportunity to -- because at a low cycle, there is something to be done, to answer to some question of Jon, we will do it. We will explain. It's a matter of discussion. If we can demonstrate to investors that it's better value creation. But again, I think also one of the objectives goal is when we analyzed Patrick's guidance why these shares may be undervalued, one of the objective, we observed that the return in term of cash. The cash out to shareholder was lower than most of our peers. So we have an objective to increase the cash out to our

shareholders, to come back into the pack, I will say, of the colleagues. You have done the math, so that's what is driving our increase of dividend and our buyback. We will have a cash out to be -- not to have to be undervalued because of that.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. The next question's coming from the central middle here, Christyan Malek, before coming back over for Al Syme.

Christyan Fawzi Malek - *JP Morgan Chase & Co, Research Division - MD and Head of the EMEA Oil & Gas Equity Research*

Christyan Malek from JPMorgan. Two questions, please. First of all, just want to come back on your production and growth outlook of a minimum of 2% beyond 2022, as a minimum. How do you think about balancing that against your cash return target? And is there a case being considered ahead of your September CMD that you move away from a pro volume strategy to one that is pro cash return? I mean, that balance seems to me -- or put another way, if the world's got too many barrels, why do you need to grow above 5% volumes in the long run? And the second question is your gearing is the best -- one of the best of the super majors now at 15%. The only reason I can see it wanting to go lower is if you were going to do a large deal or M&A. Can you talk about why you need to do a deal when you've got such fantastic pipeline of projects? And put another way, does that mean that you're prioritizing something away from oil and gas? Because you've got all these projects, you don't need to do a deal. You can continue sanctioning them, and therefore, it's more likely you do something in power or something else. So just talk about that prioritization and the need to take advantage of opportunities, please.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I think that you're right. We never said that we want to make a deal -- a big deal. We just told you that the priority was to sanction all the projects to deliver what we have in our hands. So it was my strong message 2019. So when I answered to a question from Jon but don't misinterpret what I told you. Again, there is no -- and just to know, but, I mean, the strong balance sheet, again, it's the first reason is to face the volatility is fundamental. Again, we managed to face this period with Patrick because we had to put the scrip dividend in place. We had to sell $10 billion of assets. And those assets which have been sold are sold. I don't have this weapon in my hand if it looks like oil come back again. So the lesson for me, fundamental reason, is to have a strong balance sheet is the best way to face the volatility of the oil price in, I would say, a more quiet way because then I don't need to sell. I have that. I can use like some of my 2 U.S. peers have done that when I observe it, and they are back again to our level. I think it's a lesson. So keeping a low -- quite a low gearing even if the price is at $60, $70, it's the best policy because when we are comfortable to face the low cycle, maybe we can use it, the balance sheet, but then at least we don't have to make a scrip dividend again. We don't have to -- we are obliged to take action so that, I agree with you. So that's a fundamental reason. So don't misinterpret it. We are not -- we don't read this stuff because Patrick will go, but certainly will change the disciplined policy and -- but we have in mind to make a big -- we have not in mind to make a big deal. All the bankers are coming to our office but, of course, the fact that we have been active, thinks that we will continue to be active, but we have been active on things where we were thinking we want to deliver value to our shareholders, and I'm convinced that Maersk Oil was a good move. But there is no maybe. There is no Maersk Oil every day in your -- and so it's not a main target. The first point was about the 2%, no?

Patrick de La Chevardière - *TOTAL S.A. - CFO*

Yes, moving from volume to value.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Yes, but I mean, no surprise. I think I told you that 4 years ago and our -- I mean, no. By the way, let me be clear, I did not tell you that our target is 2. Don't misinterpret. Again, I was very precise in my wording. I told you that with all what we have there, the 700,000-barrel per day are to be sanctioned. We have at least a growth of 2%, and I added that we'll not sleep during 5 years in time. So it's just the fact that we have already embedded a growth of 2% if we develop all these projects, and we intend to develop it. So it's not a target of 2%. But it's more than 2%. Keeping in mind that we want to -- to continue with capacity on the one side to grow; on the other side, to be profitable. So it's a question of choice of

projects. Is the projects -- that if we can add new projects to this portfolio which are 15% when the oil at $50, why not. I will be happy to put them onboard. But it's not 2%. By the way, again, making at least 2% is more than the hydrocarbon markets but probably room for more. But no, the 5% we gave you was an average of '17 to '22, which is still there. But if '18 and '19, we make 17%, we have the room for '20, '21, '22 for 8, so we divide by 3, you will find 3% to 2%. So we are -- that means that, in years to come, we are landing, but again, we don't have the same CapEx intensity as well. Okay? And it's true that, from '15 to '18, we were able to spend all the money to achieve all these projects but not with that sanction a lot of projects obviously, with -- so we have a momentum but we cannot grow it. Okay? Is it clear or -- thank you.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Alastair Syme.

Alastair R Syme - *Citigroup Inc, Research Division - MD and Global Head of Oil and Gas Research*

Alastair Syme at Citi. I wanted to ask about the 2P resource base of 20 billion. Really, 2 questions. One is how much of that is, do you think, economic at $60? Is it all of the economic? Or is there some sort of element of price assumptions built into it? And secondly related, is 20 billion the right number? How do you think what the right size of the resource base should be for this company?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

20 billion is 20 years. It's quite -- I mean, it's a permanent (inaudible) system. You need to replenish, which we have been successful. Let me clear, 2P means that everybody's developed (inaudible), not at $60, at $50. The definition of -- for us in the company, if we put it in our proved and probable reserves, that means that everything which is there will be -- is developable at $50 per barrel. This is the way we manage it. So you have 20 billion barrels in front of you, which are developed, and it's a question to scale. Some of them are being already developed. What are the key countries there, the 8? You have Russia. You have Abu Dhabi. You have Qatar. So we have some long-term resource which are being developed, and we cannot accelerate that development in some of the countries. Some of us, it's up to us to accelerate that. So 20 billion are fully economically developable, otherwise, we'll not mention that. We'll not put them there. If it's not, we put them in another category, which is called resource. So we have 2P reserves, and then we have resource, which some of them are not yet developable. For example, the discovery in South Africa at this stage is resource because we did not work yet on the development scheme. Maybe we shift to 2P reserves. That was the first point. And what was the second? What was your question? It was your question I think?

Alastair R Syme - *Citigroup Inc, Research Division - MD and Global Head of Oil and Gas Research*

(inaudible)

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

There is no bible in the oil industry. We have 20 years. I mean our figure is fine. I mean, an horizon of 20 years of 2P reserves, it's not too bad. I'm not Saudi Arabia. But I could give you another figure. I could give you I have a 40 years of resource base, which is true, but again, 40 years of resource that in this resource, there is a lot of -- it maybe will never be developed, so I prefer to give you a sense of. The metrics of 20 years, not too bad, maybe as an average, We were a little aware. Of course, when we grow, we have to think to that permanently. We had that metric in the company, since I joined the company 20 years ago with some targets around 12 years of proven and 20 years of 2P. I don't know where it comes from. I should ask [Terry Dumais], my predecessor. By the way, the majors are more excellent this way, no.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. And in terms of the last question, it will be Martijn Rats down the front here before we pause for lunch.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

It's Martijn Rats from Morgan Stanley. I've 2 questions. Just to check on Slide 19 at the bottom, it says $8 billion in incremental cash flow between 2017 and 2020. Is the math as simple as saying you expect to generate more than $30 billion in operating cash flow in 2020 at $60?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Which slide is it, 19?

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Slide 19 at the bottom.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

The math are very easy. We expect $22 billion plus $8 billion makes $31 billion.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Yes, more than $30 billion, right? That is...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Yes, it's very easy.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Finally, it's a punchy number. I just...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I know. You have the figures, so I help you. You can fill it in your spreadsheet. It's done. All right and you have everything, so I help you.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Yes. I think they're low forecasts on there, but that's...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, but -- then why did we give you? Because it's -- we are very -- well, 99% sure of that. We have where everything is clear. It's clear visibility is why we gave you the figure.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Okay, good. And the second question I wanted to ask you briefly, Slide 25, which shows your project map, used to have Uganda up there. And I know there's been some delays, but it's now not even on there any more in terms of sanctioning before the end of 2020. I was wondering if you have an update on your plans

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Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I can tell you we have decided that it will be the task of the year for the CEO of Total together with Arnaud, so I went to Entebbe, Arnaud, I met President Museveni in Davos. So I'm the committed -- no, there was a lot -- it's a difficult project because it's landlocked. So we have to -- this pipeline going through Tanzania, 2 lines into us. It's a new country to oil. There is no regulations, so we need to create everything, but I'm optimistic. I think we had some good meetings. We have settled many things about the refinery, about the pipeline tariff, about the transaction with Tullow, which has been delayed and a lot of -- there is -- no, we have the Lake Albert there, but there are many corporate eyes in the lake, so we need to...

Patrick de La Chevardière - *TOTAL S.A. - CFO*

Goodwill.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

To domestic the crocodiles and in order to move forward. So I don't know if I will fight with the crocodiles, but no, I think it's a -- I consider that we have -- it's too long all that and now it's a priority, and the -- we have -- the project's engineering is done. We have even some tenders. We have made the tenders. The price in term of cost is very acceptable. So we need to fine-tune, and as I said to President Museveni, I think I will come back again to your country several times, but we'll manage that. We need to solve it. It's again like P&G. It's a problem when you have new country to oil to align many people who are -- we think that the discussion with major public traded company is in balance. So they are not very comfortable because they see us managing different concepts and they think that, fundamentally, they are prudent, but I told him, okay, no, we are in the same boat. It's a project we can deliver to you around $1 billion per year. More than $2 million, in fact, but if we move -- so I think -- so again, it's establishing good relationship, and it's a priority. So I hope we'll be able -- I mean, an objective to deliver you new news next year. I'm committed, and Momar is helping. Arnaud is helping. We are all on the board. We want to solve this issue. Otherwise, Momar will not retire, so he will stay, which is a good idea as a way to stay with it.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. That was the last question, Patrick.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

It was the last question. Okay. So thank you for this attention. We'll have the lunch with you. I mean, I hope we'll have a continuing discussion. And again, this afternoon, you will have another topic. So presentation this afternoon will be done first by Helle and Ladislas, our 2 strategy and strategy for natural gas and power; and Ladislas, strategy at the group level. And then we'll come back on the climate.

Sorry, my idea, I will not deliver you all the strategy on the next year-by-year of the climate but you will have a better insight of what we want to do. Thank you.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay, thank you. And like we said, we're going to be resuming again at 1:00, but the lunch is in this room.

(Break)

PRESENTATION

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay, thank you very much, and remind you that this is going to be webcast. This next section will run hard stop to 3:00. So I'd like to welcome the first 2 presenters. We've got Ladislas Paszkiewicz and Helle Kristoffersen, and they'll be presenting on the TOTAL energy outlook. If they can take the stage, please.

Ladislas Paszkiewicz - *TOTAL S.A. - SVP of Strategy & Climate*

All right. Good afternoon, and thank you for giving me the opportunity to share with you a study work that we've done with Helle's team on analyzing what an outlook for energy demand could be by 2040. We've run a bottom-up model.

And of course, before I start entering to the details, I'd like to remind you or to tell you the way we have looked at this energy outlook, how we've built it with relying on 2 set of fundamentals aspects for demand. One fundamentals driver being, of course, economic growth, and first of all, GDP growth that we have taken as 3.3% earlier, slightly higher than historic GDP growth.

The second impact for energy demand, which is key of course, is evolution of population with rising population expected to increase by about 1% per year, on average, between 2015 and 2040. The consequence of these 2 factors, by the way, being that the GDP per capita is supposed to increase -- is expected to increase quite significantly in the 25 years to come, and that's very important because that raises the middle class demand very significantly. When GDP per capita increases fast, that moves -- that increases middle class having access to energy and middle class, in particular, in non-OECD country has the characteristic of winning more mobility, more energy. So that's the key driver, of course, for energy demand growth.

On the other hand, there are opposite aspects with energy savings, which are very significant. That's going to take place in the years to come, and I will get back to that in more detail. This is driven by regulation and policies, and of course, also by technology core improvement. So at the end, when we combine both drivers together who go in opposite ways, you have multiple scenarios possible.

And we have decided to present today 2 main scenarios, one, which is called Momentum, which is quite an aggressive scenario. It assumes, for instance, that, by 2040, 50% of the cars will run electric, which is quite significant as we move, of course, compared to today. But this aggressive view is mixed with the fact that we have assumed, in this Momentum scenario, that policies and regulation as -- have been announced already, and there is no break-through in technologies, meaning state-of-the-art technologies are being maintained in this scenario, even though that would lead to a decrease of energy intensity by about 2.2% per year, which means that overall energy demand over the period 2015 to 2040, would increase by about 1% per year on average.

This scenario does not comply with the 2°C Scenario from the IEA. And as a consequence, we have imagined a Rupture scenario that would be consistent complying with this 2°C Scenario that -- which requires technological break-throughs, major shift in public policies in order to get there, and this will be detailed -- this will be presented in more detail afterwards. So what we propose to do is to go for oil, for gas and for electricity to describe -- to present to you under this Momentum scenario what are the findings or thoughts that we could share with you.

Starting with oil. You see here on the left-hand side of the slide that the vast majority of oil is being used for transportation and for petrochemicals. 2/3 of oil is being used for these 2 segments. For transportation, you have passenger transportation, about half of it, and commercial transportation, the other half of it. The rest, residential and commercial industry, power generation does not, as far as oil is concerned, represent large share of oil demand.

And you can see, on the right-hand side of this slide, how we expect growth, actually, to be shared between these different sectors. It's interesting to note that transportation is the main driver for growth in oil demand as well as petrochemicals. But the other sectors, and I will not come back

to them really, for instance, residential and commercial or power generation, demand for oil is going to decrease over time actually on those sectors, which already does not represent actually a large share of oil demand.

If we go now more in detail, sector by sector. For light-duty vehicles, you see here that growth -- growth of cars, actually, is expected to -- the number of cars is supposed to raise from 1.1 billion to more than 2 billion, especially because as GDP per capita increases, demand for mobility, in particular, for non-OECD countries increases quite significantly. But what it is worth noting is that about 60% of this growth -- and that's the dark blue bar that you see on the left-hand side of the slide -- the efficiency gains do reduce actually by this impact of growing needs by about 60%.

That means that cars that today, on average, consume about 8.5 liters per 100 kilometers will be reduced by 2040 to about 6 liters per 100 kilometers, which means that new cars, by the way, being sold in 2040 will run with even much less than 6 liters per 100 kilometers. So we have taken an assumption of a 30% decrease in efficiency when 30% efficiency gain due mainly to environmental regulations.

Second aspect, which is key, is penetration of electric vehicles. You see here that, as I mentioned, that 50% of the sales or 32% of the fleet is supposed to be on electric vehicles by 2040, which compares actually quite aggressively with other assumptions taken by different analysis. But it would move at the end of the day by about 8 million barrels per day, consumption of oil by 2040 as you can see.

The last element is the switch which is linked to biofuels. And here, the assumption is that, on average, current biofuel integration, incorporation in gasoline and diesel is about 3%. It will move up worldwide to about 8%. But the impact, as you can see, would remain quite limited. And so we would have still some increase for light-duty vehicles.

Heavy-duty vehicle now is an interesting one as growth is more or less linked to GDP. It's commercial activity, and it's expected to grow at that level. Efficiency gains are a little bit lower than what they would be for light-duty vehicles, in particular because regulations in some parts of the world are not as stringent as for LDVs.

And here, we have taken as an assumption that the switch to electric vehicles, in particular for buses, would be quite significant. We have assumed that more than 50% of buses would run electric by 2040. This, by the way, is a modification compared to what we had presented 18 months ago where we had not seen that level of switch for heavy-duty vehicles for -- on electricity. And on the other hand, the natural oil gas switch, whether it is for compressed natural gas or LNG, is due to be much more important for HDV compared to light-duty vehicles.

For the rest of transportation business, I will be quite quick. You have the maritime activity, which is supposed to grow. But here, the main point is that there will be some significant switch to natural gas and probably IMO regulations will even enhance this switch to natural gas as low sulfur fuel oil will be more expensive.

And for aviation, at that stage, I have to recognize it's difficult to imagine that, that would be significant substitution and so, as a consequence, as demand is going to grow both for cargo and for people, yes, there should be some increase in jet fuel demand for aviation in the years to come.

Coming now to petrochemicals. I said that's the second driver. And you see here that growth actually will be significant because rising global prosperity does have some strong impact on plastics demand. But the key aspect of that slide is probably the recycling aspect. You see here that we have taken as an assumption that 25% of the feedstock would be displaced by expanding plastic recycling from about 10% or even less than 10% today. So that means that there will be some demand growth for -- from petrochemicals. This demand growth, by the way, will mostly be focused on ethane and LPG more than on naphtha. Even though today, of course, it runs very much out of naphtha. But as time goes on, petrochemicals will be produced more and more out of ethane or LPGs.

So when we wrap it up and take it all together, at the end of the day, what we observed is that increased oil demand will be, to a certain extent, offset by efficiency gains that will reduce the impact of growth by about 40%, 45%. It will be reduced as well by the switch to natural gas. More than 10 million barrels per day of oil will be displaced by gas in our analysis by 2040 as well as displacement by electricity through EV penetration. But at the end of the day, we do see still a net increase that could be around 10 million barrels per day compared to current oil demand. Of course, all of these figures are not certain. That's the least I could say. And that's the reason why because uncertainty is, of course, everywhere by 2040, by the way, that we've decided to run some sensitivities in order for you to have a sense of what it would impact in terms of oil demand. In case, for

instance, economic growth would not be 3.3%. GDP growth would not be 3.3%, but 2.8% or 3.8%, which is a very large, very significant difference. In this case, it would move the transportation need for oil by about 7 -- plus or minus 7 million barrels per day. What would happen in case efficiency of new vehicle would be 1/3 better than what we had expected? It would move again the demand by about 6 million barrels per day.

And finally, let's assume that it's not 50% of the sales of electric vehicles by 2040, but 70%, which means almost addressing everything that this -- that can be addressed even that there will always be some IC vehicles staying in the market. The impact would be an additional 3 million barrels per day of energy of oil being moved out of the market.

So finally, what I would like to share also with you is the geographical split of this oil demand. And you see that in 2015, developed countries represented more than 50% of oil demand. And this is due to be reduced by about 10%, which is a strong shift by 2040 to the benefit, of course, of Asian countries or for India. And I'd point out, in particular, the role of Africa. Africa, even though it is only 4% of oil demand today, it should represent actually about 8% doubling. That's a large increase due to the increase in the population of oil demand by 2040.

So that ends this oil demand part, and I switch to Helle for gas and electricity.

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

Thank you, Ladislas. So after I -- moving on to gas and power. This is the first time we are talking about these markets in some detail, so I hope you'll find it useful. And in any case, as you know, they are important markets for our strategy. Here, you see a picture of one of the recently acquired CCGTs by TOTAL in Europe. And of course, this power plant, they run on gas.

The first chart shows here a breakdown of the worldwide natural gas demand in 2015 by sector, and then the growth path between 2015 and 2040. There are 3 sectors driving gas demand, as you can see to the left. It's power generation and heat generation, 41% market share; industry, 24%; and residential and commercial, 21%.

In terms of growth, our Momentum scenario shows 1.8% CAGR between 2015 and 2040, which is almost double up the growth in overall energy demand, almost. The market goes from 3,400 Bcm per year in 2015 to 5,400 Bcm in 2040. The use of gas, as you can see to the right, is on the rise in all sectors, but power industry represent in our modeling work 2/3 of the pickup in demand.

There are no major changes in the market shares between now and 2040 except for what Ladislas mentioned, which is that transport will grow in its use of gas, and that will happen at the expense of residential and commercial.

Zooming in now on power generation. Once again, it's the #1 sector in terms of demand for natural gas. And you can see that we estimate the CAGR between now and 2040 at 1.8% so exactly the same as the overall gas demand. And this is why the market share doesn't change obviously.

The increased use of natural gas for power is linked to GDP growth and then linked to the electrification of energy use, which is another core theme, and I'll come back to that in just in a while when we talk about power.

Then the net fuel switch. If you look at the graph here, you may be surprised to see that it's relatively low: the little orange bar, net fuel switch. The reason for that is the following: we do expect a lot of pushing out of coal by natural gas in a number of countries, such as Europe, the U.S. or China. But then, we've also modeled them in other countries. Gas will be pushed out by renewables. So conservatively perhaps, in our growth, you're shown here the net fuel switching impact is only 7% of future growth in demand.

Efficiency gains in natural gas power plant, CCGTs and increased yield are also leading to gas savings in terms of feedstock, which is the last piece in blue. And that, of course, reduces demand a little bit.

Moving on to industry. Industry is an area where we expect growth will slightly outpace overall demand for natural gas, and the reason for that is simple. It's because industry uses gas both as an energy source and then as a feedstock for certain industries, such as fertilizers or methanol plants, for instance.

The growth again is driven by economic activity, and then we also model a net fuel switching impact in the sense that we believe there'll be fuel switching in many industries, for instance, those using boilers, and that could be the case, say, in Latin America or in China. So we'll expect these industries to switch to more use of natural gas, driven both by regulation and then by the availability and cheap affordability of gas. And that switch will occur at the expense of coal and oil.

Energy efficiency, on the other hand, is holding back demand, together with the structural shift towards lighter industries, so less heavy industries in the overall GDP mix moving forward.

I'm not coming back on the gas demand for transport. Ladislas covered that. Let's just keep in mind that in our growth scenario, the share of transport in natural gas demand will move from roughly 1% today to 5% in 2040.

So the last zoom I have per sector is on residential and commercial. In this sector, gas demand should be slightly below average, only 1% growth per annum between now and 2040. Demand again is driven by economic growth on one side and then, on the other hand, by better household living standards in terms of heating and cooking.

Over time, there will be a switch away from coal, oil and biomass in favor of gas. And we've modeled 2/3 of that switch to occur in China. But then of course, other parts of the world as well, Africa for instance, or Latin America. However, the switching effect in the residential and commercial sector is entirely wiped off by higher efficiency, especially in the services sector and also in fact by a negative switch away from gas to more power.

The chart here shows you how this natural gas demand translate into LNG demand, and we discussed this a little bit this morning already. The unit here is Bcm, not tonnes. The first message is that the LNG growth should be around 5% between now and 2040. So for the decade also going from 2030, presented this morning until 2040. Very strong growth, very good market opportunity as Patrick explained, and it's true that I think we all tend to underestimate the potential of LNG.

Let's keep in mind, in any case, that the LNG markets are undergoing very rapid transformation right now, and they are, for sure, no longer a niche. That is, in fact, the second message, which you can see to the right of the chart. LNG will overtake pipeline in terms of worldwide gas trade share. The share of LNG will move from 10% in 2015 to close to 20% in 2040. LNG will, therefore, become a much larger, much broader, much deeper market, creating opportunities for portfolio players like TOTAL.

To the left, as you know, you will note that the LNG demand growth is coming a lot from Asia, let's say, non-China and non-Korea, Japan and Taiwan. But effectively, demand is growing across the board. And then, on Other, just if you wonder, within Other, we have a roughly half of that Other size in 2040 is linked to the bunkering switching that Ladislas hinted to. And that's a big opportunity, and we don't think we've been particularly aggressive in modeling the bunker opportunity for LNG.

Here is a chart on sensitivity that Ladislas also had, which is actually, I think, the more fun parts of the modeling work. The assumed GDP growth has, of course, a big impact on gas demand, obviously. And so here, we show what an impact of more or less 0.5% GDP growth worldwide would mean in terms of more or less demand for natural gas. It is roughly a 7% impact. The 400 is 7% of 2040 demand. Energy efficiency is obviously also a driver of more or less demand for gas. I'll let you look at the numbers.

And then, there would be a significant boost in gas demand from the level Ladislas presented, if there was even more widespread use of gas in transport. So increasing the baseline from Ladislas' slide by 10% more market share for gas in long-distance trucks and in bunkers would mean 250 Bcm more gas demand in 2040.

Our model also already assumes pretty, let's say, proactive pushing out of coal in power. But then again, if we switch 10% of the remaining coal use of power in 2040, if we switch that to gas, that will drive 200 more Bcm of demand. And of course, it would be much better for worldwide CO2 emissions, which is also something we all care about.

On the negative side, gas may face even higher competition for -- from renewables. In our model, we assume that gas takes roughly 26% of all new power installations in the world. If that were to drop by 5%, so going to 21%, that would mean 200 Bcm less of gas demand in 2040. So there are many different ways of modeling sensitivities, and these are just a few of those we're looking at.

Finally, I have the last section on power. And so once again, as for oil and for gas, the first chart on power demand in 2015 and the expected growth in our momentum scenario until 2040. I think you know that power markets are the fastest-growing energy markets. Power demand in our model will grow by 2.2% per annum between now and 2040, which is more than -- twice as fast as overall energy demand. You know it. It's called the electrification of energy demand, and it's an important trend.

In terms of terawatt hours used per year, the market moved from roughly 24,000 terawatt hours to 42,000 terawatt hours, almost that number in 2040. Residential, commercial and industry make up most of today's power demand as you can see to the left, almost 80%. And these 2 sectors will also make up 3/4 of the estimated growth between now and 2040.

That being said, as you can see to the right, all sectors are growing their demand for power. Transport growth shown here is in line with the baseline Ladislas presented in terms of EV penetration, and transport makes up for 12%, 13% of the growth in demand.

A few words on the residential and commercial sector that represents 45% of the increased power demand. Growth is triggered again by the increase in GDP, more people and then also higher living standards, higher GDP per capita as Ladislas said, meaning more electrical appliances in households, more AC and so on. And of course, also, more services in the overall GDP, including data centers that use a lot of power.

The residential and commercial power sector is also stimulated by the electrification of energy use, and this would be the case in Africa, for instance, where we expect to switch away from traditional biomass and LPG use in favor of more power. All of this is partially offset by energy efficiency gains and technical improvements in appliances, including basic things, such as better building insulation and the use of LEDs for lighting.

Moving on to industry power demand. That will be roughly 30% of anticipated growth. The main message here is that industry power demand will be spurred by the electrification of a whole range of industrial processes, more automation, more robotics and so on. So if you just look at growth, the demand in the industry for power should almost double in the coming 25 years. However, that growth is offset by energy efficiency linked to the adoption of new technologies and simple things such as more efficient electrical motors. And it is also limited by energy efficiency and the change in industrial structure moving away from electro-intensive industries.

In terms of power supply, we have just one chart here showing you the origin of generated power. So to the left is the picture of 2015. The -- and to the right is the growth between '15 and '40.

I think you all know this, but we certainly believe that the worldwide power mix will evolve away from oil and coal to more low-carbon power, meaning natural gas and renewables, and of course, these are markets that TOTAL is targeting.

In our model to the right, wind and solar alone, so not all renewables but only wind and solar will make up for 50% of incremental power generated and gas at around 25%, 26%. The result of that is that the carbon intensity of power, meaning the number of kilograms of CO2 emissions per produced megawatt hour is going to decrease by roughly 1/3.

And then the chart on sensitivity. Again, power demand is usually sensitive to GDP assumptions, and it happens that, in our modeling, more or less 0.5% GDP means a more or less 3,000 terawatt hours in 2040, which is 7% more or less demand. Remember, it's because residential, commercial and industry are making up the bulk of power demand, so it is very sensitive to overall economic activity.

The next 2 sensitivities are straightforward link to energy efficiency on one hand, all to a boost in electrical car penetration, what Ladislas already presented. So I'll jump to the last block, which is more amusing, which is to assume that China's per capita power demand would catch up with 1/3 of the level of power demand observed in OECD countries or, conversely, that India per capita power demand would catch up with 1/3 of the gap to China's power demand per capita. In both cases, that would add 1,000 more terawatt hours of demand in 2040, so a beginning of convergence in the per capita use of power worldwide.

The last chart is on the regional weight in power demand. And unsurprisingly, these weights will shift massively between now and 2040. Non-OECD Asia will overtake in terms of power demand to some of North America, of Europe and of OECD Asia. And the share would be around 48%, which is actually the same share as the share of non-OECD Asia in the worldwide population in 2040.

Africa, on the other hand, as you can see on the chart here, would only represent 5% of the worldwide power demand, whereas, its population would be close to 20% of the worldwide population. So there is definitely a case of being more aggressive on power demand than what we have modeled so far.

Coming now onto the last section and perhaps the most interesting piece of our modeling work, bringing everything together and looking at primary energy demand and then CO2 emissions. Here, you see the world primary energy demand in our Momentum scenario.

So the total primary energy demand grows by 1% per annum between now and 2040, and that would be going in terms of millions of barrels equivalent from 270 million to 350 million. You can see on the bar chart that the share of gas and renewables is rising strongly. The precise number is from 36% to 46% so a big push on low-carbon energy, which again, are markets we're looking at.

Coal drops from 48 -- 28% to 22%; oil from 32% to 27%. But then if you look at the right, in this scenario, the total emission level, measured in terms of gigatonnes of CO2 per annum is not curved and remains high. In fact, you will note that the level of CO2 we show here in our Momentum Scenario is close to the one of the IEA New Policy Scenario. And therefore, since it's closed in terms of admissions to the NP, it's far away from the Sustainable Development Scenario.

So then we have been looking at what we call an Optimized Momentum scenario. And we built that by accumulating all the nice or desirable sensitivities that we have -- been discussed, Ladislas and I, from the Momentum Scenario.

So what have we done? We have accumulated the following sensitivities: more energy efficiency per annum, 0.1% more; 33% more efficiency in new combustion engine cars sold in the market; 10% higher EV penetration; 10% higher gas penetration in transport for long-haul trucks and buses -- and bunkering, sorry; 10% extra coal switch, so pushing out coal from gas; and then also, 5% more pushing out of gas in favor of renewables.

And when we do that, and add up all these sensitivities, total primary energy demand grows no longer to 1% but at 0.8%, essentially, because of the higher energy efficiency assumption.

But then you can see to the right that the level of emission is going down, but it's still not close to the 2°C Scenario. In fact, we only make up approximately 16% of the way to the 2°C Scenario emission level in 2040, which therefore, clearly says that we need a completely different set of assumptions if we want to have a primary energy demand that would be compatible with the emission level of the Sustainable Development scenario in 2040.

So this is the basis for our Rupture Scenario. The main drivers are shown here, but the main drivers are high-level technological break-throughs, a very strong shift in public policies, and I would add also, a big change in the energy consumption patterns of all of us, including us who are in the room here today.

So these scenarios is built on 4 major drivers: number one, huge energy intensity improvements of more than 3% per annum, which would lead to an energy demand that would be almost flat between 2015 and 2040. That result could also be achieved by a reduced economic growth. Second driver, much, much faster electrification in the industry and transport and in buildings, and that could happen, for instance, via break-through in mass and sheets -- mass storage of power, which would also need to have the right price points.

As a consequence of much faster electrification, power demand would double in this scenario between now and 2040. And that would also mean that the share of EVs in the light-vehicle fleet would be -- jump above 60% from the level we discussed earlier.

In terms of power generation, the third driver would be a very strong acceleration of the transformation that is already ongoing towards lower-carbon power, and there would be a massive shift to renewables, pushing out more than 2/3 of the coal that we had in the Momentum Scenario. And then

finally, we would need a significant amount of carbon sequestration with a minimum of 2.5 gigatonnes of CO2 stored in one way or another in 2040.

So with all these assumptions, here is then what the Rupture Scenario would look like. Primary energy demand on the chart here in the Rupture Scenario would be only growing by 0.1%, so almost flat with 2015.

The use of coal is collapsing. You can see that. The black bar is very small. The share of oil is down to 21%, and the share of natural gas and renewables in this Rupture Scenario goes all the way up to 62%. There's a little bit of nuclear left, of course. And then more interestingly, the CO2 emission level that you can see to the right does reach the 2°C Scenario level in terms of emissions in 2040.

So this is all I wanted to share with you on our modeling work. We are there to answer questions later. But first, I'll hand you over to Patrick, who's going to talk about TOTAL and how we integrate climate into our strategy, which is a very good follow-on. Thank you.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Yes. So these studies is maybe not -- no, no. Please leave the previous slide. Yes. The message is -- and again, we've done that -- and quite a lot of time, and I think some of our peers are more or less -- same conclusion is that fundamentally we've [all] what we know today, and reverse in momentum is quite aggressive in many assumptions. So the reality of the world, and by the way, we should not forget what the state proposed at The Paris Agreement. We all agreed to set a target of 1.5 degrees, but the contribution of the national contributions. We're not fitting at all with the 1.5 degrees but more with 3 degrees.

So is the Momentum Scenario, which is already quite aggressive is not there just to justify [whether] it's oil and gas and hydrocarbons small, but [clearly] the world wants some (inaudible) there is a huge shift which have to be done. And in particular, just to comment on one assumption, just to have in mind all of you that, on a long-term basis, when the world is making 1% per year in energy intensity improvement. So to reach 3%, if you want to keep the same economic growth, it's just something which is a revolution in the world.

So in fact, the reality is that 2°C Scenario is also a world where the economic growth is reduced. Otherwise, we don't reach it.

Having said that, is that the reason why we should not act as TOTAL? So I will come to the strategy of TOTAL, which is again, I already presented. In fact, this presentation has been done to you by Philippe in New York. But I think, it's good that first, the CEO will do it itself. And because it's a result of a lot of works being done with the Board of Directors. And second, because we have also some question marks, and we wanted to have today an open discussion. And we will also introduce, as you will see, a new element of this component to target. So by the way, these solar plant developed by SunPower.

So the strategy again and when -- what do we take -- what do we do in TOTAL. I could put now the Momentum, and we'll do it, by the way, next time. The Momentum Rupture Scenario as we trademark by TOTAL, and not choosing the IEA Sustainable Development Scenario, which was not very different from Rupture.

But again, what we have decided, and that is because we have some fundamental market trend is to embed in our strategy these trends. Of course, we don't say that it will happen. We say that it might happen even if again the demonstration [is vetted]. Not in our hand today, but we can't think that there are trends. And I don't know if it's 2040, 2050, but we need to be responsible and to observe it.

So what I say that I didn't say clearly is better. A 2°C world would be a world with lower demand of oil. Again, Momentum Scenario does not give us that, but it's not, by the way, there is no more growth. So this conclusion is that natural oil gas is a right combination with renewables to ensure, I would say, the stability of the energy system. They are permanency of the energy system. And then in other Scenario, you have the growth in renewables mainly driven by the growth in electricity demand.

So the other slide, we just repeat (inaudible) this morning, we saw the free access of the strategy of the group. Oil, low breakeven oil, that will be ready to face a market where there is plenty of oil and less demand, so the answer will be a not better chance to run Saudi Aramco, but I need to be sure that my -- the oil projects will be live by 2040, will be at the low range of the cost curve, otherwise, we could face troubles in such scenarios.

Natural gas, there is room for developing. We speak about transportation. We speak about power. We speak about many domains when natural gas can be an awesome virtue and, particular, if you want to be, say, you're substituting coal by natural gas is obviously something which, by the way, takes place in some part of this world like the U.S.

And last but not least, electricity. That's true that the 21st century will be as -- our century of electricity. It offers a bit -- a larger growth, higher growth, and the other fuels, 2% of growth even in the Momentum Scenario. So it is very -- the economy is more and more electrified, and we need to look at this business.

So then, to speak about road map, I will go through the road map of TOTAL through higher sales of what we can do in order to tackle all the climate to a manageable level and to be responsible. Of course, the first thing to be done in a company like TOTAL is to further improve the efficiency of our operations.

This is in our hands. This is our first responsibility, which means, by the way, it fits also with some economic objectives. And when you are running refining and chemical business, you will learn very quickly that if you can save some energy to be burned in your plants, it's one of the best way to enhance the profitability of your operations.

And so we have a target, internally, on which we collectively look carefully, which is to enhance our energy efficiency of 1% per year. It's not so easy. And by the way, it's also helped by the fact that the plants are more valuable.

We have been involved in the last 10 years to achieve this target. From 2010 to 2018, or so, 9 years, we have done just about 10%. So we are a little advanced compared to this target. Of course, it goes with some investments. We have allocated for since 2017 $300 million of capital investments in energy efficiency to our downstream facilities.

It goes out as well if we want to promote it with some assumptions of what will be the CO2 price and what are the hurdles in terms of profitability, what we expect from these type of investments, all very pragmatic issues, but our teams are asking "Yes, okay, you ask us to spend but what are you -- what you expect as returns on these energy efficiencies?" So we put the price of $30 per tonne at $50. I think we have another assumption of $40 per ton if the price of oil is higher. It's a little complex. We have many engineers in the company but -- so we put that. And of course, we use when there is a market in some areas of the world. We use the assumption of the market.

Another way to look at it, of course, in particular, in no [streaming] or the flaring natural gas (inaudible). On the one side, we say natural gas as a potential great future and then as a mix on the other side, in our companies, we flare gas. So we waste gas. So there is something contradictory there.

I think we have been quite serious about it, and we set some targets. I take my papers. I don't want to make a mistake. But we say to our teams, "Okay, first, there is a global worldwide commitment that routine flarings will be stopped by 2030. So we don't launch any projects with routine flaring. And it has been decided some years ago. It has been quickly observed in the company. I remember some debates with the [NP] teams sometimes, but we have the very straight no new projects with routine flaring.

On the existing routine flaring, I think we set another target, which was first of the overall flaring. We were, in 2010, flaring around 15 cubic meter -- 15 million cubic meter per day. And we are done -- we set a target to be done by 60%, which we'll have done. We will be -- we are in 2018 at 6 million cubic meter per day, so it has been down. And then the routine flaring, we said to the team, we want to be at 80% less than what we were in 2010 to 2020. And 2010, we're at 7.5%, and today, we are at 1.1%. So in fact, the objective of 80% is already achieved. It's no more -- so routine flaring.

The difference between the routine and the global flaring is a safety flaring. You got to own installations. You have some unstable phases of operations and there is no way, other way but sometimes to accept the flaring in order to avoid any accidents on the platforms. But fundamentally, we are -- we've been very serious about it. The actions have been either to find ways to valorize the natural gas, which is the best way, or in fact also sometimes to get out of some assets, to be honest, which we are to hold or to mature in order to build the growth on more environmental-friendly assets.

And -- but the commitment of 2030 will be achieved, maybe before, if we can do it. We are still with 1 million cubic meter per day of routine flaring. It's not much, but we should -- we will be -- we will tackle this issue.

Another way of being more efficient, I was mentioning that this morning during Q&A is, of course, to switch our processes to more -- being more electrified. In fact, to use more electricity-driven platforms and to be serious about it. It's clearly a route which we need to embark and to which we need to think seriously in term of engineering of our platforms, of our developments.

It has a cost, for sure. So it's where -- it's why we need to have some assumptions, some CO2 and CO2 prices and the better the price will be acceptable, the better it will be. But this is a serious way to do it.

We have sometimes some debates with -- also sometimes when we have a project, where we emit some CO2. Do we invest immediately in arranging things in CO2, capturing the injection to CO2. This (inaudible) is a nice threshold to decide, and sometimes it works because threshold in order to implement it immediately.

So the thing on access of the strategy is natural oil gas. I showed this slide this morning. And on this one, I will not repeat what we said, but obviously, it's also for us one of the action we have to be proactive is to develop new natural gas markets. And in particular, we are -- how can we pioneer and develop the LNG for bunkering for our -- my team businesses. And we have signed a contract with CMA CGM last year in order to equip and to provide LNG to all their new generation of containers ships between Europe and Asia.

And it worked. We demonstrated them but even if the ships are more expensive (inaudible), they will save some money. We have to develop some infrastructure. We have taken some decisions to implement some barges in order to provide these LNG ones in around the north of Europe, ones in Singapore.

We are speaking to -- we are discussing today to implement also a bunkering system in Oman in order to be -- to provide to Middle East. So this is a proactive action to promote this natural gas. And clearly, this is a very clear way to clean this shipping industry in terms of energy. There are some IMO rules, but if we can go directly to LNG, it will be super efficient.

Of course, when we think about natural gas, one of the key issue, and which is an objection to the growth of natural oil gas, is the methane emissions, and we have to be -- to take it into account. We cannot speak about promoting natural gas if we are not very serious about methane emissions. I remind you that the methane, as a greenhouse gas in power, which is much higher than CO2, and so we need to tackle it.

So there is -- there are several debates. So we have spent quite a bit of time to be able to measure it in particular, in all operations, there again. And so our upstream level is quite low. It's about -- under 0.3%. We committed with our colleagues of the oil and gas climate initiatives to be under 0.2% by 2525. I think TOTAL should be able to reach that level earlier considering, in particular, offering no flaring policy. We are making big steps.

And I remind you that it's very important, but when we say all the natural oil gas producer that we are cleaner, I would say, on the coal, it's true providing that the methane emissions are managed, and the 1.5% to 2% -- I -- and that's under the control of Ladislas. I am right? Yes? But it's along the full value chain. Of course, it's all value chain. It's not only India frame. It's also in the network, in the distribution and the customers. We are not in this business. We are in some of them. But it's true that we need also, in the oil and gas industry, even if we are not directly responsible of this downstream of the value chain to bring the natural gas to citizens in some cities. It is true (inaudible) -- it's true (inaudible) of these methane fight in order to have the cleanest possible chain and to be able to promote natural gas in a comfortable position which I think we can do that. And so it's clear that some organization of the whole industry is necessary for that.

Then we have the electricity again, and Helle explained to you all the good potential growth. And entering to the carbon electricity is, of course, part of the road map. I told you that there is a -- Helle told you that there is a strong increase of demand. You can see that, according to various scenarios, it could go up by 60% to 100%, double, we say, in the Rupture Scenario.

And of course, most of the additional power will -- it come from renewables and some from natural gas. Again, Helle show you the various sensitivities. And so that's why we position the company on this segment, and in particular, we say that we have an objective in 5 years of 10 gigawatts; 3 from gigawatts from gas, 5 power plants, 7 gigawatts from renewables. And this target will be, of course, increased year-after-year.

It's also why we consider all [source] but in terms of renewables, of course, we have begun our journey with solar. We recently, through Direct Energy, acquired some onshore wind position, but we also look to other renewables. We are -- I want to be -- this is the evolution of the company. But the more we look for this business, the offshore wind and hydro are also offering sizable plans, I would say.

It's important but -- and there are big improvements in terms of efficiency in offshore wind as well. So we are looking some ways to enter into that business, and we will -- with some partners or ourselves in various -- there are ways to -- it's clearly -- and technology, which is offering some interesting improvements in terms of capacity to develop the affordable power.

We have also this Battery business. It's a range of electricity. One of the huge Rupture, which is missing, in fact, today because everybody considers what we are -- because we are able to do batteries for EVs, we are able to store electricity. It's not true at a large scale. It's quite expensive.

The fact that we acquired -- Saft gave us -- we are clear insiders into that business, and we observe all the progress. We are taking steps in order to grow the start of the business, in order to really develop the energy storage systems and to combine them renewables.

When you combine of course, some solar, for example, solar and batteries today, the cost is higher. So we need also to drive the cost down. But in fact, fundamentally, when people say renewable are competitive to natural gas, it's not true if you take into account the intermittency and so the batteries is a way to make it competitive.

We have some improvements there, and I think it's one of the segment, I think -- in which we think we could have also a position. And last but not least, this is distributing low-carbon electricity to customers, and we establish that business. And we intend to grow it in the future.

So biofuels. Biofuels are the mixed reputation in the banks. We have the third-generation biofuels, the second-generation biofuels. But what is clear is that, around the world, we have policies and government policies, which in many countries, in fact, are favoring biofuels. We observe a growth of 5% per year in the last 8 years, so it's a growing market.

It's true in Europe. It's also true in Asia, in Southeast Asia. It's true in South American countries. And it's true in the U.S. According to the various scenarios, we have the range of future growth, which is around 4% to 6%. One of the issue being, of course, to have sustainable biofuels, I would say, which means the debate about the 1G against the 2G. It'll be clear the 2G for the time being is not very -- the technologies and the volumes are quite minimal. You have, I would say, some evolution of the 1G biofuel in particular, what you want to do in our plans in France that used cooking oil, or sorry, I'm missing the word in English, fat, animal fat, I think that we want to use in complement of vegetable oil. So there are ways to make the sustainable biofuels. It's also necessary for us to scrutinize the way we supply these vegetable oil to our plants, and we have taken some commitments on that in order to be sure that there's a [rule] chain is, I would say, climate-friendly.

Entering into a Brazil live market through -- in this business, where we have an average -- I was looking through the figures during lunch. Around 30% in fact, of the fuels which are sold in the network which we recently buy are in fact biofuels, so it's 30%.

And what we need to grow it. It's also a way to contribute positively to these -- reaching objectives. There is another topic, which is a little limited today but gaining momentum is biogas. And on this one, we have, I would say, few predictions. I just explained Mentor Level. It's not very big, but we have 1 in France. We have 1 in the Netherlands, and we have [stock] -- when we took some shares of clean energy in the U.S. We are also -- inherited this part of this position. So I think this will be -- I will not be surprised to see in, come future years, some mandate policy to promote

biogas into natural gas. It's one way, I would say, to also promote natural gas by combining it with some biogas. And so we've -- lowering the CO2 content of the natural gas.

And last but not least, in the road map, it's about Carbon Sink. Carbon Sink businesses, I think it's important and it's fundamental in any scenario. You still have hydrocarbon. And you know when -- you're certainly for producing hydrocarbon. When you have a cement plant or a steel plant, considering the level of it we need to make the products, we don't see how we could avoid -- we could have ways to provide them -- is eating without hydrocarbons. So it's also -- so these technologies need to be developed. It's a question -- it's a vital question. In all the scenarios, you have to take care of, I would say 2.5 billion tons in 2040. I daresay 5 billion ton in 2050. But there is a necessity to be serious about it. And when we -- the more we look at it, so on one side, we are embarking TOTAL, and we are participating to projects like the Northern Lights Project in Norway together with Equinor and Shell but also -- some clean air -- Clean Gas Project in U.K., which is being developed also with I think Shell and BP, if I remember well. So we want to take the share to take the whole experience and to invest. We invest more or less $100 million per year in -- globally in R&D and technology development program in CCUS.

But there is also the natural sinks -- natural carbon sinks, which means investing in preservation of forest, humid areas, degraded lands. This is not an oil and gas business, to be clear. So we are recruiting. We have decided to be serious about it, to consider that there is there something, which by the way in term of economic -- is much more efficient because you can clearly sequestrate some carbon from less than $10 per tonne, but it has to be done by professionals, I mean, which are the environmental people, not us, clearly, and so we are recruiting a team. We have decided that we could -- they will be able to -- we will provide them around $100 billion investment budget. If we do that during 10 years, we could reach the equivalent of sequestrating, let's say, it's a rough figure, between 3 million to 5 million tonnes of -- per year of CO2. It has to be done naturally.

It's not given because this businesses is just -- it has to be done very seriously. There are many consequences with the communities, and so you have to select the projects properly. But we think that it's a way to contribute and an efficient way in the climate change challenge.

So when I come then to what does it give or it gave you all the elements of the road maps, when we think about oil emissions, I would say we have oil emissions. Oil emissions are the one that -- which are coming from oil operations. It's our accountability. It's what we call Scope 1 and 2, which, in fact, to be clear, they are mainly on the yellow and the orange part of oil and gas production and transformation. And then, of course, oil products are sold, and then they are used by our customers. So there are emissions of [those used] by our customers. This is what we call Scope 3.

We have decided to take these 2 elements and to -- with the Board of Directors -- we had to organize a discussion yesterday, by the way, about it and to see what we could do in terms of not only saying we are responsible but acting.

So first, on Scope 1 and 2, on all operations. We have decided and we've set to ourselves an absolute target of Scope 1 and 2 emissions from our operating facilities or all operations under our control, for all our traditional oil and gas business, E&P, plus Refining & Chemicals, plus Marketing & Services. And all of these activities, we're emitting around 46 million tonnes of greenhouse gas in 2015, and which is a year of [supply] segment, so we took out that as a reference. And we want that to be down by under 40 million tonnes per year. So it's an absolute figure. Let's be clear, there's no message of shrinking behind it. We tested that figure clearance to reassure Christyan that we can grow. If I understand, you don't want me to grow too quickly, but we can grow. And so it's a strong commitment, but we decided that we had a debate, but it was the best way to show the commitment with an absolute figure, but we can reach it. So we have already made some progress. I think we'll be soon at the 42 million, 43 million, but we will be down under 40 million by 2025. And the Board of Directors has decided that an element of variable pay of the CEO and then of the top executives, because I translate all the targets which are given me to the board to my top executives, will be linked to the progress on this target on Scope 1 and 2 operated emissions from our traditional segments. It's a way to do it and we not repeat our flaring reduction, methane control, energy efficiency, process electrification, or what I have just explained to you before.

The second ambition, which is more strategic -- global strategy is to be able to, as I said, to -- so we put in place this indicator, which is we weighted average of the life cycle emissions of energy product sources. If you want the explanation, Ladislas will give you everything. I can tell you, it has been very -- it's well controlled. There is no double counting or what has been scrutinized is perfectly auditable.

I know that these, we speak about we put an index and base 100 in 2015, but you have the figure of these emissions in 70 grams CO2 by kilo BTU, and we intend to diminish it. If we put in place, if we execute the strategy, which is about growing our natural gas business to, I would say, in 2040,

I think, 45%, 55% of the global portfolio of the company being in natural gas. I think in oil to 30 -- including biofuels by your 30% to 40%, and we grow the low-carbon electricity businesses to 15%, 20% of the global portfolio of the company, we can reach these ambitions in 2030 and 2040.

It's difficult to give precise figures. It takes time, but we are already embarked on this journey, and this ambition will be, by the way, is fitting very well with what I showed you about the market trends on which we face, and we want to -- on which we want to develop the group and the company in future years.

So last but not least, the last slide, we are not alone. And on this climate change, I think it's important that major companies are also taking some leaderships and not only alone but also with collective actions. So we have, in TOTAL, clearly, a clear policy because we are -- but we should engage -- and being transparent, I think, and should engage in the initiative which makes sense in order to fit with our strategy. So yes, we are reporting since 2016, every year now our figures and how we execute this strategy. And I think we already issued 3 reports. So this will be an annual report.

Secondly, we have decided to support the TCFD recommendation by Michael Bloomberg, and we have even participated positively in the working group to make recommendations or to implement it with some of our peers. And I think in our reporting, you can find the disclosure according to TCFD. We need to improve it every year, but since last year, since 2018, we are doing it.

We are also, in the U.S., joined the Climate Leadership Council, which is advocating for carbon dividend plan. We have seen that in France. There are many debates about carbon CO2 taxation. The U.S. -- these U.S. leaders are promoting an interesting way to try to implement and to put the citizens on the right sides. Ladislas would answer for you some questions if you are interested, but we are a founding member, and we participate actively to promote this idea. Together with our colleagues, we have the oil and gas climate initiatives, and we are also very active and -- not only in setting some rules. We are in the Global Compact being -- we are 1 of the 30 lead company on the Global Compact. And last but not least, I mentioned this morning that we joined founding member of the Alliance to End Plastic Waste.

So I think it's a global move in the company. Okay, it's going well for transparency, so we are open to dialogue. We are open to provide the figures. But also, we have, of course, to issue our mission. And our mission is to deliver energy to more people, to deliver an affordable, reliable and clean energy. And it makes no sense if we don't reach the objectives. It's not only a clean one, which will be expensive. It doesn't work. Again, the events in France have demonstrated it, even in the developed countries. So we need to be able -- the company, TOTAL, to combine the 3 objectives and -- in order to be a progressive player in this field, and this is our ambition.

So after this presentation, I will be happy to answer to some question. But by the way, this will be Ladislas and Helle, which mainly, I hope, answer and -- on all this presentation. Thank you.

QUESTIONS AND ANSWERS

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. Well, the first question, obviously, we will give to Martijn Rats down the front here, and we'll follow that with Chris Kuplent at the back.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

Thanks for this presentation. I thought it was very interesting. I wanted to ask you 2 things...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Brandon, come. One question. Brandon, please come. Can you give me my file, which is over there. I need some notes, you know. Okay. Please go.

Martijn Rats - *Morgan Stanley, Research Division - MD and Head of Oil Research*

All right. Good. I've got 2 questions, if I may, about the various parts of the presentation. The first one relates to the oil demand work that Ladislas presented. And in my experience, when people talk about peak oil demand and things that are [wrote] oil demand, they end up talking about things that -- they wrote gasoline demand rather than just oil demand. And if I look at your outlook, this idea is also sort of embedded in here. And if I can just sort of pick out a couple of numbers, if I focus on the right-hand chart of Exhibit 4 and pick out the things that are effectively middle distillates, aviation, I think you have it at plus 4 million barrels a day. That's all metal distillates; marine, plus 1 million, that's middle distillates. And then road, buses and trucks are 3 million barrels a day, all middle distillates. So in total, there's 8 million barrels a day of middle distillate demand in this. Now at the moment, it takes about 2 barrels of crude oil to make a barrel of middle distillate in the global refining system. So to make these 8 million barrels of middle distillate, we will end up refining 16 million barrels of crude. But then the gasoline yield on that is easily 1/3. So if we refine 16 million barrels a day of crude, we end up making 5 million barrels a day of gasoline. There is not 5 million barrels a day of incremental gasoline demand in this outlook. You put cars at only plus 1. So in this outlook, it looks like there is an inherent imbalance in the amount of middle distillates that we're going to need versus the amount of gasoline that we're going to need. Now there are 2 solutions for this, of course. Either we very heavily invest in hydro crackers, shutdown FCCs, the global refining system very heavily switches away from gasoline towards distillates, but in an industry that isn't growing all that much, and frankly, where the margins are still rather skimpy, I doubt there would be appetite for such large investment. The second alternative is, of course, that we have different demand patterns and that perhaps what we currently considered to be middle distillate demand, turn out to be gasoline demand. You could perhaps talk about, I don't know, gasoline trucks. May sound a little far-fetched, but perhaps we need to go there. My first question is, how do you think this imbalance between the various parts of the barrel will be resolved within your outlook? That's my first question. The second question that I have, which I recognize is completely different but, is perhaps more a question for Patrick. If the outlook is 10 million barrels a day of demand growth over the next 25 years, that's 400,000 barrels a day a year. But at the moment, if you look at the industry, both operators and service contractors, we have the ability to develop about 3x that every year. We'd easily grow oil demand or oil supply at 1.2 million barrels a day. So in terms of our development capability, we could well have a little oversupply. But then again, if you look at the resource base that we have currently, we have plenty of resource. We can also develop resource at a much faster rate than 400,000 barrels a day. So it looks that both resource and capability to develop resource are both could well be an oversupply. And if you then think about who is going to capture the economic rent, you could either foresee a scenario where resource-holding countries chase the ability of operators like yourself for your capability to get their oil out of the ground, alternatively, you can envisage a scenario where operators are actually chasing the countries that own this stuff so they can apply their trade. In that tension, where do you think the economic rant will fall in the future if we end up in this scenario? Those are my 2 questions.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I leave you the first one. I will evaluate first for you. And I'm sure the model is fine, but you have to explain, so Ladislas?

Ladislas Paszkiewicz - *TOTAL S.A. - SVP of Strategy & Climate*

No, I have to say that the way we've ran the model is really on primary oil demand. And at that stage, it's not being taken into account the refinery aspect of it. It's really moving for the big picture and saying, how much oil do really I need in order -- assuming that you'll get there depending on the different slates that you will use afterwards, but it's really on the oil aspect. So probably we'll have to refine -- with no specific joke, we'll have to refine the analysis in that regard.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Okay. So the second question -- by the way, you are right. This is what TOTAL is doing. We are chasing the producing countries where we find low-cost oil. And it's why we have been quite aggressive to take all the position in the Middle East. It's why I prefer to have long-term oil in Abu Dhabi than in other countries, than in Canada, for example. That's clear -- but your scenario is right. By the way, if you follow your scenario, we don't have to worry too much about the cost of the industry now. Come back to this morning in terms of capital efficiency of the industry. But it's true that I'm -- honestly, my strong belief is that all that is -- to be honest, it's very -- this world, up to a degree, we don't see it at all for the time being. And by the way, the IEA scenario, when you look at it where it is like that, and then there's a huge drop. You don't know what is happening

somewhere. So I think this is where we need to keep both aspects in our hands. We need that to be radical. But you are right that at the end, the power will shift to the producing countries with the lowest oil -- cost of oil. That's clear. But it's why we need it keep our position today rather than before because it's better to negotiate today with them than tomorrow. So we take that conclusion. When I speak low rate of an oil, this is, we need to look at them and to change it, and we need to take the position today and not to wait. So if we have spent $3.5 billion to acquire the position of the concession in Abu Dhabi is perfectly because of that, and then we have the position for 40 years. Of course, obviously, these countries, they know that they have the rents in their hand. And so the share of rent is different, but you protect your portfolio, I think, for the future. The question is that for us, we don't have so many opportunities to take very long term or in fact, we don't have so many countries offering that for the time being. Saudi Arabia, we did not manage to convince to give us access even if I'm going to Riyadh regularly. Okay?

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. So next question is going to be Chris Kuplent and then followed by Oswald Clint in the front.

Christopher Kuplent - *BofA Merrill Lynch, Research Division - Head of European Energy Equity Research*

Just wanted to, Ladislas, you're starting your analysis from 2015 and 92.5 million barrels per day. So you add 10 million barrels per day and we're not far away from that today. It looks like we're going to be there in 2 years' time at current rates. So I wonder whether, and I appreciate this, we're dealing with the realm of uncertainties, but I wonder whether you can share with us how you expect the progression into the late 2020s, for example. Do you see an early plateau? Or do you see a continued strong increase? And then at what stage and at what height do you see a peak before we go back to your 2040 number?

Ladislas Paszkiewicz - *TOTAL S.A. - SVP of Strategy & Climate*

All right. First, I want to make clear that the 92.5 million excludes biofuels and refinery gains. So we need to have consistent figures actually when we compare to make sure that the definitions are about the same. Regarding the progression, we do see actually an increase which is flattening at the end of the period, but we hardly really see the strong peak rather than a plateau with growth actually being reduced as time goes on.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, but your question is good. So reality is that at the pace of growth today, we are exiting out of any of these scenario. And so something should happen somewhere, I don't know when, which will reverse, of course. And this is the main difficulty. So that's true and scientists are right to try to say there is an urgency to act with the world today. In fact, the reality is that we grow oil demand by 1.3, 1.5 because the price is lower, because emerging countries are willing to develop their economy whatever the consequence are, it's difficult. So that's true. But today, you have a trend which is not in line with any of the scenario. We cannot hide it. What could be the reverse? What will be the element of reversing? In [FC], I see 2 categories of countries. We have OECD countries where you can find that the policies will be strong enough like in Europe and as there will be political willingness, we can reverse it. But frankly, to see that in most of the emerging economies, which are driving the growth for oil, we should not make a mistake. There's no growth for oil demand in OECD. It's not true. So -- and the question then for OECD, do we shift quickly enough to compensate growth of the emerging economies, which is the debate today. And that's the question now for the developed economies. So that is true. But there is some way of a contradiction. And again, if you observe quick, as you have done it, I'm sure, the EIA scenario you see suddenly a sort of break of curve, there is no explanation. And so it's difficult to know when. So this question which is a nice quiz in all of the conferences is for me, just -- the question is just -- it's a quiz that's very difficult to answer.

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

Can maybe just add one thing, which is that this scenario we're showing is already aggressive on EV penetration. And of course, today, EV penetration is very low. So just remember that. It's one of the assumptions that there'll be high EV penetration coming up.

Oswald C. Clint - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Research Analyst*

Yes, just 2 questions really focusing on the oil demand side, an upside risk and a downside risk. Patrick talked about being an insider with Saft and understanding batteries and storage around renewables. But you're also -- you also have a lot of history with methanol and cold olefin. So you have a 2 million-barrel per day reduction in oil demand because of coal and methanol to olefins. I know you did this in the last decade. TOTAL has quite some history with coal to chemicals. So is this using that knowledge? Do you think coal to chemicals works? Or -- and it's going to put...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

When I became CEO, my first decision was to exit all this mess. Because I went to China during the World Day, people in their car told me you need to advocate for coal to chemical -- by the way, I was in coal -- and chemical, before I told them okay. Let's be clear. All right, it's nice. It's just emitting 5 million tonnes of CO2 per year to make 1 million tonne of polymers. That was the ratio. So honestly, this was not responsible. So we -- and by the way, the economics were tough. So on this honestly, coal to chemicals, it's so hot, you have t actual keep combining with CCUS does not exist. I mean, when we speak about China, to index CO2, you cannot find there. So we stopped it. So yes, we had the journey, but we decided that it was -- it was making sense. It was an economic driver which was low feedstock, coal in China, so it's low feedstock, advantage feedstock, but there was just a drawback. And if you put in the math $30 per tonne, you just don't do it. That was the reality. So methanol to olefin, which we have developed the technology in (inaudible). It was interesting when the price of oil was at $100 per barrel, when the price of gas in the U.S. was at $8 per million BTU. But in the meantime, something happened, which was just a shift of the gas in the U.S. to $3, it fainted at 3 04. And so unfortunately, this technology is more expensive MTO than simple cracker. When you make a cracker olefin, it's more reliable. You don't look in exactly the same products at the end. I know that some chemical can be a big -- large companies are tied to investments. They are going in storage. It's just a problem of what is the most competitive technology. So we have it. I don't say that never we'll do it, but to take the decision today, to invest in MTO, and we should invest very seriously in -- as an alternative to put after ethane cracker. At the end of the day, the ethane cracker was more interesting.

Oswald C. Clint - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Research Analyst*

And sorry, the other question was you mentioned that electric buses, you've now gone to 50% electric buses, and that's a change from this time last year. So something happened. You incorporated it. I remember BP last year saying plastic straws was a -- a reduction in their chemical demand assumptions. So each year, there's another thing that happens where you're changing the numbers. My question is, just how much government policy meetings and interaction you're having and how much is that increase so that you're on top of future political and policy changes?

Ladislas Paszkiewicz - *TOTAL S.A. - SVP of Strategy & Climate*

No, let's be clear. Policies are extremely important in the evolution of what's going to happen. So we have to take that into account. So that's definitely significant. Now for heavy-duty vehicles, we have in the first time, about 18 months ago, assumed that almost it was no switch to EV for this segment of the market. And we realized that, actually, because we learn and we look outside what's going on, that probably you have, of course, buses, you have urban delivery trucks that are going to move faster than what we had anticipated probably...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I think, today, you assist return to something very new for TOTAL. 5 years ago, we were only making the size on the supply side. And we decided in 2015, no, we need to look at demand. And I told to my colleagues, I want to hear about demand in this company because all what is happening around us, the demand is just fundamental. We can stack all the supply from all the country one by one, and we were doing that exercise every year, every 2 years with E&P, and we said, no, I want to see the demand and better understand. So we opened our mindsets. We also had, I will tell you, on these electric cars, electricity, I mean, I invited to the Board of Directors a CEO of a car manufacturing and we had a session, we will see with our Executive Committee, and we told her frankly, I'm convinced that all the cities, the big cities of the world will be plenty of electricity, forget about oil. So it obliged us to think about it and to listen -- to discuss with people, to open our mind. I think it's a very important exercise that all companies, not because we are producers, but -- production in our choice, our decision strategically must be also driven by better understanding

the demand. This is moving very quickly. All the buses will be electric, I think, in Paris in 3 years, 4 years. All Chinese, by the way, because they are the most efficient. But it's moving very quickly, and I'm -- so you need to change your mind, in particular again in trucks, electric trucks could take part of it, in particular light works, we can see some evolution of these technologies moving quickly. So I think, yes, it's a world which is changing very, very quickly. By the way, for the car manufacturing companies, it's even more different for us I think. But we have to understand and to be in the contact with them and to talk. It's true that we are trying to listen, and not only in Europe or in our continent, but also to listen to what is happening in the other part of the world because the visions is not exactly the same. So there is an evolution. That's true. I think I'm -- but you mentioned about the 2 chemicals. That's true, but 2 years ago, 3 years ago, all the oil and gas company, we want to do petrochemical. There's a huge growth, petrochemicals, that's true also, but I'm convinced that part of this growth will be taken by recycling. Part of it will not be virgin oil or virgin gas. So we have to introduce that in the models. It's more complex because there, you are obliged to take plenty of assumptions because -- in fact, it's technologies which today are very early stage. But I think it's very important that we understand better the demand if we want to establish a strategy.

Alastair R Syme - *Citigroup Inc, Research Division - MD and Global Head of Oil and Gas Research*

Alastair Syme with Citi. Two questions, one for Helle. If you look at your models on learning rates in solar and storage, do you think the combination becomes competitive with baseload generation gas and coal by 2040? Is that economically viable?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

It depends on which country, in fact. I will tell you, in Australia, and Helle will take the floor, but what they observe, it depends frankly on the price of electricity in each country which are very different. Helle, you want to elaborate?

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

No. I mean, it's a good point, first, that electricity markets are entirely local and there are all kinds of specificities to local markets, so it's hard to give an overall answer. Number two, the Rupture scenario we showed is a kind of top-down assumption embedded in there, which is the answer is yes. I mean, mass -- cheap mass storage of power certainly changes the game. And so that's what we have taken as an assumption in the Rupture scenario. In the Momentum scenario, we're improving, but we are not making this discontinuity in terms of availability, affordability and safety. But you know that, within Saft, we are working both on ESS based on today's technology, and then Saft is investing also in next-gen technology called solid-state, which...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

We have on-the-ground experience. We have convinced Momar that we need to solarize all retail stations around the world. So we enter into use program 5,000 retail station will be just solarized. And we just recently, and I think maybe something we could share with you, it could interest us, this maybe microeconomic but it gives the right idea. We just went through these this feedback from the teams, going through all the countries and looking to the profitability of this decision which was sort of consistent decision, but we've -- okay, let's do it. By the way, it was a way to support SunPower panels or -- Momar contributed to also investment in SunPower. But I can tell you, in combination of solar and some batteries in Africa, in most of the countries today, it's profitable. (inaudible) about 20% rate of return. So it works. Even if it's expensive. Okay, when you come to France, which benefit from the one of the lowest power electricity price, it doesn't work at all. In fact, we are -- we have Momar subsidizing Philippe in Sao Paulo. But so that's interesting. So it depends really of what is the cost today of providing electricity. And for example, in Australia, I understand that the situation is quite -- it's quite expensive to provide the facility. So combination, it works without a lot of subsidies.

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

And the same applies to these nonconnected areas like islands where Saft has already today. Deployed storage in connection with either wind or solar farm, and it works because the power prices are very expensive and so they can pay so-to-speak for that kind of generation. So again, it's a sum of individual and local conditions, yes.

Alastair R Syme - *Citigroup Inc, Research Division - MD and Global Head of Oil and Gas Research*

My follow-up, Patrick, was just this morning, you mentioned, when you talked about the project sanctions, that not all the LNG projects meet 15% hurdle rate. What -- how do you think about, in a Rupture scenario, what that could do to gas pricing and whether that would further impact on those returns?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Rupture scenario and gas. We still have a stable demand in the Rupture scenario by 2040. Yes.

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

It's a little lower than in the Momentum, but there is still room for...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

For sure it's a little different because -- when we see what is the share of LNG in the natural gas market. LNG today is only 15% of the world gas market.

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

10% and will go to a little less than 20%.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

You can have both LNG and accepting without having a question of domestic gas. You have the gas market shift is split into different works, in fact, so I'm not afraid of that. Well, by the way, we're prudent. We take an assumption. The $50 per barrel is equivalent to us to something like, in Europe, $5.50, I think. And in Asia, $7 or something like that. So we are -- our gas assumptions are quite prudent, in fact, when we sanction projects. This is, by the way, for me, one of the consequence of all these studies. Let's be prudent about the assumptions we take.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Our next question here is Carlota from Church of England.

Carlota Garcia-Manas

Carlota, Church Commissioners for England. I have 2 questions. Linking with the presentation this morning about some of the future sanctionable projects, and a lot of them appear as joint ventures and partnerships in their linking with the presentation this afternoon. One of the issues of great concern to the Church of England investing bodies and other investors is the capture of ESG risks and -- in opportunities associated with especially with the nonoperated joint ventures. So my question is, how do the nonoperated joint ventures feature in this scenarios and projections that you

have presented this afternoon? And the second question is more for Helle, I believe. On the outlook on LNG in Southeast Asia, what level of additional infrastructure investment may be needed in some of those countries, especially India, to displace faster the coal-fired power plants with gas? And do you see the political willingness in those countries to create the necessary triggers for that development?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

The nonoperated venture, as you know, the first decision to take when we decide to partner with companies, do we accept that operator and what -- does it follow our standards or not. That's fundamental for me, and we trust the operator. Then the second step, when we are in an operation operated by another company, we try to -- our duty is to influence them as much as we can so that the development will be fit with our standards. And generally, I will say TOTAL is partnering quite big partners, and it's rare that we go with small companies, and it's because, also, we are speaking about large projects, and large projects require investment funds, quite large capital expenditures and so when you partner with smaller companies, you have issues about financing the projects, and then it can get delayed. So I would say for us, my answer to you will be that -- and it's also part why we participate to all these collective actions, and I consider that it's all an interested mind trick if I dedicate some time with my OGCI colleagues or so, but my interest is to embark most of the industry the same position that we are. So I think -- and it's working. It's -- you can be amazed we participate in these meetings where, collectively, we become smarter together and we engage. So I think the answer for you will be that it's not -- it's of course, what we do each project, but it's also to be proactive so that in our industry we share the same standard. And for example, methane, the fact that 13 companies or 14 companies have signed a commitment. For me, it's a strong progress because if we are alone on all sides, we are not to solve the global problem, so that's the way I would answer to you.

Carlota Garcia-Manas

Sorry, the question was about whether the nonoperated joint ventures were included in the projections and targets, et cetera, you are disclosing, so the proportion...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

They are in the ambition on Scope 3. On Scope 1 and 2, no, because it's operated, so as the permit is clear. They are in the ambition of Scope 3 as soon as we take care of our share of the products. So there are ventures we take our share of the products and we are selling them -- all the sales which are earning by TOTAL are included in the scope of the ambition that we set on the Scope 3 parameter. This is a specific answer. Helle?

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

LNG in Southeast Asia. First, you mentioned an important point, which is absolutely behind the modeling work we've done in the momentum scenario, which is to consider that there are gas countries today in Southeast Asia whose, let's say, reserves may begin to decrease severely over the next 25 years. But because they have existing gas infrastructure in place, we make the assumption that they are good candidates to import LNG because, again, the marginal -- it's a marginal cost for them in terms of getting the LNG because the main infrastructure is there for historical reasons. So that's certainly a good driver for LNG demand in new countries that will be producing gas today. And effectively, it's not only in Southeast Asia that this may happen. It's true in some North African countries and Latin America. On India specifically, it's a tough question. India is certainly, in our model, one of the markets where there is remaining coal because they have domestic coal because we cannot just wipe out energy security aspects, which are very important for governance -- governments. And then I would say short term, of course, India is building LNG import terminals. And as Patrick said this morning, and as we know, India has been buying more and more LNG recently. But we do not assume in the model that coal will be entirely gone in India. And so we showed you some sensitivity on pushing out 10% residual coal in India would be a country where that might happen. We've got -- not done the modeling of the investment needed in India. And if I then go back to short term, remember the JV we've announced with the Adani group. There is also an LNG aspect to that story, of course, so -- thank you.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Michele.

Michele Della Vigna - *Goldman Sachs Group Inc., Research Division - Co-Head of European Equity Research & MD*

When I look through your Rupture scenario, clearly, there are major technological break-throughs that need to happen to achieve it. What do you think could be some of the more interesting or likely break-throughs that we could see in the coming years? And the second question on your reduction in Scope 1 and 2 emission to below 40 million tonnes per annum by 2025, clearly improved efficiency in the existing operations and more efficient new operations is one way to get there. Another way to get there also would be to exit or dispose of more carbon-intensive existing operations like more mature field, oil sands, some of the [leak] infrastructure in West Africa. How much does that become a part of achieving this target?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

The target will be achieved. You identify there are many ways. One you mentioned is clear, and it's also linked to the offering. It's also linked to the global strategy of the company. But again, I don't want to lose any value on any of my assets. So the target will be achieved. And if we put that on the table, it's because we are dutifully committed, and we see the ways and -- to achieve it, and that's part of what we could have to do. But if we do it, it's not because of the target because we consider like, economically, it makes sense so don't reverse it. The target for me, I've spent my -- when I began my career, it was in environmental matters, and I spent 5 years of my job -- of my life. Fundamentally, we make progress in ecology if it makes sense economically. I see no players taking decisions purely -- but it's good, but what we will -- so if it makes sense, we'll have the results. But we have a clear road map on it. I will not say more. I hate to announce sales of assets. Okay?

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay, our next question is just back here, and then it will also be Lydia.

Unidentified Participant

(inaudible) You just said that we make progress in ecology when it makes sense economically. So maybe you could give us some sense of the CCUS economics going forward and the 10% that you're putting in that R&D, what you can -- you intend to get from that. That's the first question. Second question is that you really pointed out that natural gas makes sense if we can manage methane. You are working with your peers on that. Yet there's no disclosure. There's just objectives, so we don't know what's measured, what's modeled -- modelized. So when can we expect some type of disclosure on that? And thirdly...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

You should read...

Unidentified Participant

Sorry?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Read our report.

Unidentified Participant

Yes, I do.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

We have disclosed the emission level that we reached last year.

Unidentified Participant

We would need to see a little bit more.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

If you don't trust us, it doesn't work, you know? But we are open so we know when we write a figure in a report -- an official report of the company, there is a backup behind it, but we are open to explaining how we measure it.

Unidentified Participant

You've done presentations to us that were highly convincing, but then you never published on the back of that, and so it's -- it would be really helpful, especially (inaudible).

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Okay. So the next report, we explain everything about methane measurements.

Unidentified Participant

And then my last question is about you mentioned the stability of the supply and the challenges around growth in the 2°C Scenarios. I was wondering if, in your Momentum scenarios, you took into account on the supply and the demand of the impacts of global warming because, for instance, Africa will be hit first and with the dire consequences on probably geopolitics but also access to water onshore, maybe more extreme weather condition for offshore operations. And so have you started to modelize the impact of the Momentum scenario on your business?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, we didn't do it, but I think the world should do it because, today, in fact, we are more in the Momentum than in the Rupture scenario. And I think that is something which should be done by policymakers, which is to begin to really evaluate the consequence of a 3-degree world and what should we do for adaptation, but we did not do it, okay. We are not there -- we are not equipped enough to do that in TOTAL. We don't know everything. We can participate through studies which are promoting, and we participate through Paris think tanks, and we finance some issues, so a little bit, we can do it. But again I will tell you, I hope we will be in the Momentum scenario. We are not there today. The CCUS, it's a very interesting question. Again, we think we need to develop this technology. And I have a strong -- this is why, by the way, we also need to have the carbon price. And because there is this chicken and egg and what is a level of price which is driven the development of technologies. Of course, for the time being, we need some subsidies to be able to develop it, but by the way, we subsidize also the renewables. And so I don't see why we cannot subsidize this type of technologies. And we are more in the range of $60, $80 per tonne. There is ways to progress. By the way, I think on the long term, there is not only CCS. There is a U, which is use of CO2. Of course it's a molecule which is very difficult to challenge to use and to --

but we have engaged with Stanford, for example, in many research on what can be done with the CO2 because maybe the transformation of the users materials has more future than just storages, which are I think a limitation somewhere in the world. Even if, look, if 2 countries like Norway and the U.K. are promoting projects today in which we participate, because you can think, and we're speaking about as we are becoming strong in Denmark, not only because of Helle but because we love Denmark, we can think of the future of the North Sea. Once all these fields will be depleted, why not using these reservoirs to reinject some CO2 in all these fields. But it's a potential industry, potential activity, business. It's not underground because I think that storage of CO2 under the ground of people in the city will be super difficult. But in areas where, in fact, it was all the reservoirs, it could be done. Of course, we have to ensure that the closure will be firm, et cetera, et cetera. So it's why we are seriously embarking on it because, again, if we don't have this technology, there is no way to reach in any way the targets that we would like the mankind to reach. So today -- so it's why we have decided to invest R&D. And my CTO will be happy to meet you, I think, and you could exchange with her and the head of the program of R&D, and we're engaging around the world in many programs. But also in projects in order to develop business models because, at the end, we need to have a pragmatic business model. This is where the Norwegian and U.K. projects are of an interest. And so that's commitment. We put some CapEx in it.

Brendan Warn - *TOTAL S.A. - SVP of IR*

The next question is Lydia and then followed by Irene.

Lydia Rose Emma Rainforth - *Barclays Bank PLC, Research Division - Director & Equity Analyst*

It's Lydia Rainforth from Barclays here. I have 2 questions, if I could. The first one is on carbon pricing and some, well, price you put into it. But what happens if you don't have carbon pricing? Is there a risk in terms of gas demand sensitivities that you go, that the world ends up going down a route that is coal plus renewables and gas gets left out because it's more expensive without the carbon pricing? And then the second question is just come back to the TOTAL strategy, the growth discussions that we're having this morning and that idea of more than 2% growth out to 2025. It looks from this side that that's more in line with the Momentum strategy than the other -- than any other strategy. I was wondering if you could comment around whether that's the correct interpretation.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Carbon pricing, what -- do you want to?

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

Well, on carbon pricing, Lydia, I think the -- it's not just a question of carbon pricing. If you take the case of China, as we discussed many times, it's a question of air quality and so on. So going for renewables on the one side and coal on the other side, we think, is, in any case, not sustainable long term. Of course, carbon pricing helps that in the short term. But in our view, you know that we believe gas has intrinsic qualities as a complement to renewables for the intermittents and then is flexible, easy to pilot kind of energy, and I think the case of China is a good example to illustrate that it goes far beyond carbon pricing.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Yes, but in full, carbon pricing exists. In many jurisdictions today, in many countries, even in Europe, EUR 20 per tonne, you shift -- the U.K. has shifted from coal to gas. So you don't need a very high tax. So what happens if there is nothing, there is, by the way, that's again a world of coal and renewables. I'm not sure it is the best way to -- doesn't reach at all any target of CO2. But it's true but, honestly, [and one who] presented and you put a finger, Lydia, on something which is, for me, one of the main challenge, which is, will we be able really to replace coal for gas, and why? Because coal is super cheap. But the 2 larger consumer of energy in the world were China and India, have plenty of coal. But even India has only coal natural resource. And in any country, what I observed is that country security of supply is becoming -- is beginning by using our own resource. So that's a huge challenge. And it's why seeing the penetration of LNG and natural gas in India is a huge challenge because we have to compete

with the domestic coal which is employing millions of workers. And when I met the Prime Minister Modi, of course, this debate is super difficult when they run a country like that, we want to have economic growth and emerging, putting people out of poverty. So that's for me something which is -- and that's back to our duty. And our duty is to lower the cost of bringing natural gas as much as we can. We are back to our industry or manufacturing duty. This is why I'm a strong advocacy of an enlarged portfolio being able to optimize all the logistics of LNG tankers and all that between -- and when I see companies like [Glencoe,] Vitol, et cetera, coming to that market, that's good news because the more will be players there, more we'll be able probably to [ownemize] over logistics by even exchanging tankers. We don't do that, [David.] Why don't we -- are we not able to do that today? So there is something fundamental which drives the costs down. Otherwise, all what we said, I'm afraid, will be not at 3 but at 4. So it's even more dramatic than the Momentum. But Momentum is not given at all. It supports a huge effort in particular this one. So that was my question and my answer.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. Our next question is Irene.

Irene Himona - *Societe Generale Cross Asset Research - Equity Analyst*

To perform the scenario analysis of...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Sorry, there was a second question by Lydia. I was forgetting. No, I knew, is it consistent to go by 2 and Momentum. It is perfectly consistent. Again, it's a question of choice of oil, but I'm selecting in my portfolio. It is consistent providing by my growth is, again I will say, immune against something which would change in the market. So it's why I'm insisting on low breakeven oil where you should not be up here with us if we begin to tell you that I will reinvest in oil sands. That I think you should ask your shareholders or my shareholders should ask to change the CEO because that would be absolutely inconsistent. So I will not do it. I want to keep my job. Sorry, I interrupt you. Sorry, Irene. Sorry, but I didn't want to...

Irene Himona - *Societe Generale Cross Asset Research - Equity Analyst*

So to perform your scenario analysis obviously by definition, you have to assume no great technological break-through. Now I appreciate it's impossible to answer a hypothetical question, but if we were to assume that, sometime tomorrow, next month, a real Black Swan event happens somewhere in some university. There is a big technological break-through and of course, that we come to recognize it as such because I don't think Nokia in 2007 saw the iPhone for what it was. But if that were to happen, from a risk and strategy perspective, does TOTAL just continue to do what it's doing, reduce costs, improve resilience? Or is there, Patrick, some red button somewhere that you press to change something quite quickly?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

I will call Patrick de La Chevardière to help me. But no, I think one of the answer to you from me is, by the way, the fact that we try to diversify the company in being not only in oil and gas but also in the electricity business is a way to tackle this type of risks. If we are more diversified, we can maybe follow some technological trends in a better way, if I follow your advice. Otherwise, I'm in the energy business. Frankly, we didn't see a huge -- I mean, yes, there are some technological break-through, and one of them, by the way, was all the shale technology, which was we observed it, and it changed the full dynamic of the supply in our industry in 10 years, so it's possible. (inaudible) but you need to try to open your eyes to be aware and to try to understand and to react, but I don't have a magic -- I don't have a magic red button. No, I don't have it. That means that a company like TOTAL, we must listen to what is happening around us. For example, your question on electric bus was very interesting. You know why we don't have any electric bus last time because our colleagues wanted to sell oil, so we didn't want to look to electric bus. That's all. So it's part of the journey we have to be sure at the top of a company like TOTAL that we are aware of what is happening not only in our industry but in (inaudible). So we spend 3 days in Las Vegas and Boston, the MIT last -- beginning of the year to open our minds and to listen to what is happening, not in oil and gas. I can't tell you. In other fields, in order to say, maybe there, for example, it's clear by the 5G technologies and all this which should

make Internet of Things a reality which we connecting machines is a clear field on which we must invest quickly. That was not too clear to us. But we set out after 3 days. Okay, now we need to really have a clear program and a way forward and not just waiting for that. So that's a type of -- so that's something that we -- so it's out of our industry, which is the difficulty. So -- but it's part of what leaders of the company must incentivize the people in the group to do it and listen and open their eyes.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. I think there were 2 last hands. Time for just last 2 questions, Henry and then also over here.

Henry Michael Tarr - *Joh. Berenberg, Gossler & Co. KG, Research Division - Analyst*

It's Henry Tarr from Berenberg. I guess looking at these ambitions and targets, how much do you currently have within the portfolio already when I think about Saft and some power, et cetera, to reach these portfolios looking to 2030 and beyond? And how much do you think you might yet still need to bring into the company?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

We have 1/3. We need to bring 2/3. We have 10 years or 12 years. It's feasible. It's feasible.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay. This will be last question before Patrick closes.

Unidentified Participant

[Alex Chason] from [BNCA]. My first question would be, you said your Momentum and Rupture scenarios were based on the IEA NPS and SDS. Could you explain if there were differences on certain aspects, why the weather was -- there was divergence. And the second question would be on your renewable and power business, 1.522 billion is a lot to allocate. Can you explain a little. I'm guessing it's not only a matter of reaching a certain level of IRR. So can you explain a little bit the approach and strategy approach to making investment in this business?

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

I can talk about the scenario modeling. So I think there is a mistake. The scenarios are not based on the IEA new policy, the sustainable development scenarios. It's in-house modeling, bottom-up, country by country, sector by sector. What we show when we've wrapped up is the CO2 emission level that would be associated with the 2 scenarios, and there we benchmark with the IEA scenarios, but this is internal modeling work that we've done with all our teams. And so we just use the IEA as a reference. We always use it. You know we've done that for many years. And in terms of CO2 emissions, we benchmark. And then you can compare the data you now have in your booklets. You can compare the energy mix -- the primary energy mix that comes out of our scenarios. You can compare them with all the other scenarios that are available in the market, I would say.

Unidentified Participant

But you could give the main takeaways and the main difference that you've identified?

Helle Kristoffersen - *TOTAL S.A. - Senior VP of Strategy & Business Intelligence and General Secretary - Gas Renewables & Power*

That's going to be a little long because it's really completely different modeling work. So I think it's hard to do that online.

Ladislas Paszkiewicz - *TOTAL S.A. - SVP of Strategy & Climate*

But as an example, the IEA doesn't foresee more than 2 billion cars by 2040 by far. And penetration of electric vehicles that we have taken into account is way more aggressive than the scenarios of IEA in the NPS scenario, for instance.

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

So I suggest we continue the dialogue if you are interested because people were -- we didn't run the models ourselves, to be sure. We're doing a lot of things in the company, but that's not. So if you think you're trying to assess it would be good to have a dialogue. And by the way, it's a model the first time we decided to make it public so will be improvement on it, and we're taking all the questions also are for me a way to improve and to come back to you and to revise because all that is moving quickly. So the second point how do we spend the money? We spend the money by looking to investment. You know this year, in fact, in gas and renewables and power, the downstream power, we spent, in fact, $3 billion: acquisition of Direct Energie, plus some CCGT. So we were above the 2, and you have to understand my guidance is an average over the next 5 years more than year-by-year, it's because as we need to do some things inorganically and we want to acquire position at a sizable size, we need to take some quite big bet, in fact. And so that's part of the answer to you how do we evaluate it, but we evaluate it when we make M&A in this field, we do it with the same rules in terms of returns that we do with our oil and gas business.

Unidentified Participant

I guess my question was more about the strategic approach because, obviously, renewable in power, it's a lot of different -- like it's retail. It's power generation. It's -- like the strategy...

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

Okay. The strategy is, again, I describe it this morning, but it's being integrated along the chain. So to be producer -- low-carbon electricity producer either from natural gas for from renewables, mostly from renewables, and to be also marketer, distributor and supplying natural gas and power -- also a low-carbon electricity power to end customers. And also in the middle to trade and supply all this low-carbon electricity. So the strategy is to be along the value chain, which is your point. So you will see us moving from production elements on to also some downstream businesses, like we do in oil and in natural gas, in fact.

Brendan Warn - *TOTAL S.A. - SVP of IR*

Okay, well, in the interest of time, we will be closing. Did you want any final closing comments, Patrick, or...?

Patrick Pouyanné - *TOTAL S.A. - Chairman, CEO & President*

No, I think thank you for your attendance today. Okay, the session this afternoon was more futuristic. It's more, in Norway toward September, which means you'll have to wait September. We've done it today. And I think it was also important to us to reaffirm what we want to do on climate. There are many debates with investors with some of the stakeholders, which are good debates because it's part, of course, we learn, and we try to be progressive and proactive. So thank you for the attendance. I've seen that there are as many questions this afternoon as this morning, and I noticed this morning that finally the questions were not too difficult to answer because everything is clear in TOTAL, so clearer in TOTAL than the future of the energy market, for sure.

But thank you for your attendance, and I think we'll have the opportunity to come back to you before summertime with Patrick. Thank you to all of you, and see you soon.