PRESENTATION

Ladislas Paszkiewicz *TOTAL SE - Senior Vice-President, Investor Relations*

Good morning or good afternoon to you all and thank you for joining us today. Our program today will start with a presentation of 2020 results and outlook by Patrick Pouyanné, Helle Kristoffersen and Jean-Pierre. And this presentation will be followed by a Q&A session. Then will come presentations on how we progress on our climate roadmap. Arnaud Breuillac will drive you through how TOTAL reduces carbon emissions from operations. And then Adrien Heny, Vice President, Nature Based Solutions, will explain how such solutions will contribute to net zero emissions. And this session will also be followed by a Q&A session.

So, before we start, I'd like to share with you a safety moment. As you know, safety is a core value for TOTAL, and we start all our meetings with a safety moment.

(presentation)

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*

Good morning, good afternoon, or good evening for those who are in Asia and welcome to this session of our 2020 Results and Outlook. I am happy to welcome you today, together with my colleagues of the Executive Committee. Jean-Pierre, Helle and Arnaud will take the floor during the presentation but Alexis, Bernard, Namita and Philippe are also there for answering your questions, I'm sure you will have for them as well.

All of us will remember 2020 as a landmark year that brought unexpected challenges and led to significant changes. We will look back and think of our lives in terms of "before Covid" and "after Covid".

The pandemic has taken a terrible toll on people, with global estimates of more than 100 million cases and more than 2 million lives lost thus far.

In response to the virus, widespread lockdowns disrupted the global economy on a world-war scale, wrecking businesses and livelihoods to an unimaginable extent.

We will look back at 2020 and remember it as a punishing year for the industry : while dealing with the Covid-related health and safety concerns, as well as maintaining continuity of operations, Brent fell below 20 $/b and it became a real test of faith.

So, 2020 was full of "short term" challenges that we had to tackle and once again TOTAL demonstrated its resilience.

But 2020 is also a pivoting year in terms of global consciousness of the planet's fragility : we have built over the past 30 years a global interconnected world, interconnected for the best – elevating billions of people out of poverty – but also interconnected for the worst – pandemic, climate change, biodiversity…

In many ways, we recognize the world has changed dramatically – there is no going back from here; there is only the way forward. The move to digitalization, for example, has accelerated and is changing the way we do business – making everything more efficient. Europe is leading the way on the Green Deal – and now this is becoming a global effort, with other major markets moving in the same direction, including the US, China, Japan, Korea and India.

That's also why we also need to think "long term". That's why in the midst of the 2020 global crisis, TOTAL launched a bold new strategy to transform itself into a broad energy company with the view to Get to Net Zero Emissions by 2050 or sooner, together with society.

We see how science and technology has been able to identify the Covid-19 virus, develop new vaccines and launch a campaign to provide global immunity – all within a single year. We share the same optimism in science and technology to face and solve the climate challenge.

For TOTAL, and indeed for the whole industry, the energy transition means the dual challenge: satisfying growing global demand with more energy on one side, while safeguarding the environment with less emissions, less carbon, on the other side.

We see it as an exciting challenge, and it comes at a time when we need to become a stronger company, playing a positive role in an evolving society. At the same time, we will remain fully committed to the four priorities: HSE, operational excellence, cost reduction and cash flow generation. While transforming, we will maintain strict financial discipline to keep our breakeven low and our balance sheet strong.

Diversifying the company will strengthen the resilience that allowed us to weather the storm in 2020. Jean-Pierre will comment on our resilient 2020 performance, the strongest among our peers, by demonstrating that the company is on the right track and that all of us at TOTAL are aligned and ready for the transformation.

Thanks to this resilience and because we value the trust of our shareholders to come along with us in this transformation, we maintained our policy to support the dividend through the cycle. This dividend highlights an issue that has become more pressing during this pivotal time period, the future of the major oil and gas companies.

In my mind, there is no doubt that TOTAL offers a compelling investment proposal. And the dividend is central to that thesis. However, questions about the long-term future of oil and gas companies has become a weight on their valuations.

As an optimist, I believe the transformation in which we engage will resolve those questions. As we redefined ourselves with ambitions that satisfy the long-term needs of an evolving global society.

As Helle will explain, the writing is on the wall – clean low-carbon energy is the future. In 2020, global energy demand fell by 5% because of the global economic crisis. Oil demand fell by 9%. But demand for LNG and Renewable power actually grew.

In the context of achieving our Climate Ambition while creating value, our strategy for profitable growth is focused on these two pillars: LNG and renewable generation.

As I explained in September, we are entering into a decade of transformation, because the transition will need time. Today, during this presentation, we will put on the table 4 new elements, which are comforting this strategy of transformation and that we will comment. We upgrade our climate road map by setting new objectives on scope 1 and 2 by 2030. We will increase disclosure on our growing renewable business as to fulfill all your expectations. We integrate our climate ambition into our financing policy: all our bond emissions will be now climate KPI-linked.

And last but not least, we propose to anchor this new strategy in our identity, to change your name into TotalEnergies in one single word. This new name, TotalEnergies, embodies the course we have resolutely charted for ourselves. The one of a broad energy company committed to providing energies that are ever more affordable, reliable and clean. This name is consistent with our social values and ambition to achieve Net Zero Emission by 2050 or sooner, together with society and more globally; to become a stronger company, playing a positive role in an evolving society and putting sustainability at the core of our purpose.

And I love this image, TotalEnergies in red: more energy, less emissions. It's exactly our purpose. It's exactly the challenge we face and that we will solve within TotalEnergies.

So, I would like in this first part of the presentation, which is not traditional for the results and outlook in February, to come back on the sustainability agenda that we have put together within TOTAL, just to remind you the strategy we presented to you in September, because all that is consistent; and comforting this strategy by some few elements.

The sustainability journey obviously begins by safety. Safety is core value. You know it. It's a journey, and you can see on this chart that this journey is progressing within TOTAL in the right direction when you compare the total recordable rate from TOTAL and the peers since 2015 to 2020, going down from 1.1 to 0.74.

It's a lot of effort of all the teams and our partners, the contractors, in all of sites around the world. It's a positive outcome. Even if it's tarnished by the fact that, still, we had last year one fatality. One is too much, like always. One fatality in the drilling operation in the Gulf of Mexico. 2020 was also, of course, an extraordinary year from health, safety and environment points of view as we had to protect all our employees and partners. We have demonstrated within in TOTAL our capacity to face type of crisis, mobilizing all the teams, delivering millions of masks and gloves, mobilizing some plants to produce hydroalcoholic gel in 6 countries, and at the same time, maintaining the continuity of operations as, in fact, we lost not so much of manhours worked.

So again, safety is the first tone of the journey of sustainability within TOTAL and we will maintain, and will even enhance, in future years, in the next decade, all this effort. Safety is a value.

But journey is also a strategic one to transform TOTAL into a broad energy company, which now has a name TotalEnergies. It's a matter of producing and delivering different energy products: gases, renewables

& electricity, liquids and also to invest in carbon sinks.

This slide is a strategic road map, which I presented to you in September, which is to grow in gases in our LNG business, but also to develop some renewable gas. It's to accelerate investments in low-carbon electricity, primarily from renewables and to integrate the electricity chain from production to storage, trading and supply. In liquids, it's clear to focus on low-cost oil, but also to develop renewable fuel business; and at the same time, to adapt our downstream capacities to the demand, in particular in Europe; and again, because it's mandatory for carbon neutrality to develop and invest in carbon sinks.

More energy means growing our production, because our ambition is clearly to continue to grow. The world needs more energy, and we will take our share of this growing energy demand, which means that fundamentally, as we said in September, growing by 1/3 in the next decade from the equivalent of 3 million barrels of oil equivalent per day to 4 million; or I should say, from something like 17 petajoules per day to 23 petajoule per day. That will be done with 2 pillars, the one which, again, was distinguished in the energy market in 2020, despite the crisis: LNG on one side and Renewables & Electricity on the other side.

At the same time, we will adapt the sales to the demand. Our strategy is fundamentally lead by the demand evolution, which means that the pattern of our sales, which was 55% oil, 40% gas, 5% electrons last year in 2019; will become in 2030, less 30% of oil products, this is a big shift, 5% of renewable fuels, 50% of natural gas and 15% of electrons. People could think it's not accelerating enough. This requires a huge transformation during the years 2020-2030. And thanks to this evolution of our sales and our production, we will reduce emissions while growing.

In September, we took a strong commitment, which is that the scope 3 emissions of our customers by 2030 will be lower at a worldwide basis than what they were in 2015; and that in Europe, they will decrease by 30%. We can today report to you the results of 2020, which, of course, is lower than 2015 because we are helped, if I may use the word “helped”, by the COVID impact, less activity, less sales.

But even if we integrate the COVID impact, the decrease between 2020 and 2015, of the scope 3 emissions from our customers in Europe is 12%. There is still a lot of work to be done to reach the 30% that we ambitioned by 2030 because it means that we will have to adapt all our activities and growing in some direction, decreasing, in particular in our oil businesses.

Today, we are upgrading our climate roadmap by giving you another commitment, another objective on the scope 1 and 2. The emissions coming from our operated oil and gas facilities by 2030, the net emissions, should decrease by 40% versus 2015. Until now, we had this objective of less than 40 million tons in absolute value and Scope 1 and 2 by 2025, which is already a challenge because it's not only a question of diminishing the historic perimeter of 46 million tons of 2015. In the meantime, we grow between 2015 and 2025. We have 10 million tons or more to integrate from our acquisition and startups. There is a lot of effort on the historic base of emissions.

As you can see, this effort is going on. Arnaud Breuillac will come back on it and will explain you how we intend to reach less than 40 million tons by 2025. And going beyond in net emissions means that from 2030, we will integrate in the scope 1 and 2 the negative emissions coming from the carbon sinks, that we

will develop from, in particular, our nature-based solution business unit, and Adrien Henry will explain you how.

It's another additional target aligning for the next decade: 30% less of scope 3 emissions for our European users and 40% Scope 1 and 2 from operated oil and gas facilities. All that will lead us to the carbon neutrality by 2050.

If I summarize where we are on the global road map that we announced in May 2020, when we announced that we were sharing the ambition to Get to Net Zero by 2050, together with Society for our global business. We put 3 major steps to get TOTAL to Net Zero. The first one of Scope 1 and 2. The results today in 2020 is minus 15%. In the official documents, you will see minus 22%, but in fact, if we correct the COVID impact, it's minus 15%.

On Scope 1, 2 and 3 in Europe, I just mentioned it, it's minus 12%, even if you will read it minus 25%, but in fact, COVID helped us too much there, and demand will come back. And on Scope 1 and 2 and 3 of the carbon intensity reduction, we will have achieved 8%, which is, again, the best performance among our peers in shifting the portfolio.

But sustainability is not only a matter of climate for TOTAL and for TotalEnergies tomorrow. We want sustainability to be at the heart of all of the TOTAL's transformation journey.

When we speak about environment it's also a matter of biodiversity. This year, we took some new commitments. The S of ESG is to find a way to deliver just transition in particular, as a responsible employer, and you've probably noticed that we are the only one who did not announce any lay off despite the crisis and maintaining all the workforce competencies, even if we were strong on managing our costs, and Jean-Pierre will come back on it.

It's also, in the journey of transformation, putting the right place for the diversity. We strongly believe that diversity is enhancing our collective intelligence. We have reached our target to have 20% of women in all our management bodies by 2020. Together with the Board, we enhanced this objective to 30% of women in all management bodies by 2025 within TOTAL.

It's also a matter in the governance, of course, to put sustainability and to take consideration of all environmental and social challenges when we take decisions for new projects and capital allocations, as the Board recently did it when it approved the Uganda project. It's also a matter to be consistent with between this sustainability objective and the way we incentivize all the executives of the company, including the CEO, as ESG factors will represent 25% of variable parts in criteria of this remuneration.

For this journey in sustainability, we have one principle, which is transparency. Transparency to explain what we do and to report on it. I know it's a lot of work for our teams and that there is more and more requests coming from shareholders about understanding how we perform in ESG. I see that very important to deliver to you all the elements to evaluate properly our efforts. That's why in 2020, we have, for the first time published our SASB reporting, and we will add in 2021: the World Economic Forum reporting,

the KPI/ESG-linked reporting and also the WDI reporting.

As you can see on the right side, there are many agencies evaluating our ESG commitment and performance. I am proud to say that for all of them, which are there, TOTAL has the best score within the gas sector, even if there is still a journey to be done to get the best score among all the corporations of the world, which is the real ambition that we should have as a multi-energy company.

Last but not least, the consistency is also to integrate this sustainability and our climate ambition, not only in carbon emissions, but also in a global approach and into a financing policy. At the Board level, we have decided that from now, all the new bond issues will be climate KPI-linked, which means that Jean-Pierre and his teams will propose you to issue bonds, which will be systematically linked one way or the other to a climate KPI.

We have the KPIs, measurable KPIs: the Scope 1 and 2 operated emissions in 2025, 2030; the Scope 3 in 2030, 2040, 2050. So even with long maturities, we can link them. I think we are the first company in the world to propose that, to embed our transition within the financing policy. I know that there are a lot of debates around taxonomy, but that is our answer. If you will buy bonds of TOTAL, somewhere, you will go together with our transformation. And if we don't reach our target, we will be punished by a higher cost of debt, and you will be rewarded. So, it's worth continuing to finance these investments of TOTAL.

That was the first part of our sustainability, and of this introduction, I think. I want to leave the floor to Helle and to Jean-Pierre to come back on the market and our results and our resilience before to speak again about the outlook.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***

Thank you, Patrick. And so now just a few words on the macro-economic environment. As you all aware, 2020 was the year of a global economic recession, except in China, due to the shock of the pandemic. 2020 was a year of rollercoaster energy demand due to repeated periods of more or less severe lockdowns. And 2020 was a year of extreme volatility in commodity prices due to supply and demand imbalances. Against that backdrop, the chart here shows you the contrasted evolution of various energy markets, as Patrick just mentioned earlier. Global energy demand was down by 5%, more or less in line with GDP.

Oil markets, on the other hand, were down 9% because mobility is a key contributor to oil demand. What's striking on the chart is that LNG demand and wind and solar power generation did remarkably well, growing, respectively, 3% and 13%. This confirms the role of these 2 markets in the ongoing transformation of our energy systems and as key growth pillars for TOTAL. Then I also think that this market picture underscores the benefit of being a broad-based energy company, TotalEnergies.

Regarding oil markets. Asian demand, in the end, proved very resilient last year. But the key question right now is, of course, how fast global demand will rebound and to what levels. The jury is out on that. We need the vaccines, obviously, and we need the implementation of the massive economic recovery packages that have been decided around the world.

What's clear on the other hand is that there is a risk of supply crunch in the midterm, and that's the message of this chart. We've seen in 2020 how OPEC managed to bring back market discipline. We've seen the cracks in the U.S. shale model, and we've seen continued under investments in the oil industry as a whole. Given that the natural declines in existing oilfields that are shown here, the message is simple. We need new oil projects. And that's true even if you take a very cautious view on short-term demand recovery and on future demand levels.

What's shown here is a cautious outlook out to 2025. But a 10 million-barrel per day gap in supply between now and 2025, that's a massive shortfall of supply to cover in just a very few number of years.

On LNG, once again, demand was very dynamic in 2020, considering the economic downturn. Worldwide LNG demand was up by some 3% while global gas demand was down by around 2%. This big disconnect is due to the fact that the LNG market is much smaller than the global gas market. But also to the fact that it's much more flexible, more reactive and actually tailored to the needs of the customers.

And with the lower prices that characterized the first quarters of 2020, the first 3 quarters, demand elasticity proved remarkably high. Imports were up by 11%-12% in China and by 15%-16% in India, those are the latest numbers.

On the supply side, there were only 2 FIDs, and TOTAL was part of those actually, as other less competitive projects were either canceled altogether or pushed out. There were several outages in existing liquefaction trains, which contributed to the tensions in the LNG supply chain, especially in the second half of the year. And with the cold winter in Asia, prices soared to record levels at the very end of 2020.

Going forward, we continue to see strong support for LNG. It's been a high-growth market every year since 2015, and as Patrick said, this trend is now being amplified by a number of announcements and net zero climate goals by key customers such as, for instance, China, Japan and Korea.

And with that, I now hand the floor over to Jean-Pierre.

Jean-Pierre Sbraire *TOTAL SE - CFO*

Thank you, Helle. TOTAL has been following a strategy to strengthen the Group since the collapse of oil prices in 2015. We started the year 2020 with a gearing below 20%, with a cash breakeven at around $25 per barrel. So to some extent, we were prepared when the crisis began. As COVID virus spread and markets began to collapse, we reacted quickly. We adapted by implementing an immediate action plan, and you will see we delivered.

The Group demonstrated in 2020 its resilience during storm, which allow us to continue investing in profitable projects, supporting the dividend and maintaining a strong balance sheet. We were disciplined. We were flexible, and we have not overextended. In 2020, we generated $15.7 billion of cash flow from operations. Relative to the plan we announced in 2019, the most significant change for 2020 was flexing

the level of investments, including M&A.

2020 CapEx was $13 billion versus an initial guidance around $18 billion. I will come back later on this saving. But at the same time, we maintained our commitment to grow renewable energies to support the transformation strategy of the group. We did not overreact to the crisis. And instead, we chose to support the dividend through the cycle, as Patrick mentioned already.

Return to shareholders of $7.2 billion include the cash saving decision to propose the final 2019 dividend in shares as well as the $550 million of buyback in the first quarter. Gearing, excluding leases, increased to 21.7% at the end of 2020. But on the right-hand side of the slide, we show that TOTAL has the strongest financial position amongst the majors with the lowest gearing. That means that we're able, despite the crisis, to preserve our balance sheet strength.

We reacted quickly to the crisis. Immediate action plan was taken first in March when the oil price crisis started, and it was reinforced in May when the COVID-19 demand crisis came. The objective was very clear. It was to cut outlays by about $5 billion. The cost culture is part of the Group DNA. So the foundation to deliver on the action plan was already there. The action plan was implemented effectively and rapidly, while maintaining continuity of operation throughout the crisis. And we delivered more than we promised as the year went on.

The reduction of CapEx targeted at least at $4 billion ultimately came in at a saving of $5 billion. The reduction in CapEx by more than 25% demonstrated the group's strong discipline on investments as well as its ability to flex the level on spend, particularly short-cycle projects, but also, it reflects the decision we made not to pursue some acquisition. For example, the Ghanaian and Algerian parts of the Oxy Anadarko deal.

Despite the need to conserve cash, we maintained investments of $2 billion for Renewable & Electricity as it is the foundation of our future profitable growth. On the OpEx side, we began the year with a plan to cut costs by $0.3 billion, and we increased that objective in May to $1 billion.

We over-delivered with a $1.1 billion of cost reduction by year-end. I will come back with more details on the next slide. Over the past several years, we had high-graded and actively managed the portfolio to reduce the organic breakeven, which was $26 per barrel for 2020. This low breakeven, high-quality portfolio of assets is the cornerstone of our resilience.

Managing cost is a continuous group-wide effort that is built into our culture. In 2020, we cut more than $1 billion of costs across the group compared to 2019, while the initial budget set was $0.3 billion. The crisis has forced us to adopt new ways of working, most of which are sustainable and contribute to accelerate digitalization in many areas, new operating philosophy in many of our sites.

In 2021, our target is to cut an additional $0.5 billion through the generalization of efficient cost-cutting initiative across affiliates and further optimization that our cost culture will continue to foster through, for

example, best practice sharing.

Overall, 70% of OpEx savings in 2020 are sustainable. So they came from logistics, in particular, means optimization. They came from supply chain and procurement with centralized and global procurement, delivering more competitive purchasing across the Group with leveraging use of digital. They came from structural change, with staff through deployment, reorganization, new practice and more digital usage to reduce our business travel and meeting costs. They came also from operations and maintenance, we are increasingly able to monitor operations from plant platform, remotely with lower costs and increased effectiveness.

We are already in the next phase of efficiency improvement and cost reduction. And our Digital Factory is starting to deliver. Because of this strong culture in terms of cost cutting, TOTAL is already the low-cost producer among our peers in terms of OpEx per barrel. It is a competitive advantage that we are always working on to improve. We have cut our OpEx roughly in half since 2014 to $5.1 per barrel in 2020, best-in-class, once again, among the majors. And we are targeting a further reduction to $5 per barrel in 2021. Digitalization and the new best practices we're adopting will allow us to continue to capture sustainable cost reductions.

In 2020, our original budget was at $18 billion for CapEx. The action plan led to a $5 billion CapEx saving versus this original budget with a CapEx at $13 million in 2020. On the right, we show you where the $5 billion of 2020 CapEx saving came from. So it will give you an idea of how we can flex spending.

Most of the cuts were made in Upstream, including net acquisition. In particular, we exercised our flexibility to delay around $1.5 billion of short-cycle E&P spending essentially choosing to save some projects for better times.

We see the 2021 environment as uncertain so we prefer to approach it prudently and with flexibility. The 2021 CapEx plan was developed using $40 per barrel Brent, maintaining what we control, maintaining discipline on CapEx with a budget of $12 billion. Continuing to invest in profitable projects to implement the Group transformation with a strong signal of commitments with more than 20% of CapEx devoted to Renewables & Electricity. That means in 2020, that we preserved the flexibility to mobilize short-cycle CapEx, should the oil and gas environment strengthen.

There is more differentiation among the majors that we have seen for many years. And dividend policies have become contrasted as well. The Group fundamentals are strong, high-quality, low breakeven assets that we put together over the last 5 years with more than 30% rotation of the portfolio. Cash breakeven around $25 per barrel, strong balance sheet. 2020 was a tough year, but the Board, confident in the Group's fundamentals, confirmed its policy of supporting the dividend through economic cycles.

The 3 interim dividends for the first 3 quarters of 2020 have been maintained at EUR 0.66 per share. And a distribution of a final dividend equal to the previous 3 quarters will be proposed to the next Annual General Meeting of Shareholders in May.

We respect the relationship we have developed with our shareholders over the years. Paying the dividend is central to our disciplined cash flow allocation to create shareholder value. We believe our shareholders trust us as a major oil company to weather crisis and cycles of volatility. You can see on the right-hand side of the slide, our performance in terms of TOTAL shareholder returns in comparison with our peers. And this is, for us, the demonstration that our shareholders support our strategy in terms of dividend policy.

Finally, a recurrent slide to benchmark the 2020 year performance against our peers. The 2020 environment was one of the most challenging years the industry has ever faced. But thanks to our resilience, we posted a $4.1 billion of adjusted net income and a $15.7 billion of cash flow from operation in 2020. Once again, in absolute term, we are among the best performers of the group despite the fact that we are competing against some much larger peers relative to the size of the production.

Consistent with our climate ambitions, we recorded impairments of around $10 billion, mostly taken in mid year, in June, and concentrated mainly on our Canadian oil sands investments, which are high cost assets and have reserves extending beyond 30 years. Despite the magnitude of the number, it is the lowest level of impairment among our peers. It demonstrates the high-quality of our assets and reflects an history of using prudent price assumptions.

On return on equity, although too low in such context, this return on equity was best-in-class. TOTAL has performed well compared with peers for many years. And as the peer group continues to become more differentiated in strategy and assets, I believe, as Patrick said, we are on the right track. We are well positioned for this positive momentum to continue. And I will leave the floor to Patrick.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

So, thank you, Jean-Pierre and Helle for this presentation of our results and our resilience. I think as you said, we have the foundation. And now, I would like to again repeat the pillars of the foundation, which is its motto: HSE, delivery, cost and cash that are very well. And again, our teams have demonstrated in 2020 that when we ask them to act, they deliver, which is, of course, a great comfort to engage on the transformation journey in which we have decided to go. But we will always keep in mind that we need to deliver and that it's because we are good and even excellent on our short-term results, but we have the right to have this bold strategy of transformation and investing part of the cash flows we get from oil and gas business into these new energies.

So, I know that you are all expecting more information about renewables. So, you will not be disappointed. I hope so. We are disclosing today what we will do, and you have more, by the way, in the annex of the presentation: many details and geographies of all our assets. Not everything because we need to keep some information for us, but a lot of them, behind it being that we want to help all of you to better value the portfolio that we are putting together in our renewable business.

As you know, all the fundamental idea to create a broad energy company is to rate the company from low multiple from oil and gas and to get part of what the market is giving to this green, new energies. I don't

dream to have a 25 multiple. But if we get gain from 5% to 6% or 5% to 7% to 10%, we'll be more than happy.

So, the idea today is to have deep dives in these assets. So first about immediate delivery. As you can see, we have a growth installed capacity, which of 7 gigawatts by end of 2020, which will grow to 10 gigawatt by 2021. This represents, by the way, and we speak about growth capacity because this represents a gross CapEx of $5 billion in 2021. I will come back on it, but you know that we financed by equity, only 30% of it, so $1.5 billion. And you will make the math with me after that. The most important is that all the projects that we sanctioned have an objective of more than 10% of equity IRR.

The other part of the slide is very important. In September, we told you that we were targeting to 35 gigawatts by 2025. By that time, the renewable teams were not so happy because they had only 25 gigawatts in their hands, but we are trusting them. And in fact, the last 6 months, we continue to work. And now we have these 35 gigawatts in our portfolio. And I will describe that to you.

First, why did we get them? From from this perspective, 2020 was really for me a very important and accelerating year or even pivoting year in terms of renewable because we have demonstrated to ourselves, that we were able to really capture early stage opportunities at a low entry cost. There is no way to acquire existing assets because of the multiples I just mentioned.

But another way to grow, which is, of course, organically, but also to capture and to find agreements with some other development teams, which are early stage, which means they have the land at the connections, but they don't have necessarily the financial capacity. They don't have necessarily all the commercial agreements. And we can work with them to accelerate their developments and to put all these projects, I would say, to reality.

So, in 2020, we worked, and we put together 10 gigawatts of new projects, mainly in Spain, in India, a first step in U.K. offshore wind and Qatar. Since the beginning of the year, we have accelerated another 10 gigawatts. I will not do that every month, be sure. So, we have maybe already reached the objective of the year but will continue to work. But with 4 new steps, a big new step in the U.S., solar in the U.S. at the Utilities scale projects with 2 deals for 4 gigawatts. So that's important because it was one scale market for renewables, out of which we were not there. Now we have these projects that we need to deliver. One gigawatt, by the way, will be used in order to green the electricity of all our downstream plants, refineries and our petrochemical plants.

We have also done bold move by acquiring 20% of Adani Green Energy, in January for $2 billion. You know that we have established 3 years ago, a partnership with the Adani Group in gas, LNG, city gas. We have made, in the first half of 2020, a JV with them in solar of 3 gigawatts capacity, but we share some assets, which are now into production. But we have also decided that Adani Green energy accelerated a lot in 2020. They have now a portfolio of almost 20 gigawatts of contracted capacity. They even increased, I think, this week by acquiring rights to another 4 gigawatts.

They have great ambitions. It's a great partner. We embark there. India is a very large market, several hundreds of gigawatts of solar and wind capacities are promoted by the government for their own climate journey. And so, we are very proud to embark with this #1 solar developer in the world. And I think we are entering in the same story that we have done in Russia 10 years ago with Novatek and the LNG development of Yamal. So, it's an investment. You know as well that we paid $2 billion, but shares today have a value of $4 billion. So I think we will be able to deliver good profitability out of these investments.

And last but not least, U.K., where we took U.K. offshore wind. We made the first step in 2020 with SSE and Seagreen project. And last week, together with our partner, Macquarie, we obtained the seabed rights of our 1.5-gigawatt projects on the Eastern side of U.K. We have been active. So, we had to finance all these acquisitions. Jean-Pierre and his finance team have done well. We issued a hybrid bond to finance the renewable. Some people are asking me, but why can you be competitive in renewables if you finance this renewable with a capital, which is remunerated a 7%? We have demonstrated with the hybrid bonds, that we can finance our renewable with forever coupon of 1.9%, which is very highly competitive cost of capital.

So, the renewable business of TOTAL has different fit, but I would say reaffirm today that the priority, of course, is to develop utility scale portfolio. Here, different names, Total Solar International, Total Quadran, Total Eren, Adani Green now, Total Offshore Wind. In fact, at the end of the day, you have a photo there of what are the competence of each of these companies, the subsidiaries.

I would say, Total Solar international, it's solar developer in Europe, the U.S. and the Middle East. We're working also with Adani Green in India, which owns, at the end of 2020, 3.3 gigawatts. Total Quadran is a subsidiary in France, solar and onshore wind, 1 gigawatt end of 2020. Total Eren is a company we put together with some founders of Eren. We have 30% of this company, which has 1.9 gigawatts of growth capacity, and we have the option to acquire 100% in 2023 or to go to IPO.

Adani Green, I just mentioned it, is the acquisition of the 20% as a shareholder. And offshore wind, we develop it ourselves in JVs, mainly because of the magnitude of these projects, we have the favorable JVs, either with SSE, with Macquarie or with local developers on floating offshore in the U.K. and in France. And then we have another part of the business, which is dedicated to the distributed generation.

There is a subsidiary called Total Distributed Generation, dealing mainly with corporate, I mean, making corporate PPAs, small ones, to offer to corporates renewable capacities on their roof for small plants in order to go with them in their own climate neutrality journey.

We have a JV with Envision in China. And of course, we own 52% on SunPower. SunPower, who has been refocused in 2020, mainly on the residential DG business. And it seems that the stock market appreciates a lot is, I would say, refocusing of SunPower on this market.

So that's the different vehicles we have. When we look to the portfolio, more in details and you have plenty of information on this slide, we can look at them by maturity of assets. You can see that we have 7

gigawatts in operation, growth capacity. The net is 3.1. I will come back on this notion. 99% of these operations are covered by PPA. So almost all of it, 99.8% in fact, and we have PPA duration of 18 years and an average PPA price on these operational assets of more than $110 per hour per megawatt.

In construction, it's 5 gigawatts, three of net capacity, 90% covered by PPA. The remaining part is a 30% share of the Seagreen project that we have in U.K. offshore, but we intend to go for a CFD on next round. 20-year of PPA duration there again, an average price for these assets in construction of $55 per megawatt.

And in development, we have 23 gigawatts. So, the one on which we are working. 21 net because we kept most of our assets within the development phase, as you know, and 40% are already covered by PPA, which means only almost 9 or 10 gigawatts. Average duration 20 years. There it is mixed between 60% state PPA and 40% corporate PPAs because we begin to work on this part. And the average PPA price for these new assets coming stream in the next 3-4 years is $45 per megawatt.

Beyond it, we have already some projects, in particular, the offshore wind projects that we mentioned in Korea, in U.K., like the one we were awarded this week, which are not yet covered by PPA, but I would say it's a question of maturing all these assets.

So, the important point is that already 60% of all the portfolio we mentioned, 25 gigawatts or more than 20 gigawatts are already covered by PPA, which allow this portfolio to deliver predictable long-term cash flow. If I'm going to this delivering of cash flows and profitable growth and the business model, I just want to take a point there because people are asking us, how do you manage to make your 10% return? We have done an exercise taking and modeling, in fact, the 10 gigawatts of projects, which were acquired in 2020. And so by modeling them, that is normalizing as if all the COD of these projects were on the same date, which is not exactly true because some of them will come quickly, some like offshore wind or a little later, but we try to understand if we have 10 gigawatts of project which will start, how much will be the payback of this 10 gigawatt, having a mix of solar, offshore wind, solar in Spain, solar in India and other geographies.

As you know, we invest 30% in equity. That means that we'll put 30%, and we have 70% of non-recourse debt, non-recourse is very important. It's not on the balance sheet, obviously. So, when we said that this year we'll finance the equivalent of this $5 billion of growth CapEx, in fact equity will be $1.5 billion and non-recourse debt will be, let's say, $3.5 billion. And the $1.5 billion are going into our investments, $3.5 billion are on the asset themselves.

Then we will clearly develop by ourselves the projects. This is why this growth capacity is important because this is the effort that TOTAL support during the development phase. And when the project is developed, the production start-up at COD, our policy is to farm down 50% of it.

There are 2 reasons to farm down it. The first one is a matter of risk management of the portfolio. Renewables is a local business. We take the local risk of production, but also the local risk of delivery of sales. And PPAs for 20 years are nice contracts, but you have also a risk of counterpart, even with states.

We observed it in Spain in the future. We see that France has sometimes some strange ideas as well.

And so for us, it's a matter of, I would say, de-risking part of the portfolio by selling 50% of the assets. And that's an important point of view for me as Chairman and CEO of the company. The other beauty of it is that you accelerate cash flows, we increase returns. We gave you the figures of the 5 farm downs we have executed in our France and Japanese portfolio in the last 3 years until the month of January. We sold 550 megawatts for $1.1 billion of EV, which is these 550 megawatts, if you take a cost of let's say, $500 million, you see that the multiplicator effect is 2x.

So obviously, this is important. It's accelerating cash flows. It's increasing returns. And you can see on the chart, that after 5 years of production, the remaining 50% we kept, we have more or less the payback of the equity investments. So, this is a global cash flow model, which we call a capital-light model that we are developing. So, it's a question of de-risking the portfolio, getting the most by bearing again the investment until the production start-ups. And then the PPA will continue for 15 to 20 years, like I said before, and beyond it, production will continue because these types of assets have a long life.

So, this is a way that we are creating cash flow for the long-term for our shareholders in the renewable business, and this is a way to reach 10% of return target on equity.

Finally, on this power business, the growth is globally on the electricity production because at the end, what we have is the net production. So, remember, the gross we finance and the net we get it as a production. And we'll feed our future results and cash flows. So net production was last year at 14-terawatt hour, which increased by 40% to 20 terawatts from renewables as well from gas-fired power plants as we have acquired some in Spain.

But the future to 2030 is clearly that the renewables will have the lion's share of our electricity production, as we explained to you in last September. We introduced today another metric, a new metric about this electricity business. You complain that you cannot understand exactly the results. So, we will report, in fact, quarterly on this metric, which is what we call a proportional EBITDA of this electricity business, which includes, in fact, the proportional share of equity affiliates that we have as we have this divestment policy.

It's important because this is the cash flows, which will, in fact, finance the cost of the debt and also the return to dividends to TOTAL. You can see that it's growing, and it will grow in 2021 from let's say, around $500 million to something like $800 million. Most of the growth coming in renewable business. And we are only at 7 gigawatts today, 10 gigawatts at the end of the year, 20-terawatt hour. I'll remind you that the target for Total is to reach more than 100-terawatt hour by 2030. So, it's 5x more.

So, when we speak about generation of cash flow, that's a reality. This is exactly why we want to embark in this business at scale.

Just a last word before I move to LNG sales, we have now 8 million customers in France, in Spain and Belgium, we delivered last year 50-terawatt hour of electricity to our customers. And I think we have also

some few B2B customers in the U.K., the intent being to concentrate efforts on these countries for the coming years.

So, the second pillar of the strategy is LNG. LNG, you know that it's a strong source of our cash flow generation. By the way, 2020 demonstrated as well resilience. We've seen, of course, the Brent lost something like 30%. The Henry Hub lost itself 16%. Asian prices were at the bottom. And despite that, the cash flow generation from LNG, $3.2 billion, was quite almost the same as last year. Why? In particular, because we continue to grow, we create value from scale and arbitrage, 10% growth, 38 million tons of sale last year, and we expect 10% more for 2021.

So, we benefited, of course, from the start of Cameron in particular, which will deliver at full-scale in 2021. And so that's why we have this growth. But as you know, this story is not over as we did not stop it despite the crisis. We have the 2 flagship projects in Russia, Arctic 2, which is 45% progress on Train 1 by end of 2020. And Mozambique LNG, which is at 21% progress end 2020.

We face clearly some security issues, as you know, it's public, and we are working with the Mozambique government. It does not have, at this stage, impact on the planning of the projects, which we'll deliver by 2024. Because we are still mainly in the engineering phase, a logistical phase, and the offshore works have been maintained. But obviously, the situation on the ground will need to be controlled. And we have a clear plan, securing an area of at least 25-kilometer around the project itself in order to be able to resume the work, which is our intent, together with our contractors. But my highest priority is security, not only of my staff, but fundamentally, of the staff of our partners on the ground in Mozambique.

In 2020, we have also maintained our commitment to LNG by sanctioning like Helle said, the 2 only projects that were sanctioned worldwide. One is Train 7 in Nigeria. And the other one, and we are happy to participate to that is the Costa Azul Project on the Pacific coast of Mexico. It's a very well-located project. Closer to the Asian market that the Gulf, of course, obviously, you avoid the bottleneck of the Panama channel. And it's a low-cost project because it's fundamentally the reversal of a re-gas plant, where we benefit from all the infrastructures, jetties have already been invested, and it will be sourced from low cost Permian gas.

So that's interesting. You can notice that on this slide, systematically, we put the indication of carbon intensity. And it's linked to the climate ambition that we deliver in May, we said that we want the allocation of capital should be consistent. You do mind, probably, but let's say that the historic LNG plants have a carbon intensity around 40-kilo per CO2 per barrel or more 50. So, you can see that last plants in which we invest, like Mozambique, on which the TOTAL teams have done some amendment to the plant, which we inherited from Anadarko. We are making effort to minimize in all our projects this carbon emission systematically.

A word about renewable gas. Maybe in September it was a little aspirational when I mentioned figures, now we can speak about it more because we have some assets. We have made some interesting moves.

We acquired a company in France, which has a production of 500 gigawatts-hour per year of renewable gas. The market in France is 4 terawatts-hour per year, so it's 12%. It has projects to double its capacity in the coming years. So, it's, for me, a platform of continuing to grow, not only in France, but in Europe, and we are happy to welcome Fonroche Biogaz in the Group.

We have done also another move in the United States, together with Clean Energy. We acquired 25% of Clean Energy in 2018. It is a company that is dedicated to promoting gas mobility in the U.S with a very larger network of gas retail station. We see clearly, not only in the U.S. but also in Europe, and we think that gas mobility will become more biogas mobility because everyone is engaged on both sides of the Atlantic towards carbon neutrality. So Clean Energy wants to integrate the upstream, and we propose them to put in place a JV between TOTAL. We have more financial capacity and 50-50, with Clean Energy in order to develop a renewable gas production in the U.S., together with Bio CNG, Bio LNG distribution capacities.

And the last part of renewable gas road map is hydrogen. There, again, a first project, pragmatic one. It's not big. It's 40-megawatt electrolyzer, but it's an integrated project with a solar farm, a 100 megawatt. And more importantly, this project we'll have to deliver green firm hydrogen to La Mède refinery. So how do we store the hydrogen, if we deliver the firm. It's a project which is around EUR 200 million, on which, of course, we'll need support from governments in order to move forward, but there is a lot of enthusiasm in Europe from European governments to develop this hydrogen economy. It's a first step, and we'll come back later in coming years about the ambition in hydrogen.

I should not forget oil, of course, because oil is at the core of all our businesses and nobody should forget it. And today, to illustrate it, we delivered to you a figure, which you don't see normally, which is the oil E&P cash flow. I want to pay tribute to all our colleagues who are continuing to maintain operations on oil fields around the world. $7.6 billion, it's half of the group CFFO. If you are adding to that, the downstream CFFO, which represents almost $5 billion. Clearly, today, it's true that most of the cash flows of TOTAL come from oil. And when we invest more than 20% of our new investments in renewables and power, we take part of this cash flow. But without these cash flows, there is no way to make the transition in which we are engaged. So it's why we have a strategy that we want to continue to maintain, no more growing oil business, but to maintain all these activities and to be good at it, even excellent. The excellence is illustrated on the right side, again, when we took the upstream adjusted net operating income, upstream means for us, E&P and LNG because it's a way that we can compare to our peers. You can see that the results of the company this year was fundamentally delivered by this upstream business stream of $4 billion and is larger, much larger, I can say, than our peers despite the fact that among these peers, we have the smallest production, which we should remember.

And frankly, I'm proud of what we do, when I see that the global cash flow delivery by TOTAL is at the size of some of the largest peers, the peer group. I'm very proud that we are able to deliver. And again, like I know that Jean-Pierre insisted a lot on it. It's back to the fundamental quality of the portfolio, which has been driven by choices, which are low breakeven because there is no way to make -- to weathering, to deliver value in this business. And the last 5 years have been -- it has one lesson, it's the volatility of oil

price. So it's fundamental. But when we make choices for the future, low technical costs, low breakeven is at the heart of what we select. And this is exactly what we will do, I will show you in the new projects.

A word about our production, to tell you that, this year, we lost 100,000 barrels per day, more or less. Because of the quota policy. But as a CEO of TOTAL, I'm supporting the quota policy, let be clear. Without any quota, it would have been, of course, a nightmare. We've seen the -- and the discipline of OPEC and OPEC+, I would say not only OPEC countries or OPEC+, and of course, of Saudi Arabia, in particular, I think is praised by everybody in the industry.

So yes, we lost production, but the positive impact on the oil price, even today at 55, above 60, I understand this morning. I mean, despite the fact that the market remains fragile, inventories are still high, more than 70 days of OECD inventory is much higher than the 60 days that we had last year. So that's a nice policy. So we lost barrels, but at the end, we gained some cash flows.

For 2021, we have a stable production because we think that the quotas are being relaxed smoothly, and Libya come back to a more normal production level. And you know that we have invested in some fields in Libya, like Waha. So it will compensate the decline. There is no surprise there. We know that in '21 and '22, we don't have many projects coming on stream. The growth will come from 2023, and I confirm today because we didn't impair - in the flexibility that Jean-Pierre explained to you - any of the big projects, which were planned in September. So 3.3 million, 3.4 million barrels per day, it's back to this 2% per year as an average that we mentioned from 2019 to 2025. We told you in September, it's not on a linear basis. It's, in fact, at the end of the period, so I confirm that to you.

A word about our reserves. We have 12 years of proved reserves at the end 2020. 18 years of proved and probable reserves. So by the way, I have 20 years of average of PPA duration, over 18 years of reserves, which means that all these assets have more or less 20-year visibility and not 5 years or 0 year. I mean -- so it's quite long. Both types of assets have a clear visibility. 60% of our reserves are gas, consistent with the strategy, I would say. A word about the renewal of reserves this year. You have on the slides, the 127% of reserves replacement rate on a 3-year average, which makes a lot of sense. This year, we had to follow the SEC rules, using a price of $41 per barrel as an average, which means that exactly like we've done in 2016, we are obliged to de-book 300 million barrels from the proved reserves, more or less, of oil sands from Fort Hills. This means that the yearly reserve replacement rates will be lower than 100%, about 70%. But again, this is more a regulatory de-booking because these proved reserves of Fort Hills will come back as proved reserves, if the average price of the next year is higher than $45 per barrel. So it's just, I would say, a regulatory move like we've done in '16.

What is a more fundamental is proved and probable reserves: it's a figure we look because it makes sense. Our global portfolio last year was at 19 years. So we reduced from 19 to 18 years. Why? Because there we have de-booked voluntary, in line with our climate ambitions, the oil sands that go beyond 2050, as we announced in July. The impairment was done fundamentally in July: $6-7 billion were drawn out of the $10 billion on these assets, which were the only stranded assets identified within our portfolio after review at the Board level. And we lost 1 year of reserves, but again, it's to be fully consistent in our accounting

with the climate ambition to carbon neutrality by 2050.

So the projects, we take FIDs, I told you, the consistency with the climate ambition for us is driven by 2 fundamental elements that we look at the Board level. Low technical costs, low breakeven, less than $20 per barrel. This is the case for Brazil. This is the case for the Uganda project. And of course, minimize carbon intensity. We want all the projects to be lower than the average of the portfolio. The average of the portfolio is 20-kilogram per CO2 per barrel, which is quite low compared to the average of the industry. It's even a little lower than that. The average of the industry is higher, more than 25 kilograms. So we have a good portfolio. But these 2 projects you can see will be at 15 in Brazil and 13 in Uganda. So from this perspective, in terms of carbon emissions, they are not deteriorating. They even contributing to lower our global carbon intensity because it's back to this parameter of carbon intensity.

We have also, of course, Uganda, Brazil, I would say, it's a continuation of the success story of the Mero 1, 2, 3, this famous Libra field in which we entered. So there is -- it's a profitable very profitable projects. On Uganda, which is onshore. We have other challenges, in particular, to manage the social and environmental impacts biodiversity and relocation of people. We have spent a lot of time the Board reviewed all the files and taking into consideration these elements to approve the project, the commitment of TOTAL to the project. And we have taken one decision in line with the policy of transparency, we will publish very soon all the third-party audits, which have taken place around these projects, which have been ordered by us, but done by third-party on biodiversity and on the resettlement of the indigenous population. There is a lot of debate in social media about it. The best answer we can give is to be very transparent. And to demonstrate, we have been, by the way, all these reports are important part of the investment because we took also some lessons. We put some action plans. We have to improve. We are not perfect. And we will, by the way, as well, together with the report, publish the reports, explain the action plans, which are being implemented in order to put in action the various recommendation. And again, it's part of the sustainability commitment that I mentioned at the beginning, and we must demonstrate that we are able to develop an onshore project together with respecting all the sustainability commitment that we want the company to respect.

So these projects, I know we have questions, I think Arnaud is coming soon to award the EPC contract. So it's -- this quarter, end of the quarter, let's say, to put all paper play because then we need to go to be approval by the partner and the authorities. But everybody is working hard to finalize this project, just last negotiation of cost with some contractors - to put a little pressure.

A word about exploration because it's true that in line as well with our climate ambition, we have restricted our exploration budget to $800 million. It's lower than before. And because fundamentally, we have decided to focus and to focus our exploration spending on what we call the low-cost development projects. And when we look to offshore, deep offshore, in particular, giant fields. I don't know if we are lucky. Our teams are good, but I would say it in that way. Our exploration team. Last year, we entered into a Surinam license. And since we entered, we made 4 major discoveries in the block 58, together with Apache. We became operator of this block since January.

We will concentrate a lot of effort in our budget, exploration appraisal budget to this basin of Surinam and Guyana. We are together, we are currently drilling well together with Exxon on the Kenya license in Guyana. 9 wells the objective, including some important appraisal wells. The objective being for us to be able to define before year-end '21 a first development, oil development in order to produce oil by 2025 on the Block 58.

So a lot of activities in that part of the world, growing people from TOTAL discovering these parts, these regions. And a lot of commitment. But obviously, we have potentially, in our hands, a new jewel in terms of oil for the group.

Then moving to all the downstream. We had the traditions since 2015 that Downstream was delivering more than $6 billion per year. This year, it's not the case. And fundamentally, because of the crisis, in particular the collapse of demand. The refining margin, as you can see, had an impact of almost $1.2 billion on the cash flow, which is very consistent with all the metrics. You've seen that instead of $30 per ton, and I think last year, we were even at a little more, we went down to $11 per ton, which I have never seen before. We'll show you a graph just after.

The refining margins are compressed. They are compressed because, of course, lack of demand, I would say and the crude is supported by OPEC policy, so high price of crude and no demand. So, at the end of the day, the margin is very minimum, sometimes negative. And in particular, as well as there is no more jet fuel, all the jet fuel products are being pulled within the distillates, which crashed the distillates margin as well. So, the situation is not very good. I think it can only improve with a better economic return and better demand. There is no OPEC of refining. So of course, we also suffered from this aspect.

The others business in the downstream, petrochemicals have done well, very resilient. Trading has overperformed, we mentioned in Q2, another performance of $500 million, which has been maintained for the year, maybe not being repeatable every year. Marketing & Services has a solid contribution.

And so for 2021, I would say we have a comeback of more demand. We could expect more than $5 billion, maybe we are prudent, but it's also very important to plan prudently with these uncertainties.

So just a word about refining business, you can see on the bottom left-hand the margin – the red line, you compare it with what we experienced in the last 4 years (2016-19). So you can see that it has been a disaster since April, clearly linked to the COVID.

Of course, our teams have put -- I've been like the title say, dynamic adaptation in the short-term with a COVID action plan, reducing their cash spent, $500 million, reducing runs, which is not very good for results because, of course, you have the fixed cost to cover, but there was no choice. And even we have done a voluntary shutdown of Donges end of 2020: 200,000 boe per day of refining capacity out of the European market. We intend to restart this refinery as soon as we can. But when we will be able to make money by running it and delivering all products.

We have also acted in 2020, a lot of work to begin to adapt our European footprint to the structural demand decline. We are selling the Lindsey refinery and the closing of the sale should happen by this quarter, by end of this month. I think green lights are there if Bernard does not contradict me, I hope.

And then we have also engaged the conversion of the Grandpuits in a zero crude platform, which means renewable fuels and bioplastics, in particular, to answer renewable fuels for the aviation, I would say, lowering carbon footprint of the aviation as a liquid.

And Marketing & Services, last business, but not the least, I would say good performance. You have some indications of the way the evolution of the sales of the Marketing & Services during the year. You can see the incredible drop of the jet sales, which went down by almost 70%, which have affected our B2B sales because it's part of the cash flows missing this year. The rest of the business has been affected, I would say, an average of less than 10%-15% of lower sales. But at the same time, as the refining margins were low, the marketing business was benefiting from better margins.

So all in all, you can see that the retail business has done very well, almost same cash flow as delivered last year. It's also supported by the fact that in our retail business, we have also some nonfuel sales, which are more stable. So resilient foot and we appreciate it doesn't have the same volatility, obviously, as the rest of the portfolio.

So if I just want to conclude to give you some outlook. I want to confirm today what we said to you in September, I would say, fundamentally, maybe being prudent, speaking about $40, $50. At 2025, we put also $60 because Helle explained you why we believe strongly, but we have less investments in all these oil business at the -- at a certain point, I'm convinced but we will have suddenly -- because the demand is not diminishing, except the COVID impact so quickly, but we might -- we will face a supply crunch. We could push the price high. It's a matter of when the market will begin to anticipate, by the way, this supply crunch, and it's a strong belief. But at $50 per barrel, if we normalize all that, you can see that we'll have an additional $6 billion of cash flows coming from all the segments, coming from E&P, $1 billion, in particular, projects like Brazil, Uganda. Coming from the downstream because it will come back. Will not remain at these levels and M&S as well has a growth plan. And coming as well from LNG and from renewables as we gave the figures. The sensitivity for this year, $10 per barrel gives you $3.2 billion per year.

And cash flow allocation no surprise as well. This slide, you know it. We just modified, I would say, the allocation of capital investment this year for 2021. Jean-Pierre explained you that we have decided to plan it prudently at $12 billion. If we could have one flexibility, but the flexibility might be $1 billion, not more, to be in line with the $13 million $16 billion we mentioned to you in September as a guideline. It's renewables and power will represent more than 20%. And I would say I consider it's a new normal for future capital investments. The dividend, clearly, the Board has demonstrated its strong commitment to support the dividend through the cycle. So I would say, in this environment, we maintained the EUR 0.66 per quarter, and you can expect that it should be the same for the coming year.

Through the cycle, I mean also when the price is going up, not overreacting both ways. And so the balance because the priority for us is flexibility on capital investment and balance sheet, we have managed to limit the increase of the gearing to 21.7%, which is -- but it's above the 20% we have as a target, even we'd like to have 15%. So if we have cash flows, extra cash flows, priority will be to allocate that to de-leverage the company again because, again, the big lessons for the last 5 years is a huge volatility.

Share buyback, we will discuss it when we have higher oil price and some flexibility, which is not the case, again at that time.

So to conclude this presentation, and I begin by TotalEnergies. Of course, this is, for me, it's an important decision. It's not every day that you change the name of a company, that you propose to your shareholder to change the name of the company. It was done, I think, very long time ago when CFP became TOTAL, when it was done because of the merger in 2000, just interim way: Total, Total Fina and Total Fina Elf. So we have decided that because we really think at the Board level, but we want to anchor this transformation in our identity. And I think it's a very strong message. We are more than serious. We want to establish TotalEnergies in a new category, no more an oil and gas company, but a broad energy company, an energy company.

And we want to do it because we strongly believe that it's the best way to reestablish the long-term valuation of the portfolio, including the 18 years, I mentioned, of reserves of oil and gas. We want to say to the market, there is a long future for companies. So today, the valuation does not recognize this long future. But by growing energy from renewables and LNG, by upgrading our climate roadmap, by embedding our climate ambition into the financial policy, by supporting the dividend through the cycle, these are the 4 key messages, which are, I think, at the core of the TotalEnergies that we will build together. Thank you.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions)

We have the first question coming from the line of Oswald Clint from Bernstein.

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

I had 2 questions, perhaps on the IGRP division. I mean the cash flow, you mentioned it in the results, they had a positive offsets from renewables against the weaker LNG prices, which was good to see. You've given us your new proportional EBITDA metric today as well, which is great. It's likely small, but I wanted to boil it back down to the cash flow.

Last year in September, you told us $0.1 billion of cash flow in 2019 and how that might get up to $1.5 billion, I think, by 2025. So I mean, the question is, given everything you're saying here and the business

development you've done in January, is it fair to say that, that's a de-risked number at this stage or an easily achievable cash flow number for kind of electricity by 2025, please?

And then -- I'm sorry, the second one, I mean you've made Patrick, some very interesting comments here around the valuation of renewable companies and how you'd like to tap into that. The disclosure, I guess, of your new EBITDA will help and that will certainly help it. I guess the question is what happens if it doesn't happen quickly enough. And I'm just asking you, have you considered or will you consider, would you consider other examples of showing that to the market. I just can't help be struck by companies like EDP, who spin out another -- a little part of their business at 17%. And suddenly, it's -- they're both EUR 20 billion market cap. So some of the parts has clearly worked in some of these names. So I just wanted to get your thoughts on that, please.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

First question, I mean, I'm not sure it's easy to do $1.5 billion - I will not change the figure because now we have the portfolio we need to execute. And so we are entering into a new phase of development of our renewables and power business. I don't know if it's the reason why I decided to change the President of this division. By the way, it gives me the opportunity to mention because I should have done it or I could do it at the end, but Philippe Sauquet will retire in one month. I see in front of me, he's not around the table, but it will be next time, Stephane Michel. No, it's nothing to see. He will retire just because he has the age, Philippe. Philippe had led the capacity to, I would say, develop all this portfolio. Now Stephane will have to execute to deliver the $1.5 billion. Maybe Philippe has done the easy part. It's not true.

But no, I will not change this figure. I think in 2020, I think we are at $250 million. If I was looking to - so to give you an update. It was not in the presentation in terms of cash flow direct to TOTAL. So the $100 million became $250 million. So again, the portfolio is there, and we'll come back to you on these matters in September.

Now, honestly, on the second part, you cannot compare TOTAL, which has a market cap of EUR 100 billion and EDP. I think it's a mistake from my view. And let's be clear, if we transform TOTAL in TotalEnergies, it's not suddenly to spin-off the energies, and to come back again, TOTAL. Otherwise, I will be a strange man or a strange Chairman and CEO. So we know that we need to be patient. We know that we need to deliver. Even if today, all these renewable companies are more valorized on their potential of growth rather than the cash flow they deliver, probably people will ask us more. But I think the fundamental idea is that we want to give the same clarity and a lot of what these companies are giving you in order to make this valorization. It could take time to -- but the business model of TOTAL, yes, 15% is only a share of 100%. It's true.

But I think, again, there are cycles in the markets. And I'm optimistic. So don't expect from us any move like the one you suggest. We are really committed to develop this business within TotalEnergies as a strong foot of TotalEnergies. It will take the time, –you know what I observed for the last round of U.K. offshore wind gives me comfort. When you see who has won, who were awarded during the last week, these 1.5-gigawatt contracts, let’s say, 8 gigawatts, these are big players.

So I strongly believe because of the capital intensity of all this electricity and renewable business, but there always been a time, which is good to have people, who were quicker than others, who invented it and which have a reward. And then now is the time to scale up all this business. And to scale up, you need a lot of capital. And then the big players will have a big share, including in terms of returns and profits. And this is exactly the strategy we want to develop within TotalEnergies.

Operator

We have the next questions coming from the line of Biraj Borkhataria from RBC.

Biraj Borkhataria ***RBC Capital Markets, Research Division - Director, Co-Head of European Energy Research Team & Lead Analyst***

A couple, please. Looking at kind of the announcements over the last few months, it looks like almost every week, you won an auction on the renewable side or done the deal. Could you just talk about what proportion of the renewable bids or deals you tried to secure in 2020 you won? It looks like you've just been more successful than many of your peers over the last 12 months.

And the second question is on SunPower. You've owned that stake for a few years now, and obviously, the value of that investment has gone up 10x over the last year. Can you just talk about the strategic rationale for holding that asset now, given your growing renewables portfolio elsewhere in different geographies?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

In fact, we did not win a lot of auction, to be honest. Last year, we won in Qatar and this year in the U.K. and it's not us, but Adani Green has won auctions in India, but it was not TOTAL. And we lost. We lost in Abu Dhabi, we lost in Saudi Arabia. So in fact, I think we lost more than we win. Why? Because auctions, as always, are not the best way to create value. And you know when you have a target of 10% IRR post farm down on equity to be competitive on auctions, it's tough. You've seen that the last tender in U.K., pricing were quite high, but we consider we have the capacity together with Macquarie to deliver what we want.

In fact, what we've done are more, I would say, direct negotiation there. And all what we mentioned, Hanwha JV in the U.S., it's a direct discussion with them because we have a partnership. The Sunchase portfolio, it was a direct approach by our teams and not a tender organized by a banker, like we've done in Spain last year. So it's more adding people on the ground to identifying some potential partnerships, bringing our value proposal, which means financial capacities, the commercial capacity, attractiveness. When you offer some PPAs, corporate PPAs, you can convince people. The Adani deal is not an auction. Honestly, if we paid $2 billion to get to 20%, it's because we have developed a fundamental, strong partnership with Adani Group.

So I think it's making business, and that's the way you create value. So -- and by the way, Biraj, don't expect us to make an announcement every week. To be honest, I didn't plan beginning of the year, that we'll announce once as many deals as we've done. But I will not say that to Stephane Michel, who will take the

job, because he will believe he has to rest. It's up to him to go on the same momentum.

Now so doing deals, again, auctions is not the best way because it's very competitive like in upstream, by the way, like in oil and gas. We all know that. If you want to create value, you have to be smart. And I think what I observed positively and if we have this momentum is because TOTAL became serious. It is considered as a very serious partner around the world. The ambition we have announced, and it all started, by the way, by winning the auction in Qatar last January. We became immediately with this 800-megawatt a credible partner, including, by the way, attracting contractors, Chinese contractors knocking to our door because they want -- and they give us better costs in order to be competitive. So it's a virtuous circle.

And now with the ambition we have announced, again, when you compare the amount of capital intensity, we have capital CapEx in this field, we are among the largest players. So I think it attracts, and people come to us with proposing projects and we can select. The U.S. journey has not been an easy one. I think we have -- at least there are 2 or 3 opportunities that we have decided to not to follow because they were too expensive before we went on the ones we have selected. So -- and that's one advantage. This is a very large market, a very growing market. So there is enough room not to rush and to compete to lower the price to get the business. which is not exactly true on offshore wind, but that's the capacity to leverage our global footprint.

SunPower, honestly, I think, it was a long journey and with a lot of efforts of everybody, SunPower, shareholders, TOTAL, in order to make this spin-off of the manufacturing business, which has been a success. We created Maxeon, which by the way, we still own 30% of this manufacturing business, which has an acceptable, journey on the stock market since the spin-off appeared.

SunPower is clearly benefiting from a better, more understandable business model, which is mainly concentrated, as I said, in the residential DG. Value has gone up, very high, that's true, probably part of these new waves like the GameSoft story in the U.S. But at this stage, we are a majority shareholder. And what we want is to consolidate SunPower. And then, as I mentioned to you, the priority of TOTAL is to develop our utility-scale business. So DG is part of the portfolio, but it's much too early to speak about any future. And by the way, it's a listed company. So I will not make any comment on SunPower. But I think, globally speaking, of course, we are in a much better position today than we were during several years and SunPower is in a much better position. And I would like to pay tribute to Tom Werner and his team who have done a very good job during the last years.

Operator

We have the next questions coming from the line of Michele Della Vigna from Goldman Sachs.

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

Patrick, it's Michele. Congratulations on the very strong and consistent delivery through this year. Two questions, if I may. The first one is about cash return to shareholders. So we are just exiting a deep recession. You're prioritizing financial degearing, which makes perfect sense. But as we look to the longer

term, given the health of your business, what do you think is the right long-term cash return to shareholders? I believe in the past, you mentioned 40% as a level you could aim for, for the long term. I believe on your cash generation, the current dividend gives you about a 30% return. And how would you put in that context, the importance of buybacks?

And then my second question really is about decarbonization. Gas has, without doubt, a key role to play in the transition in the next 20 years to decarbonize the industry, transport, heating, power, especially in a lot of emerging markets. But there is a rising wariness about potential stranded assets in the long term. I'm wondering what is the ability today of actually building this gas infrastructure in a way that it can be easily retrofitted with clean hydrogen in the longer term, effectively avoiding any kind of stranded assets and accelerating the hydrogen transition in the long term.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

As always 2 interesting questions with Michele. The first one, by the way, this year, I'm afraid that the cash out is more 47%, 48% than 30% with the dividend. So we have been above the 40%. I think this idea of 40% was, I think is not a bad metric to -- it depends, of course, of the level of the crude price that we get. My conviction is that as we want to support the dividend for the cycle, if we have more cash, buyback is obviously a better way to keep flexibility rather than increasing dividend. But it's always the same debate. You have some shareholders who prefer dividends. Some others prefer buyback.

Honestly, Michele, if I have that difficult question to answer, I will be happy. For the time being, I'm more prudent than you because for me, we are not yet exiting the full depression. I read your papers. I know Goldman is quite positive, and I'm happy that you are. Vaccines are being spread, but not all over the world. So it could take time. So maybe we are too prudent within TOTAL, but I would say that you can keep in mind -- you keep in mind what we told you, and then when it will be the time, I will answer more precisely to the question. But obviously, my view is that to supporting the dividend full cycle is fundamental to keep trust. And so we need to manage prudently as well the increase of dividend. But we'll see, and then if we have more cash, it's normal, that we have to return more to shareholders who have to be, of course, rewarded for their patience.

Decarbonization gas has a key role. Yes, that's true. It's interesting what you said. But you know there is hydrogen and you speak about blue hydrogen. It's clear that -- when we think to hydrogen at a big scale, there are 2 way to do it. Either you do very big solar farms in the middle of Saudi Arabia, or Qatar or Morocco, very big. And you have a very low costs of electricity because obviously, green hydrogen fundamental is not only to lower the cost of electrolyzer, it's fundamentally to be able to produce a very low cost of electricity. So large scale, scale will be of essence in that story.

So it's one way to do it. The other way is to find large gas fields like the one you have Qatar, in Yamal, maybe in the U.S., by the way. And then to -- but you need also to find a very large carbon storage, if you want to be able to produce blue hydrogen and decarbonated hydrogen, which is the thing that we have to combine both. I'm not sure that we have that in all the locations. But it's obvious, but when I'm thinking to the future of hydrogen for TOTAL, I'm thinking both green or blue, I'm color blind, I would say. And the

best location for blue hydrogen are the ones where you can produce gas at a very low cost and where you can find these large CO2. I think that Novatek is looking to that, obviously, I'm sure that Qatar -- big, large producing countries should look to that. And then it could make the transition, as I said.

By the way, the way we should develop hydrogen in the future is probably like this one, remember the story in LNG 30, 40 years ago, we were a pioneer within TOTAL by developing LNG in Qatar or Indonesia. But we found to do that some Japanese customers. There were customers, ready to pay a certain level in order to develop this LNG technology, which was nowhere. And we've done it, and it was a success in a large way.

I think hydrogen is there today. It's a matter now of finding the scale, projects with scale, but also finding the customers ready to make this emerging. So governments can do things like in Europe, but also it will be a mix. So we are at the beginning of a journey. But I see that for me, and your question is a good question in terms of hydrogen would -- could become a relay of our position where we are today, a strong position developing LNG because we have large gas resource at a low cost, like in Russia. It might be the future for TOTAL on the blue one, providing we identify the carbon storage and the other fit being green with renewables.

Operator
You have the next questions coming from the line of Lydia Rainforth from Barclays.

Lydia Rose Emma Rainforth ***Barclays Bank PLC, Research Division - Director & Equity Analyst***
Two, if I could, Patrick. First of all, what happens to the CapEx budget at higher prices in terms of the oil side? Obviously, it gives you a little bit more flexibility. But does extra spend go into the renewable space? Or does it go into the upstream to capture some of that potential uplift in prices?

And then secondly, just in terms of the cost of decarbonization and the work that you're doing in terms of bringing forward, so to speak emissions, the reduction of it. Are you finding that the cost of reducing emissions is coming down as you do more work on it?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
The second question, I think I will leave it to Arnaud during his presentation because he will show you the whole exercise we have done internally. We can lower our emissions, and you will see that we find a lot of tons, we have a very low cost, in fact, which we are not just a question of concentration. So you will have to be patient on the second one, and Arnaud will answer in half an hour with his presentation.

On the first one, let me be clear. I think that again, the $12 billion is a good level. We could go to $13 billion, maybe. And there are 2 ideas. One, of course, we have some flexibility. We have some flexible short-cycle CapEx, which have been stopped last year in 2020 in E&P, which are mainly infill wells on which it will take a little time, so we cannot reactivate that immediately because it needs to remobilize, I would say, rigs and things like that. But it might be done and so that's an idea because a short cycle means payback for 2 years.

So if we have a vision that the crude price could remain at a good level, then it's an opportunity, and that's --but at this stage, I'm not yet there. It's not because I've seen yesterday evening, $60, that I consider $60 is forever. And when you see that Saudi Arabia has decided by itself to cut 1 million barrels, it means I think that they see some fragility in the market.

So don't become too short sighted, too short term, short-term assumption should not dominate our decisions. Then renewables, it's possible, but you need to have opportunities to do that. And again, it's a matter of maturing opportunities and it's not because I decide to spend $1 billion, but I will spend $1 billion. Does not work like that. Opportunities need to be profitable to reach a target. So there is a maturity of the portfolio. So again, consider that in 2021, might be $12 billion, might be $13 billion, but we'll see. Let's stay on the $12 billion, again, my priority is, first, to come back to strengthen the balance sheet.

Operator
We have the next questions coming from the line of Thomas Adolff from Crédit Suisse.

Thomas Yoichi Adolff ***Crédit Suisse AG, Research Division - Head of European Oil & Gas Equity Research and Director***
I guess my first question is on LNG. And perhaps you can share your latest thoughts on Qatar and your potential participation of fiscal terms, they are more acceptable and entry costs more digestible.

And then secondly, just in terms of the pre-FID production contribution in 2025, can you remind me whether a large part of it is going to be driven by Surinam and Uganda? A simple yes or no, at this point.

And then thirdly, I do apologize. Just a quick one on how to decarbonize heavy-duty transport, obviously, you can use hydrogen, you can use renewable diesel, you can use bio methane and you're involved in all 3 different technologies. As it relates to heavy-duty transport, which technology are you the most excited about?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
I will let Helle answering on the excitation on technology for transport. And Surinam will be by 2025, I think it's quite minimum with something like potentially 20,000-30,000 barrel per day. So it's not important. Uganda is more important, it's 100,000 barrels per day. We have a large stake in the project. We are working hard on to launch Uganda, and we are very near this FID now.

And before I let this time to Helle to think, but -- and maybe, by the way, Alexis, you can complement, if you want, Helle. LNG...

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Qatar.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Qatar. It's Qatar, yes. I don't know. You know better than me, what are the entry costs because I don't know. I'm waiting for -- to see the terms. I think that Qatar is moving forward. They have announced they have awarded the EPC, so which, by the way, is good because part of the first approach they've done 1 year and a half ago, there was a big uncertainty on CapEx. So of course, it was difficult to manipulate some fiscal terms and entry costs without having the CapEx. So I think that will be clarified.

I understand from Saad al-Kaabi, that I met recently, but he intends to bring partners. I think, fundamentally, what Qatar will ask is some offtake because now in LNG, what happened, we also know that -- and so we'll see what level of commitment on offtake different players will take.

So for me, at the end, it's a matter of risk and reward. I mean we know what they are expecting, and then we'll see the rewards. If there is a good balance, we'll move forward. And obviously, we have a strong history in Qatar. But again, it's not a matter of emotion. It's a matter of at the end of the day of -- and I think, by the way, Saad al-Kaabi thinks exactly like me - it's a question of risk and rewards. And there are plenty of advantages in Qatar, in part icular, the cost of production and the cost of LNG efficiency. And then we are waiting. I think it will come soon, and then we'll take some decisions, better commitment on Qatar. Helle, Alexis?

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***

Yes. Thomas, I think the answer is we're excited about everything, and then we have to keep, I would say, an eye on both the cost and the benefits. Renewable gas, biodiesel, great technologies, no big deal in terms of engines. But then I'm not sure that there is enough opportunity worldwide to switch the whole heavy-duty transport to those 2 decarbonizing technologies. So then you have to consider hydrogen, which is less mature, but over time, probably has a higher potential source of supply.

You didn't mention it, but we will also be seeing electrical trucks going forward, not immediately. So it's also a question of maturity and time line. And then, of course, you can combine a little bit of everything by doing e-fuels. So I would say at this stage, as you pointed out, we are involved in the 3 major technologies for the next 10 years, and then we'll see what happens after that.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Yes. Alexis, you want to add something?

Alexis Vovk ***TOTAL SE - President of Marketing & Services***

No. No.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

I think that, honestly, so biogas story for EV duty, I think as the volume of biogas might not be sufficient, but that's the point. But let's see. I mean let's see what -- because there is a lot of policies behind it. And let's say as well what the truck manufacturers will decide. They may decide for ourselves.

So we are there fundamentally to be able to provide energy products at lowest possible cost and to adapt ourselves. If we can help them in thei choice, it will be good, but we'll see that.

So I think Helle is right. At this point, we have to be ready and to understand for which of this fuel, the one we can produce in the best efficient way, and where we can produce them in the best efficient way. And this is what we can bring to our customers and to the policymakers.

Operator
Our next questions come from the line of Irene Himona from Societe Generale.

Irene Himona from Société Générale

I actually have 3 questions, if I may. Firstly, a results question. In the fourth quarter, the E&P tax rate was very low, I presume, due to pricing. With brand back to a more normal $50-$55 this year, what can we expect the upstream tax might be this year?

Secondly, Patrick, you target 30% of all the management bodies at TOTAL to be women by 2025. What was that proportion in 2020, please?

And my third question, you said you raised today the portion of capital expenditure on renewables to all the trend and you show how by 2030 oil product sales will be down quite materially. And today, oil is a huge part of cash flows, even in the very low-price environment of last year. Is it totally premature to ask whether by 2030, we might expect the renewables business to turn perhaps cash neutral or even cash positive? It doesn't seem to matter today for the valuation of renewable utilities. They have no free cash flow, but obviously, it does matter to your investors.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Jean-Pierre will take the second one. I will answer the first one. As we have more or less a 20%. In fact, today, in all the management committees, I ask all my colleagues to have at least 2 women out of 10, we say, and we intend to go from 2 to 3, I mean, fundamentally. And I think it's an important move.

Remind you that 5 years ago, there was no woman at the Executive Committee. Today, I'm happy and lucky to be surrounded by Helle and Namita. Surrounded is the right word. And so I wait for somebody else coming. And I think it's important, again, for me because diversity brings some collective intelligence. We are better groups when we are, in particular, at this time where we have some decisions, which are not so easy to take, to listen to various points of view. And that's something on which we are really embarked.

You have to know, but fundamentally, among what we called the -- I would say, the managers in TOTAL, I mean,…

Helle Kristoffersen *TOTAL SE - President of Strategy & Innovation*
The managers.

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*
Managers. We have today, around 33% of women. So the idea is fundamentally, and we continue to increase it, but we think we should go to 35% because it's a matter of recruitment. We have a lot of technical positions where we find less women. So the idea is by 2025 to have, in fact, at the management bodies, the same proportion of women that we have among all the managers of the company. That's the idea.

So to come to a certain level of normality, I would say, maybe when we go from 30% to 35%, but then it's a matter of few figures, it's 1%. But that's the idea.

And I want to do that at different levels. It's very supported by the Board. And so that's a strong policy, which is also contributing to the ESG commitment of the company.

So Jean-Pierre, tax rate?

Jean-Pierre Sbraire *TOTAL SE - CFO*
Yes, E&P tax rate. Yes. For the fourth quarter, the E&P tax rate was at 20%. So benefiting from some particular tax elements. When you look at the full year, so on average, over 2020, with Brent around $40 per barrel, you have a tax rate at 29%. So it's fully in line with the guidance we gave, 30% at $40 per barrel.

And if you remind the 2019 figures, so in an environment around $60 per barrel, you have an E&P tax rate around 40%.

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*
And so you can think 35% with $50?

Jean-Pierre Sbraire *TOTAL SE - CFO*
Exactly.

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*
If it works. So that's more or less a guideline. Again, you could have some quarterly effects because of tax deferred. And with COVID, all the systems are not perfect. But at the end of the day, when I look to the average on the year, it's -- we are always the same type of guidelines. So it works...

Jean-Pierre Sbraire *TOTAL SE - CFO*
In line with the guidance we gave.

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*
So you have a precise answer for your model, Irene. And then it's because maybe you will not have a

precise answer on the last one because I observe that you want to have more clarity. I would love that you ask the same questions to all my energy colleagues -- I'm sure that you are asking the same question to all our big energy new competitors in the renewable fields. Because for the time being, I'm not sure it's really a question that the markets are asking.

So to tell you the truth, yes, I think by -- I mean, I hope it will be cash neutral by 2030 because, again, that's true but the more we invest, the more the gap increase, but we said $1.5 billion by 2025. By that time, let's say, we'll spend something like $3 billion, I don't know the figure. So by 2030, yes, you can take this assumption, but the cash neutrality should be an objective for the company.

And let me clear it for me, it's nothing surprising then when I'm entering into Russia in 2011, you know the cash neutrality of the investments of NovaTek will be reached this year, 10, 11, 12 years after because we have to invest. In energy, it's always long cycles. It's sure as well when I remember, we made a lot of works on Angola. Before we obtained the cash neutrality in Angola, which is today one, I would say, of the cash cow of the company, it took more than 10 years; it got 15-20 years before we really obtained.

So, energy requires a lot of investment because you are willing to grow. So growing means investment. And there is a point where you can get the fruits out of that. And that's part of the model that you need to put in place. I can tell you, by the way, it's an interesting discussion I had with Gautam Adani about the future of AGEL because obviously, I was ready to take 20%, but I want some my money back like a U.K. Prime Minister said one day to Europe. So I use the same way to work.

No, let's say, it's a good horizon, a good objective that you just put us, and I adopt it.

Operator

Your next question is from Christyan Malek from JPMorgan.

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

Thank you for the very comprehensive presentation**.** Two questions, if I may. First, so I really appreciate the detail on the path versus getting up returns in the low carbon business. And as it further matures, would you, the Board, consider an IPO as part of unlocking a lower cost of capital? And what would the key triggers be?

The second question is about disclosure. And it's not fair because I could ask this of your peers, but you clearly seem to be leading the way here, Patrick. Given there seems to be the dislocation valuation relative to pure plays in the low carbon business and in the renewables business, can we expect greater disclosure to demonstrate progress towards this 10% equity IR target? And would you consider disclosing carbon intensity levels by asset or region, given it seems investors want greater transparency on everything, whether it's financials, carbon intensity in the portfolio, not just a holistic target. So probably more than 2 questions there, apologies.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
So the first question, I think I answered to one of your colleague. I mean, it's not on the table today at all. As I said just before, we changed our name to TotalEnergies, not too suddenly IPO, the energies. I mean I want to keep the energies within the company. I think it's a strong move by the Board, which means that, really, we think that it's a question of patience, as you just said, that the more -- the larger this stake will be in our portfolio, the better it will be understood, and it will be valorized.

So but it's clear that we are willing to invent a new category of energy company. And I don't see why today there is a debate about the legitimacy of oil and gas to produce electricity. Probably, we're frightening some electricity companies, by the way, by coming into the picture. After what happened in Round 4, in U.K., maybe we are right to be afraid. But I mean, it's a matter, for me, of delivery. So it's not there, not on the short term. And we say, again, I think the signal we send you today by changing the name of the company to TotalEnergies is a very strong signal. But really, we embark in this strategy, a strategy of transformation and that renewable is fully part of this business model. And so renewable and electricity is full part of this business model. And so I don't intend to change the business model every morning because I wake up and I'm afraid about the valuation of the company.

Low carbon disclosure. Okay, we gave you a lot of disclosure today. If you don't have enough, you will tell me. So we'll give you capacity by geography, by technology. By the way, we intend to give you that every quarter or so what I said. If we need to give more -- I'm not sure if there was a debate. I've seen that 1 competitor is giving even the PPA by contract. I'm not sure I'm willing to say to my competitors all my figures. I never gave that for oil and gas. I never disclosed all the fiscal terms of the oil and gas contracts. So it’s a little sensitive, but let's see.

Our interest, let it be clear, Christyan, where we are aligned is that -- and so we will give you by region, by technology, the figures, you will see that wind represents around 20% - 25%. We will give you the net capacity. So I think what we will deliver to you today, you have a lot to work on, and I will be happy to listen to what you want because, again, our willingness by disclosing more is clearly that everybody could better valorize and give the right valuation on this portfolio. And 35 gigawatts, 20 gigawatts of PPA. Just these figures and the price we gave you, if you compare with some renewable company, I think you can find some good valuation.

So I take the point, and I will be happy to welcome your suggestion in the coming weeks.

Operator
Our next question is from the line of Jason Kenney from Santander.

Jason S. Kenney ***Grupo Santander, Research Division - Head of European Oil and Gas Equity Research***
Hi there. Truly impressive level of disclosures from TOTAL. It’s a critical quarter shift (2:07:50), I think, and I really do hope it appears in the share price given the obvious value in the business lines. I'm really enjoying this roller coaster that TOTAL is on as well. Material portfolio additions over recent months. And I know that in comments, you've mentioned the Renewables could be 40% of sales or revenues by 2050.

And I know it's not going to be a linear process, but do you think you could give us a percentage of revenue by 2030, 2035 from Renewables? That's my first question, really.

The second, maybe to Helle. Could you envisage a macro scenario where we have 80 million barrels a day of demand for oil only in 2025? So no more than 80 million barrels a day of demand? And what kind of oil price do you think that would entail, if we were to see that demand? Obviously, there's 2 sides of the equation here.

And then one more, if I may, and it's on a technology question, really. Because of the amount of solar that you do have and the shift to hydrogen over time, I'm wondering if there's an investment in photoelectrode catalysis that you could maybe combine with those solar panels and just create hydrogen directly without using electrolyzers?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
So the first answer is 15%, 20% by 2030, 2035, I would say, fundamentally. 15%, 20%, I think it's already at this horizon.

The second question I will ask Helle. I'm sure she has that scenario. If she has that scenario, I think she will be fired, in fact, tomorrow morning. So I'm just letting Helle...

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Jason, I'm not allowed, of course, to say that this is a credible scenario. But honestly, I don't think it's a credible scenario. I think there will be tons of other issues. If oil demand drops to that level, I think we'll have, you know, the world will be undergoing -- be on the wake of disappearing. So I think that's science fiction, honestly.

We told you back in September that we see oil demand beginning to peak at the end of this decade. We have no reason to believe that it will be declining rapidly from here on until '25. I don't think that exists.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
And by the way, I mean, just to comment on it. The only scenario you can think is that it's not 1, but 2, 3 pandemics in a row, that we think that we are all locked down, that there is nothing, nobody is moving anymore, which I hope not, for all of us. But I mean, we've seen something incredible in 2020, so… but I hope it will not happen.

But by the way, let's be clear, the oil price is not only given by demand and supply. I don't know if you notice today, honestly, at $55, the demand is not yet very high, the inventories are high because you have some players in the market, which have been quite efficient...

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Disciplined.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Disciplined, I would say. And there is probably a debate, is it $45? Is it $50? Is it $60? But we are targeting to get $50, I would say. And it's back to what is the competition between oil in Russia, oil in Saudi Arabia and shale oil in the U.S.

But, so my vision is that today. Because these economies of these countries are not able to transition in 5 years. So they absolutely need a certain level of oil price. And they will prefer to diminish their production than letting the oil price crashing to I don't know which level.

So I mean, for me, again, the oil demand, I know that everybody is today thinking to it. The world transition means something. Our world is working because we have oil, and we should not forget it. I mean, 80% of the world economy is carbonized. And we will not shift it just because we are willing it somewhere. And so it will take time.

So my view is that the oil price, at this level, I would answer to you, it's $45 or $50 per barrel. Because of the supplier discipline, not because of supply and demand.

Jason S. Kenney ***Grupo Santander, Research Division - Head of European Oil and Gas Equity Research***
I was probably thinking more about efficiency gains and substitution effects where other fuels switch in to take out some of the oil demand with the oil pricing.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
We talked about that back in September, Jason, and we absolutely look at that, of course, but it's impossible to do as quickly as 2025.

Jason S. Kenney ***Grupo Santander, Research Division - Head of European Oil and Gas Equity Research***
Fair enough. Okay.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
I think we showed you some very aggressive assumptions in the Total Energy outlook, very aggressive assumptions, but we can't reach that level that you just suggested in 5 years. Even by being super, super aggressive.
I didn't catch your last question, please can you...?

Jason S. Kenney ***Grupo Santander, Research Division - Head of European Oil and Gas Equity Research***
Yes. I mean, it was basically cutting out the middle-end of the electrolyzer and just going straight from photoelectrode catalysis on solar panels directly producing hydrogen.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
That's still very early stage, I think.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Philippe, you are the expert on solar panel, on hydrogen. If we have an expert?

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Yes. Well...

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Helle is the R&D, in charge of innovation.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Yes. It's being looked upon as far as I'm aware. Philippe, I'll leave you -- but very early stage at this point in time.

Philippe Sauquet ***TOTAL SE - President of Gas, Renewables & Power***
Yes. Well, Helle is perfectly right. To produce hydrogen, there are 2 molecules that are abundant on Earth. Methane on one side, and you have to separate hydrogen from carbon, it's easy, but it goes with CO2. Or the other way is to separate in water, hydrogen from oxygen. And you need a lot of energy because it's a very stable molecule. And to get from solar the direct level of intense energy that you need to separate this molecule is a real, real challenge.

So I don't think that we will see photo-catalysis. High temperature electrolysis is much more promising to me. Sorry to be boring.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
But I think Jason is willing to see if we wants to invest in which company. So high temperature technology. As the hydrogen companies are just becoming crazy in terms of valuation, everybody is looking for the next golden mine, where is the next golden mine? So clear.

Operator
The next question comes from the line of Paul Cheng from Scotiabank.

Paul Cheng ***Scotiabank Global Banking and Markets, Research Division - Analyst***
On carbon sequestration, you haven't mentioned anything on that. There seems to be big differences in approach between the European and the U.S. companies. You've been looking at the low carbon wind and solar power, the technology is quite established and well defined. Carbon sequestration seems like it's early stage. So trying to understand that, is that a business that you think, sometime in the future, will be a major business for you and could be as big of a focus and emphasized as your solar and wind power? If not, why not? That's the first question.

The second question is that you have been talking about net investment, $12 billion for this year, $13 billion to $16 billion for the next several years. Is there an organic CapEx estimate that you can share? What, out of that net investment, the organic CapEx may look like?

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*
The first question, I didn't mention it because, in fact, you will have just to wait for Arnaud because when Arnaud will speak about Scope 1 and 2 and net emissions, obviously, we will not speak only about NBS, natural base solution but Arnaud will cover carbon sequestration. And honestly, I will tell you, just reveal something today to you is that I asked Arnaud, the E&P President, to speak about carbon sequestration, because I think, I have the feeling that he's best positioned to speak about it rather than Philippe in charge of Renewables.

I don't know why, but carbon sequestration is obviously, for me, something in particular, that has been public. TOTAL has invested in Northern Lights, that I consider that having some positions in the North Sea with depleted fields, it might be a future for us.

Is it a business, that's more a question? It's a necessity for sure to offset, I would say, or to store some carbon and it's back to the hydrogen. Hydrogen, where do we store the CO2, if we want to develop blue hydrogen. But Arnaud will come back on it, and he will give you a floor.

I don't have the feeling, to be honest, it will be a major business. It's absolutely necessity that we manage that. But again, and it will, of course, be highly dependent on CO2 pricing for that technology to become a business. But Arnaud will develop it in his presentation just after.

The organic CapEx, I don't know if I have the right to disclose it. I think, no, I don't disclose it. No, it's a flexibility we keep but I can just tell you that the organic CapEx in 2020 was $10 billion. You will see it in our accounts. So I can reveal something, that is in our accounts.

But then the way we speak when we look to net investments, of course, one difficulty we faced in 2020, let's be clear, when the oil price is low, the capacity to divest some assets is not so strong. Or you have to lose some value. We are not ready to lose value. And there is acquisitions but there is also divestment. So for me, it's more that equation that I'm looking carefully, which is, if I can sell more, I can buy more. But organic CapEx, the range of 2020, around $10 billion is a good figure.

And it goes back to my answer also to short-cycle CapEx, which is a way to have some flexible organic CapEx, I would say.

Operator
The next questions come from the line of Martijn Rats from Morgan Stanley.

Martijn Rats *Morgan Stanley, Research Division - MD and Head of Oil Research*
I've got 2, if I may. First of all, the ESG bond, so the bonds linked to climate KPIs, that seems a rather big deal. And I was wondering if you could talk about it perhaps a little bit more. Specifically, I was interested in the sort of the magnitude of the sort of cost of capital advantage you think you could get relative to more traditional bonds by using this approach?

And then secondly, yes, not something that gets an awful lot of attention these days, but I was wondering what your outlook is for your European refining portfolio? And what levels of restructuring we might expect there in coming years? I was a little surprised that you, for example, mentioned that you would still restart a refinery that is currently closed, for example. So if you could talk about that a bit, that would be great.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

The second question, no, I did not mention I will restart refineries closed. Donges has been just temporary shutdown to face the low margins. But we never announced that we are closing Donges. No way. So maybe I was not clear.

The one we announced that we are really closing in terms of the refinery is Grandpuits, like La Mede, this one will never come back as refining capacity at all product capacity. When we took that decision, I would say, conjunctural decision to shutdown Donges, it was clearly announced as a temporary shutdown to wait for better margins.

And I think TOTAL has done a lot in its portfolio in terms of restructuring in the last 10 years. So other players around Europe should also take their responsibilities. Jean-Pierre will tell you everything about these ESG bonds.

Jean-Pierre Sbraire ***TOTAL SE - CFO***

Yes. The idea is to use climate KPI bonds in the future for our bond issuance. It's not directly linked to a cost advantage. I know that on the market at present time, there is what we call the Greenium. I don't know exactly perhaps 5 bps, but the main driver is to align our financing policy with our climate ambitions. And it's a matter of sustainability, a matter of acceptability rather than a way of reducing the cost of our bond issuance.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

But the bond issuance by TOTAL today, at which level as an average? We issued bond at which level?

Jean-Pierre Sbraire ***TOTAL SE - CFO***

At present time, we issue bonds less than 2%. In 2020 during the second quarter, we issued $9 billion of new bonds with very long maturity, and we are able to capture 40 years maturity as less than 3%. So on average, I would say, around 2%.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Yes. And I think it's an important, for me, decision of the Board this one. As you said, it's quite a big deal, Martijn, you're right. Because all that is back to, for me, all these debates, in particular in Europe around taxonomy and the fact that there is even people pushing the ECB. ECB, as a monetary body, has to be neutral when they buy some bonds. They have to be neutral bond, neutral buyer and to buy all their share of all the bonds.

There are people pushing the ECB to align the way they will purchase bonds on the taxonomy. And taxonomy is quite, I would say, a stringent approach, maybe too stringent, by the way. But I think what we propose today is a way to say, "Okay, look, you have some corporations, some companies like TOTAL who are in transition. We need to finance the transition." And so at the same time, by the way, TOTAL is very useful because, again, the economy today is a carbon economy. So if we cannot finance our future, there is a real problem, it could create a problem.

So linking all our bonds tomorrow to become ESG bonds, like you said -I like your idea, ESG bonds, we call them sustainability bonds, by the way. ESG bonds, it's clearer- to climate KPI, for me, is making this link of transition in a strong way.

If we could have an advantage, I hope it will be the case. At least, what I don't want to see is to have a disadvantage of the financial policy. But again, we are obliged to preempt and I think it's a strong message to all these monetary policy bodies that you have players like TOTAL, TotalEnergies, who are ready to be very serious about their transition. And you must take that into account in the way you will allocate your bond purchasing policy.

I think, and this is what I'm advocating at the European level: the taxonomy has one default for me. It's an absolute rule. You are green or you are not green. In fact, there is something wrong there because these economies in transition. So we should find a way to reward the best-in-class ESG players. If we are among the best ESG players, we should find a way to find access to this good financing. Because, again, the transition will not be only done by smaller players who are not delivering cash flows and who have a limited access to capital.

So I think this is, for me, something very important. And I hope that this ESG bonds policy will be well received and even, if we make some pupils, it would be good. At least for TOTAL. But I take the point, Martijn, I will ask. So there is a new KPI for Jean-Pierre, which is to lower its cost of debt thanks to my idea to make ESG bond. So it's good. Okay.

Operator

We have the next questions coming from the line of Alastair Syme from Citi.

Alastair Roderick Syme ***Citigroup Inc. Exchange Research - Research Analyst***

I just have 1 question really on that Slide 28, where you sort of talk about the renewables financing model. And I'm just intrigued around the farm-down strategy, whether you're seeing any signs that, that strategy is changing over the years? Is it getting more competitive? Are you finding the terms more difficult? I guess just reflect, I mean, the strategy works until there's a lack of buyers that are just taking on that risk or helping you derisk.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Of course. Yes, of course, you are right. But today, the market is huge. When we make some farm-downs, I can tell you, the price we obtain are always better. So it's clear that it's linked also to the very low interest

rate, but the attractiveness is there, you have many, many financial institutions, you know that perfectly, who themselves want to decarbonize their own portfolio. Everybody is the same transition.

And so you have more demand for these type of assets than supply.

Helle Kristoffersen ***TOTAL SE - President of Strategy & Innovation***
Supply.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
So it's clear. So it might change in the future. But with the maturity, I mean, all that is a question of market maturity and we'll see. But honestly, I think for the next 5 years, I'm comfortable that we'll be able to execute this approach. And there is a lot of appetite for that.

Okay. Maybe it's 4:30, Ladislas. Maybe we should move to the next part, because I'm afraid we could go too long for our auditors. I think we have something like 30, 35 minutes of presentation coming on. So maybe we should keep the questions for the last session, if you are right, and introduce Arnaud and Adrien.

Ladislas Paszkiewicz ***TOTAL SE - SVP of IR***
After the presentation of Arnaud and Adrien, anyway, we'll have also a Q&A session. So, you will have time to ask your questions.

So now comes the second part of the day with the climate road map in action. And so there will be Arnaud and then Adrien Henry, as I mentioned earlier on. So I switch directly to Arnaud Breuillac.

Arnaud Breuillac ***TOTAL SE - President of Exploration & Production***
Good afternoon, good morning or good evening, wherever you are. I think Patrick gave you a good reason why I'm making this presentation. Another one is that you will have noted our capacity to relentlessly reduce costs over the last 5 years. And you will see through this presentation how we have engaged in a similar journey to reduce emissions from our operations.

We are committed to reduce by 40% the Scope 1 and 2 emissions from our operated oil and gas facilities between 2015 and 2030, with an ambition to get to Net Zero by 2050.

Our main levers are to reduce, avoid, capture and offset. Reduce our emissions by optimizing the energy used to produce or refine oil and gas. This can be achieved by electrification of the process and by increasing the energy efficiency.

Avoid via ensuring zero flaring or venting and keeping methane emissions near to zero. And capture with CCS projects, and I will come back on that and also methane emission later in my presentation.

Of course, portfolio management will impact emissions, but we scrutinize all new projects to ensure that their marginal impact to our Scope 1 and 2 emissions is positive.

Finally, in parallel to optimizing the energy used and minimizing the energy lost, we are developing carbon sinks notably with nature-based solutions, and my colleague, Adrien Henry will come back at the end of this presentation to cover these projects.

All together, we are developing a strong low carbon culture in the company, and this is illustrated by the next slide.

In 2020, our CO_2 fighting squad has launched a company-wide systematic review of all opportunities to reduce Scope 1 and 2 emissions. The first phase allowed us to identify more than 500 projects in Upstream and Downstream operated assets, out of which more than 400 projects have been qualified with the potential to reduce Scope 1 and 2 emissions by 7 million of tons of CO_2 equivalent per year.

To answer Lydia's questions, most of these projects would cost less than $40 per ton of CO_2 reduced. And since January 2020, the economic value of all new investments are computed with a CO_2 price of $40 per ton of CO_2 with a sensitivity at $100 per ton of CO_2 from 2030.

Let's zoom now on our Upstream projects. We have identified 160 projects or initiatives that will contribute to reducing the Scope 1 and 2 emissions of our Upstream operations by 2.5 million tons of CO_2 per year by 2025.

To illustrate these actions, here are a few examples, as shown on this slide. We will reduce venting in Gabon by reducing cold vents to the flare. Routine flaring will be reduced in Nigeria OML 100 by rerouting gas to the export system, and in Congo and Gabon by adding LP compressions. Of course, routine flaring will be stopped by 2030 on all of our operated assets.

In Angola, revised operating philosophy on our FPSOs will contribute to significant savings on fuel gas consumptions. For example, for further optimizing the number of turbo generators running with minimum impact on power reliability, and by upgrading the air filtration on turbine intakes.

Several digital projects will contribute to reducing power requirement from compressions or pumping stations. Finally, we are studying electrification of offshore platforms on Culzean and Tyra fields in the North Sea with connection to wind power turbine and solarization of onshore sites, like Tempa Rossa in Italy.

For each new Upstream project, we are systematically reviewing cost-effective solutions to minimize emissions. On Mozambique LNG, to come back on the point made by Patrick earlier on, we've managed to reduce the emission intensity of the project down to 25 kilogram of CO_2 per barrel equivalent, significantly below the average emissions intensity of LNG projects - that is shown on this slide at 38 kilogram of CO2 per barrel of oil equivalent. This is achieved by optimizing the power generation, by choosing low emissions gas turbines, by adding waste heat recovery units on each of the turbine exhaust systems and by installing high-efficiency boil-off gas compressors. In addition, a part of the energy

generation will be generated by a dedicated solar farm installed near the project site.

On Mero 3 FPSO, in deep offshore Brazil, the emission intensity will be approximately 15 kilogram of CO2 per barrel at plateau level, thanks to the extraction of CO_2 from the fuel gas and reinjection into the reservoir. On this project, vapor recovery compressors are used and also waste heat recovery units. With these modifications, in 2 years, Mero 3 FPSO intensity will be reduced by 25% compared to Mero 1 FPSO design.

Last, on our Lake Albert project in Uganda and Tanzania, the emission intensity is estimated at 13 kilogram of CO2 per barrel, well below the average intensity of our oil and gas operated assets at around 20 kilograms, as mentioned. And for example, we've decided to add an LPG extraction unit on the Tilenga Upstream production facilities to optimize the fuel gas consumption. And we are also supplying the local market with LPG, substituting charcoal being used for cooking.

On the EACOP project, the pipeline project to explore the oil from Tilenga, the pumping stations will be solarized in Tanzania.

So, all new Upstream projects are scrutinized during the conceptual and design phase to ensure that no opportunity is lost to reduce our emissions.

Let's look at the Downstream emissions. Altogether, by 2025, 4.5 million tons of CO_2 of Scope 1 and 2 emissions will be avoided each year, thanks to 280 projects. 2.3 million tons of CO_2 per year will come from avoiding emissions through electrification of the processes, by producing green hydrogen in La Mède biorefinery from a 100-megawatt operated solar farm or by supplying our European refineries with green electricity. This is our Go Green project, and I will come back to this.

1.4 million tons of CO_2 per year will come from reducing emissions by improving energy efficiency in all our refineries by switching from fuel oil to natural gas, for electricity or steam generations. And we have a major project in our Leuna refinery in Germany. And by using digital solution, as in E&P, to optimize energy consumption.

And last, 0.8 million tons of CO_2 per year will be captured from the SMR unit in our Zeeland refinery. And in addition, for beyond 2025, we have another CO_2 capture project studied for our refinery in Antwerp.

A few words on our Go Green Project, which will be a significant contribution to the reduction of our emission in Europe as 2 million tons will be avoided by supplying our Downstream operations with green electricity produced from our solar farms in Spain. The production will be amounting to 10 terawatt hours by 2025. And our power trading entity will do the interfacing between the solar farms, the local power markets and the Group entities. This green electricity will be used in our operated industrial sites, especially our refineries, but also our commercial sites and offices across Europe, with an estimated power consumption of 6-terawatt hour in 2025. Of course, excess power will be sold to third party.

In summary, we have identified 400 projects in Upstream and Downstream operations that will avoid 7 million tons of CO_2 equivalent per year by 2025.

Now let's focus on methane emissions.

2020 global methane emissions from the oil and gas sector are estimated by the IEA at around 72 million tons. Most of these emissions are coming from the Upstream sector, around 75%, and the remaining 25% from the gas distribution activities. The Upstream emissions sources are associated with unburnt gas at the flare tips, cold vents associated to production, process venting and unburned fuel gas in the combustion engines or furnaces. Finally, fugitive methane emissions can be found in flanges, fittings and passing valves.

Methane emissions from TOTAL operations in 2020 are estimated at 64,000 tons, which is equivalent to 1.6 million ton of CO_2 as methane has a warming factor that is at least 25x greater than CO_2.

Measurements of group methane emissions are a combination of continuous measurements by flow meters on flare and cold vents and calculations with typical emissions factors per equipment. Spot surveys are also used with gas detectors and infrared cameras.

The pie chart on the left part of the slide illustrates that half of our methane emissions are associated with venting and 25% with flaring. Therefore, all actions launched to reduce venting and flaring, as illustrated before, will contribute to reduce significantly our methane emissions.

The current intensity of our methane emissions from our operated oil and gas assets is less than 0.2% of our production of commercial gas. The methane intensity of our gas assets alone is less than 0.1% of our production of commercial gas, which is already very low compared to the average of the Upstream gas industry, as published by the Environmental Production Agency or the IEA.

Even though our methane emissions are already very low, this slide illustrates our relentless efforts to continue to reduce these emissions.

From 2010 to 2025, we will have reduced our methane emissions by more than 50%. Our operational levers on new projects are to design facilities with closed flare systems, to replace gas instrument with air or inert gas and to systematically exclude continuous cold venting.

On all of our operated assets, we are increasing the frequency of leak detection and repairs, and we are also reducing the number of gas pneumatic devices.

Here are some examples of venting reduction on 3 projects:

First on Tyra redevelopment project in Denmark, a new project. So, all cold vents have been removed, leading to methane reduction of 1.2 kilotons per year which is equivalent to 30,000 tons of CO_2 per year.

On Anguille platform in Gabon, the rerouting of cold vent between 2 platforms and the installation of an electrical compressor, will contribute to reduction of 7,400 tons per year of methane, which is equivalent to 180,000 tons of CO_2.

And last, on Elgin platform, in the U.K., the rerouting of the strip gas used in the glycol unit - which used to be vented to the LP flare - has reduced methane emissions by 3,800 tons per year, which is equivalent to 90,000 tons of CO_2.

Finally, we are participating in R&D programs to improve methane detections and quantification. Since 2018, we have a dedicated testing platform, near Pau in France, to test and quantify new technologies for greenhouse gas emissions, detection and measurements.

We have developed a proprietary technology, mounted to a drone to detect and measure CO_2 and methane. And this tool has already been used on some of our onshore and offshore operated sites.

Satellite data acquisition is booming, and we are partnering with new companies like Kayrros or GHGSAT, which have specialized in satellite detection of greenhouse gas emission. And we are also developing fixed camera and micro sensors for continuous local monitoring of greenhouse gas emissions.

We believe that the combination of drone and satellite measurements, together with on-site cameras and sensors, will provide reliable data on CO_2 and methane emissions.

In conclusion of this presentation on methane, I want to confirm TOTAL's strong commitment to maintaining our emissions to the lowest level, to develop technologies to provide reliable monitoring of methane emissions and to be at the forefront of the industry reduction initiatives to keep methane intensity below 0.2% on oil and gas assets.

The third part of my presentation will focus on our projects in carbon capture and storage, and I hope it will answer Paul's questions earlier on.

Carbon capture and storage projects are essential for the industry to meet the climate challenges. All “2°C scenarios” include an important contribution of CCS to sequestrate and keep CO_2 concentration in the atmosphere below 450 PPM. The latest IEA SDS scenario includes 850 million tons of CO2 sequestration by 2030 and more than 5,000 million tons by 2050. Just for comparison, the global CCS capacity last year, in 2020, was 40 million tons and identified projects by 2030 are adding up to only 170 million tons.

So today, there is a need for acceleration of development of CCS projects, that currently require tax incentives and carbon pricing to fly. However, the number of projects planned to be launched in the next 10 years will drive cost down through economies of scale and technology improvements.

Europe, with its Net Zero ambition by 2050, has clear targets to develop CCS and several countries have set up fiscal incentives for CCS projects. Therefore, we should see strong growth in CCS and particularly in

the North Sea, that provides a favorable environment with a concentration of large industrial complex connected to infrastructure, pipeline and harbors and depleted fields.

Since 1996, TOTAL has built transverse competencies on CCS by mobilizing expertise across the company on each segment of these projects. This is illustrated on this slide, where we have a track record of being involved in pioneer projects and industry initiatives.

Currently, TOTAL is involved in several CCS projects across Northern Europe at different maturity levels, which are totaling a potential of 15 million tons of CO_2 storage. The Northern Lights project in Norway, being the most advanced with other projects in the U.K. and in the Netherlands, and we've also managed to engage the Danish government to look at CCS.

CCS business framework is still in the making and will combine the 3 following pillars: first, project management, HSE, operational excellence and cost optimization expertise, this is our primary responsibility; second, state support; and third, CO_2 value obtained through regulation, it could be CO_2 tax, fuel directives or ETS.

We intend to develop CO_2 capture and storage projects to capture emissions from our operated sites and therefore, reduce their Scope 1 and 2 footprint. We are targeting 3 to 5 million tons of CO_2 storage capacity per year by 2030 for the Group.

Let's have a more detailed look at our main projects. First, thanks to our historic presence in Norway, we are partners with Equinor and Shell on Northern Light, the most advanced CCS project in the North Sea. FID of Phase 1 was taken in May of last year, and this project has received a strong support from the Norwegian government, both with the announcement of a target price for CO_2 of $220 per ton by 2030, but also with an 80% state subsidy on the $800 million CapEx for Phase 1. This Phase 1 will include the transportation, injection and storage of up to 1.5 million ton of CO_2 per year. The unit cost of this phase is approximately $150 per ton of CO_2.

Phase 2 will consist of an extension to reach 5 million tons of CO_2 per year to fulfill the need of European emitters and should have a unit cost around $70 per ton of CO_2, thanks to economies of scale, mainly on transport.

In the Netherlands, the climate accord has set the pace for decarbonized economy with a target price of $150 per ton of CO_2 by 2030, with attractive subsidies for CCS and EU funding, TOTAL is planning to produce clean hydrogen from its SMR unit, capturing 0.8 million tons of CO_2 per year by 2025 and shipping it to North Sea storage site. This is on our Zeeland refinery.

CapEx are estimated at $300 million, and therefore, the unit cost for capture and conditioning should be around $70 per ton of CO2. A similar project is under study at our Antwerp refinery and would be connected to a CO_2 transportation infrastructure with a gathering pipeline and export terminal at the port of Antwerp.

Also, in the Netherlands, the Aramis project aims at giving a new life to depleted gas fields. We have identified the potential to store more than 4 million tons of CO_2 per year, and we intend to build an onshore terminal to receive CO_2 by pipelines, barges and ships and to connect this terminal to an offshore sequestration network reusing existing infrastructure, offshore pipelines, platforms and wells. The development concept will be modular and based on customer needs. This project is targeting around $50 per ton of CO_2 for transportation and storage for 2 to 4 million tons of CO_2 per year.

To conclude this part on CCS, TOTAL is investing $50 million per year in R&D to lower CCS costs. As illustrated on the previous slide, we are accelerating R&D results by implementing new ideas into industrial projects through partnerships.

On CO2 capture, we are working on new materials and processes to improve the efficiency mechanism. On transportation, for example, we are developing solutions to avoid hydrate formation in pipelines and wells during injection.

On storage, we are working on reservoir modeling and monitoring to ensure safe containment of CO_2 over time.

This concludes my presentation on TOTAL's actions and projects to reduce our carbon emissions by leveraging our expertise across the different branches of the Group. We are relentlessly reducing our Scope 1 and 2 emissions and maintaining our methane emissions at a very low level, and we are working with government and partners to find cost-effective solutions to develop CCS projects.

As a reminder, our target is to reduce our net emissions by 40% in 2030 compared to 2015.

Now I will hand over to my colleague, Adrien Henry, who will present our nature-based solutions to sink carbon in nature, this will be required to get to zero net emissions by 2050.

Adrien Henry

Good afternoon, ladies and gentlemen. As introduced earlier, the purpose of the nature-based solutions activities is to build carbon sequestration capacities and to provide for volumes of high standard carbon credits for the Group.

The plan is to build these capacities and volumes from now to 2030 as a first milestone. And these activities shall contribute to get to the net zero emissions balance from 2030 onwards, as said by Arnaud earlier. And this is a final and necessary piece of effort and achievements coming after reductions as detailed before.

To this end, in 2020, we assembled a team. We defined and built a model for our operations around a few pillars I will detail. And we started originating, designing and achieving some operations.

Of course, there are multiple ways to sink carbon in nature, but the very first pillar of our model is to focus on the quality of the underlying operations that will come because, ultimately, the quality of this operation that sequester carbon through living nature are the guarantee for the robustness in time, the sustainability of the sequestration and also ultimately, the guarantee for the environmental integrity of the verified emission reductions that can come from these operations.

As a consequence, we decided to focus on some of the ways that nature offers to sequester carbon and mostly photosynthesis and soil carbon absorption. And this, by difference to other possible ways like dissolutions in the oceans or more complex mineralization ways that we consider not fit for such operations today because of uncertainties and progress of operational ways to deploy.

Another important point is that we will, as far the underlying operations are concerned, consider both conservation activities and creation of new carbon sinks. This is for many reasons, but mostly because we think they are both useful and necessary in terms of volumes of carbon sequestration that will be required to reach a certain carbon concentration in the atmosphere in 2030 and toward 2050. So, both conservation and creation of new carbon sequestration ways are necessary.

The second good reason for considering both is that the conversion way and the creation of carbon sink bring different co-benefits in terms of biodiversity, in terms of water cycle management, in terms of local job creation. These different types of operations create different co-benefits, and it's good to opt for a portfolio approach.

Finally, we also obviously anticipate changing environments for this operation and these carbon sinks on the ground. There will be changes in the climate, there will be changes in the biology, and there will be changes in the regulations applying to all these different types of operations. So, it seems the right way to go to consider, again, a portfolio approach. And not to go only for either planting trees on bare land or just conserving forest, but to go for various types of operations and to bundle them in a portfolio approach. In fact, and on the ground, we will have all these types of operations in our portfolio.

The second very important pillar for deploying our operations is, of course, the environment -- the certification and verification environment that applies today and that will apply in time. And we set for ourselves to target and the standard that we will only go for the highest standards for verification.

It's now common knowledge that the vast majority of such operations happen in a voluntary carbon market and that the design, verification and certification pathways are critical to ensure the final environmental integrity of the verified emission reductions that come from such operations.

So, we set for ourselves the rule that we will go only for the highest standards. And of course, follow the external new rules and standards that could come in time and that will certainly come in time. Again, to be specific, it means that we have a strong preference for operations that have realistic and reasonable baseline for the calculation of the sequestration of the carbon through nature.

And in terms of conservation operations, it goes as far as preferring operations under nested approach or jurisdictional approach.

It also means that we will have a preference for proven methodologies that have been proven through past operations all over the world. And this is true for a few methodologies in terms of removing carbon through plantation, and it's also true for some methodologies and a lot of methodologies in terms of conservation.

Finally, it also means that we will strictly follow the rule of underground measurements for the performance of the carbon sequestration, be it for, again, the creation of new plantation or new carbon sink or be it for the conservation, the progress in terms of satellite imageries. And all the new technologies coming will offer a good scientific base to follow the actual performance and the measure of performance from the conservation.

Finally, and certainly not least, the third pillar of our model for developing our nature-based activities is a very strong belief that there is no long-lasting carbon sink from nature without local, inclusive value chain with people for the simple fact that we will not enter spaces to deploy this carbon sequestration activities where there is nobody or nobody has to leave from these same places. As a matter of fact, it's also common knowledge that deforestation and degradation, in a broad sense, the change of use of land is the second cause for emissions to the atmosphere. So, it's also the result of past decades of developments of such activities that there should be local value chains deployed alongside the carbon sequestration we are expecting from nature.

In a very practical way, it means that we will adopt a holistic approach and we will consider carbon sequestration. We will also consider the biodiversity. We will also consider the water cycle. And we will obviously consider the creation of local value chains, meaning local job producing value and agri forest production from nature, locally, creating jobs, creating also products that will be used locally and internationally.

Practically, again, on the ground, it means that we will team up with partners who have a long experience of such operations, learn with them and take the risk of operations with them. It also means that a portion of the investment we will deploy will go for the creation and/or scaling up of such noncarbon activities that come along with the carbon sequestration we are targeting.

And finally, it also means that we intend to monitor the progress and the results, the performance of our nature-based activities, not only with the number of carbon credits coming from these operations, but also looking after and monitoring the core benefits that will come from these operations.

Now based on this model, in the course of the past year, we have started originating, designing and achieving some operations that I'd like to illustrate now with 3 examples. These 3 examples are of different kind and illustrating the different types of operations in a portfolio spirit, as I was explaining before.

The first operation I'm picturing here is a partnership we closed with an Australian developer in the second part of 2020, and this company is proven and seasoned in the financing and deploying money alongside farmers so that the transition from a non-sustainable pasture management waste to sustainable pasture management waste, what is obviously called regenerative agriculture transition. So the model here is that through and with our partner, we will offer the farmers to candidate and then to deploy new ways of managing their pastures, and it means different grazing models, it means different amendments to the soils, and this leading to more carbon sequestration in the soil.

It's very interesting to develop this activity in Australia for at least 2 reasons. The first one is in Australia, the carbon market for such operations is advanced, and there is a connection with the compliance market for nature-based activities. So, it offers a robust framework with proven experiences before. And the second good reason is that in Australia, this soil carbon methodologies have been proven several times already. So, it's a good move to start with the first phase on this operation.

You could consider that maybe 1 million ton CO2 equivalent over 25 years is a small move. However, it's a good example of how we see operations. It's a first move and what we're bringing to the table, to the partners and to the farmers is long-term horizon in terms of financing so that they have the time for their transition and they can focus on the operations rather than caring for the financing of this transition. And 10,000 hectares is the goal for this first phase, and it's already a significant surface of land.

Now another example in Peru, and it's a flagship example of what we can deploy and do in the conservation part of our activity. At the end of 2020, we settled an agreement with a long-experienced Peruvian NGO for the design and the development of 2 very significant operations that can sequester and that can lead to the potential of sequestering over 25 million tons of CO2 equivalent over 20 years, plus another set of 3 to 4 operations we could develop in a second phase that could go for another 25 million tons of CO2 equivalent and corresponding volumes of carbon credits.

Here again, our approach is to partner with seasoned and best operators while bringing to them what they've been lacking for decades, that is long-term development and operational horizon and support and long-term and patient financing. We are committing for financing operations over decades in such cases.

What is also very important in these 2 operations is the fact that they add afforestation and reforestation through agroforestry scheme to the conservation part of the activity. So again, we are not opposing creation of new carbon sinks and conservation of existing forest. We are not opposing the development of nature-based activities and important carbon sinks and local use of the same surfaces and same land by local population. We are aiming for the models that combine and gather all these different aspects so that we create the local value chains that will both sequester carbon and create improved livelihoods for population so that we erase the very causes for deforestation and degradation that are the most important causes for emission to the atmosphere from the land use change.

Finally, a third example, this is an operation that we are currently building now, and that will happen in Central Africa. This operation has been originated, designed and developed by the Total nature-based

team, so it's a development in-house, together with a long-proven partner for the operations, so the planting operations in a given country, and also together with the state. Because when you are going for planting up to 40,000 hectares of new planted forest, of course, you have to have such a strong partner, and you have to discuss this development with the state. Here, the idea and the model is to create a planted forest on lands that start with a very low carbon content and that suffer from fires several times a year.

There will be 2 phases in this operation. The first phase is to create this planted forest and, doing this, create a forest atmosphere locally, where there were only very few plants growing. And doing so, we will sequester carbon in the first 20 years of the operations and generate the corresponding amounts of verified emission reductions. So that in the second phase, after year '20, we can start selective thinning of that wood and get only the annual growth of the planted forest. But doing this, we will unbalance the age and type of trees that are planted in this forest, and we will create the condition to transition from a planted forest to possibly after 30, 40, 50 years the regeneration of a local forest in the very long term. And while doing so, we will also create local value chains for timber products that will serve the local big cities undergoing growing population and demographic development. We will serve these cities with both construction wood and energy wood. So first phase, creation of a planted forest, a forest atmosphere generation of carbon sequestration and corresponding emission reduction; and second phase, selective thinning so that we recreate the possibility for the emergence of a natural forest in a very long term while producing locally construction wood and energy wood for growing populations.

Last but not least, on this operation, we include 2,000 hectares across forestry development for the production of food crops and possibly cash crops for the local people starting in the first year of the operations and not waiting for 20 years that the value of the timber value chain stops.

This was my last example for picturing the type of operations we intend to have in our nature-based solutions portfolio of operations.

And so as a conclusion and in a nutshell, I'd like to stress that our purpose with these 3 pillars in mind is to invest in, scale up and manage or contribute to manage integrated and communities-inclusive nature-based value chains that capture carbon. And in this order. I mean all this is working together. This is our strong belief, and this is the model we define for our nature-based operations. And of course, the purpose of all this, in line with the pillars I defined, is that as from 2030, the Group will have and will be ready with internal capacity for carbon sequestration and corresponding generation of verified emission reductions and also starting, as soon as 2030, with 100 million ton CO2 equivalent carbon credits, being the fruit of all this development from today until 2030.

To achieve such a big ambition, the Group has decided for significant means, on average, $100 million per year over this period. And of course, with this portfolio approach I described, we will target a balanced average price under $20 per ton of CO2. And as of today, as a result of the first months of work, we have over 40 million tons of CO2 equivalent already approved for, as I described and pictured, multiyear projects. Again, with this, we will target 5 to 10 million tons CO2 equivalent sequestration capacity by

2030, a reserve of 100 million tons CO2 equivalent carbon credits to be used from 2030 onwards while maintaining at least 10 years of reserves. Thank you.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Thank you, Adrian, and thank you, Arnaud. I think, Adrian, maybe you can stay there in case there are any questions. We were a little far from our traditional domain, which is good with Adrian, is that at least we learn each time he's speaking. It's an executive committee so we continue to learn. I hope you learned, but I think it's important because, of course, it's part of the climate roadmap we have, if we want to get to carbon neutrality.

So we think we will open a second round of questions for the panel, I think, as was planned so that we can close at 5:30. I think it's quite already 3 hours and 30 minus quite a good time of listening and answering. So please, if you have any questions, of course, on this second part or the first part for those that we interrupted at 4:30.

Operator

We have first question coming from the line of Anish Kapadia from Palissy Advisors.

Anish Kapadia ***Palissy Advisors Limited - Director & Head of Energy***

When looking at the U.S. Gulf of Mexico, I had a couple of questions around that. With the federal permitting and potentially coming in, could you talk about how that could potentially affect your Gulf of Mexico operations and further developments?

And then if you could also say something about the potential FIDs in the Gulf of Mexico, I think you have a few projects that are close to FID. Your thoughts on the Ballymore discovery, given the disappointment that Shell has had with Appomattox?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Okay. Gulf of Mexico, we have 2 portfolios and either we are linked to Chevron as an operator, and I trust Chevron as being very well positioned to be an operator in the Gulf of Mexico. We had Ballymore, we had others. The one last year, we sanctioned...

Jean-Pierre Sbraire ***TOTAL SE - CFO***

Anchor.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Anchor. And we are also with them on other assets.

Jean-Pierre Sbraire ***TOTAL SE - CFO***

Tahiti, Jack.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Tahiti and Jack. So , we have a good partnership. But it is true that we have, on our side, one project, which is for the North Platte as an operated project together with Equinor. It's part of the projects on which we we were a little suspended, to be honest, in 2020, North Platte, because we had some arbitration to be done in the CapEx and it's a project which we have to work on in order to lower the cost.

The difficulty in the Gulf of Mexico is the size of the reserves, the size of discoveries, contrary to Brazil or to maybe Suriname. We have pools of oils, which are not so big, and so we need to work hard in order to reach our targets in terms of technical cost breakeven. The beauty of the U.S. is normally that the fiscal terms is lowering them. So attractive fiscal terms are lowering the breakeven and there is, of course, an upside as soon as the price of oil is going up.

So, we need to review. I don't have all the details of the permitting, but I don't think it has a direct impact on our development because we are well in control, I think, as the license on which we want to develop our projects, North Platte in particular or Ballymore are well controlled. So, it's more, for me, a question about how the Gulf of Mexico fits in our exploration strategy and our global low-cost oil strategy. And we are reviewing that independently, I would say, of the decisions of the federal government.

So, beyond Ballymore and beyond North Platte in which we will restart the work, I'm not so convinced, but we will have an aggressive exploration strategy of the Gulf of Mexico. But again, it's not linked to the recent decision of the federal administration. I said during my presentation that we want to refocus our exploration on these large, low-cost developments. And obviously, when we have made a large review of what we've done in the last 20 years, I cannot say that it did deliver really these very large developments, which are offering low cost. So, it's more for me a potential mismatch between the type of targets in the Gulf of Mexico and our global oil strategy for the future. Having said that, these 2 projects, we are working on them. And if they can reach our threshold, we'll approve them. So, I don't see any impact again on new federal policy on these 2 projects.

Operator

The next questions come from the line of Alessandro Pozzi from Mediobanca.

Alessandro Pozzi ***Mediobanca - Banca di credito finanziario S.p.A., Research Division - Research Analyst***

The first one is on macro. You have a nice slide showing how tight the oil market could be within the next 5 years. But when we look at the LNG, I'm not sure if the market is so tight. So, I was wondering if you can spend a few words on how you see supply and demand evolving over the next few years. Of course, we're coming from a big spike in the gas prices, but maybe some of those factors behind that are maybe normalizing this year. So, anything you can say about short period term outlook for LNG?

And my second one is on offshore wind. In the U.K., it looks like you left some of your competitors who are upset because they haven't won any acreage in the U.K. also because of the option fee. That keeps me wondering whether maybe the renewable economics in OECD countries are getting a very competitive and compressed maybe below your 10% equity threshold.

And the final one on Mozambique. I was wondering whether you have a timeline on when onshore work can restart there.

Patrick Pouyanné *TOTAL SE - Chairman, CEO & President*

No. Situation is not the same between LNG and oil. It's clear. We know, but what has been good with the year 2020 is that there was a pause on many of the potential FIDs around the world, in the U.S., but also the other project in Mozambique. So, we could have feared last year, but we have too many projects rushing to FID in 2020. 2020 has put a pause, and I think it has also put back to reality a number of projects.

In this LNG market, particularly in the U.S. projects, we have developed by transferring a lot of risk on the off takers. And I think with the crash, not only it's identical to the oil price, but a crash on the JKM. I mean the low market we've seen, the spot markets. I think people realized that taking off-take risks without being integrated in the project, quite unbalanced. So my view is that what happened this year between again the spot market crash in the Asia plus less investments in our industry-leading to less FIDs is probably good because we will probably have a more normalized LNG market in terms of new projects coming on stream or being sanctioned.

So that's why probably there was an overheating market. It's putting some cool, and that's better for all of us. Having said that, again, the good news is that you still have a strong demand growth. I mean for LNG, strong demand for LNG. The fact that this year, you are still at plus 3% despite the global economic crash is quite impressive because it's led fundamentally by the shift in Korea, in China, in India from coal to gas. So, there is a good demand. And I would say, some cold water being put on all the people rushing for more projects. So globally speaking, my vision is that by 2025, where we could have feared to have another supply, I think we have a more balanced vision of the 2025 horizon, but it could have been what it was 1 year ago.

Offshore wind, I mean, again, I think the option fee is part of the equation, then it will be a matter of I will be the CFD because it's only part of the equation, the option fee to get the seabed. But what I'm sure is that we don't have the seabed rights, there is no project. But what we observe is that, as I said before, this market is a clear signal that you have today players with a larger balance sheet able to manage these risks. But again, I can tell you that with the option fee we paid, which is, I think, GBP 83,000 per megawatt per year, which is almost half of what some other competitors paid. We are within the range of what is acceptable to us. And we keep the capacity to get our returns that we are targeting.

Now, time is of essence. Time is of essence, which means that the quicker we'll be able to go to the sanction of the project. I think 2025, one of our peer mentioned that figure. But to date, it's a good target. It's an ambitious one, but it's a good one. The quicker we go to the target of FID and then the quicker we get the production, the better the returns will be. But again, one of the big elements today is still missing, this was the specificity of this U.K. auction is that they separate in the U.K., the seabed rights on one right and then the CFD auction. And so, it's when we'll have the CFD that we'll really know what is the profitability. But we have been, I can tell you, very reasonable on our sides of our CFD expectations in the way we bid.

Mozambique, timeline onshore work. I mean to be clear, we all agree when we met with the government, that the sooner is better, but we want to remobilize. So, if on the ground, again, the armed forces and the police are able to recontrol the area that we agree together, I think end of Q1, should be able to restart the work. That's the objective that we said to ourselves jointly with the government. What is very important to us is that we want to be sure that when we remobilize people, we can really engage in a sustainable work there. And we don't want to reengage and then to stop again. That would be very detrimental for the trust of all the partners in this project. So, let's first work and so. And again, this is going beyond the situation in that region. It's not only a matter of the area around the project. It's a more global security issue for the Mozambique government, and so we'll see when we can recontrol the situation.

Operator

The next questions come from the line of Peter Low from Redburn.

Peter James Low ***Redburn (Europe) Limited, Research Division - Research Analyst***

I just had a question on the ambition to green of power used in your European operations. Have you structured that as a corporate PPA with your Spanish solar business? And can you give any color on how that contract works?

Then perhaps as a follow-on, are you seeing demand for similar PPAs from third-party companies who want to reduce their own emissions? And is that, that earlier TOTAL will seek to grow it going forward, kind of moving away from kind of government stock PPAs towards kind of more commercial ones as completely to decarbonize?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

So yes, it's organized clearly as a clear contract. The way we work within TOTAL, even if there are three subsidiaries involved. You have Total Solar Spain, which signs a PPA with Total Trading Power, I would say, which is based on a 15-year PPA with a price, which is within the market, with a negotiation, which will allow, on one side, Total Solar Spain to develop the projects, having secured a PPA, which is part of the renewable business.

And then you have another contract between Total Trading Power and Total Refining&Chemical division, which is, again, selling some power. Of course, they don't have exactly the same pricing because in between somebody is supposed to make some money. And the beauty is that when we compare today, in fact, Total Refining and Chemicals is buying sun power from, I would say, on the market with some more or less medium and long-term contracts. Why the trading is interfacing? Because, obviously, once the solar plants are in Spain and the other plants are not in Spain, so you need to manage all that. We structure it in a way, that this model could be offered tomorrow to other corporations. In fact, we really wanted to structure it within the market, so with market rules. So that what we have done within TOTAL, and it's done in the Europe, it will be done tomorrow in the U.S. in the same way in Texas, where we have done the acquisition. So it could be done exactly with the same way for corporations.

The entity, which takes more risk there in the middle, is Total Trading Power. But the beauty, of course, is that it's one element within a large portfolio. This is why in all these businesses, we need to have trading businesses, trading entities because at the end, they aggregate some sources coming from Spain and some sources coming from other places and some more customers. So they can make their own optimization of the business, and this is what we can offer to other corporations. We can offer not only our capacity of producing renewable power somewhere, but also the capacity to aggregate, to deliver to them. And so, we have engaged with some corporations, which are looking for that.

But again, my vision is that, like we've seen in the U.S., the U.S. today is a merchant market, except for corporate PPAs. I suspect that in Europe, there will be a point where states will no more come with PPAs, but with let's say, corporate PPAs coming. It depends, of course, of the technologies. It's not true for offshore wind, even if probably the Netherlands have begun to make some PPAs. Some corporate PPAs are not willing to subsidize any more offshore wind, even if they might subsidize them through hydrogen development. It's a project that we are looking, linking in the Netherlands, an offshore wind farm to a hydrogen development that might be also a way.

So, I think there is an evolution. With renewable business at the infant stage, we need some subsidies from states. Then you see a market growing with corporations. And one day in 15 years, all that will be a merchant market. LNG is a perfect parallel. At the beginning, we developed the LNG industry with long-term contracts with agent customers, 15 years long-term contracts. And then it moved to more spot development market. And all that is linked, of course, to the evolution of the technology, lowering the cost of the technology and the capacity to be profitable in a merchant market.

Operator
The next question comes from the line of Christopher Kuplent from Bank of America.

Christopher Kuplent ***BofA Securities, Research Division - Head of European Energy Equity Research***
I'll keep it to just one question, Patrick. I mean, look, 2020 has been a very challenging year. When you look back, you obviously highlighted to us, you've come out with one of the few dividends intact. And yet, your dividend yield is 7.5%. The oil price is knocking on $60. So what is your answer? What else do you have to do to show to the equity market that your cost of equity is not 7.5%? I wonder what possible explanations you would have. Is it perhaps linked to the fact that a lot of your growth, whether it's Adani, whether it's SunPower is sort of a little hidden in listed subsidiaries? Or do you have other more important explanations?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
My only explanations I have is that the yield of the TOTAL is lower than some of our peers. And that it takes time, okay? I was clear in my introduction. You have the fact that the equity market is no more in love with oil and gas companies and the fact that they are able to deliver some cash flows.

You have a question about their future, I mean, sustainability of the model. I think TOTAL is working hard to show that there is a sustainable model. And again, if we are willing to establish this strategy, it is to

show and demonstrate to the market. We install TotalEnergies in the long term. So, I don't think it's a question of either in equity affiliates, all that is technicality. It's not the case. It's more fundamental. And I think that the fact that today, we need to convince the market that you can be somewhere black and green. But again, I'm proud to be black and green. Because, if I don't have the black part, which is delivering cash flows, I cannot grow the green part. So, it's part of what we do.

So, it could take time. Fundamentally, where I'm convinced as well is that keeping the dividend intact is at the core of the investment thesis. And of course, from this perspective, today, the challenge is there. It's a question of sustainability of the model. But not in terms of cash flow, it's more about climate, CO_2 impact, et cetera.

Operator
The next question comes from the line of Dan Boyd from Mizuho Securities.

Daniel Jon Boyd ***Mizuho Securities USA LLC, Research Division - MD & Senior Energy Equity Research Analyst***
I have 2 questions. The first one is just when I look at your DACF guidance out to 2025 at $60 a barrel, it looks to be a bit lower, sort of 5%, 6% lower than what you presented in September. You commented on most of your major projects being on track. So I'm just wondering if there are some conservatism based in that new update or if you can kind of go through what the moving parts were, that would be helpful.

My second question is related to divestments and where that incremental capital would likely go. You correctly pointed out that the asset market hasn't been that great. You've held off on upstream divestments. But as we go forward, if commodity prices hold, presumably, you would go back to the market to sell assets. And in that scenario, where would we expect the incremental capital to go? Would that primarily accelerate the low carbon ambition?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
On the first one, I think the increase of 6 billion was more or less what we said in September, so maybe it's a question of millimeter on the slide. But having said that, I'm not sure. I think for me, it was more or less the same guidance. The team will check, and we'll come back to you, but I think the increase of 6 billion was what I had in mind. No? Jean-Pierre?

Jean-Pierre Sbraire ***TOTAL SE - CFO***
We gave the guidance by sectors between LNG, between downstream and E&P on the slides. So you have all the details. And so we see that it's more or less in line with what...

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Okay. So maybe it's a matter of the 3-4%. We did not rerun all the figures, to be honest.

The second one, as I told you, I mean, let's be clear, for the time being, proceeds for asset sales, we need to look at them. I think I answered the question. In fact, it will be either to look at some short cycle, flexible

CapEx on the upstream, which have a quick delivery payback. That's possible. The other part is accelerate renewables. Again, it's a matter of having the opportunity. But I'll be clear. What we have done recently does not mobilize a lot of CapEx. I mean the acquisition cost is quite low because what we've done in Spain, which we've done again in the U.S., these are stage payments that we pay, in fact, according to the progress of the projects. And so that's not changing a lot. That's not requiring a lot of capital expenditures. And for the rest of the projects, we cannot accelerate the portfolio because we decide, it's a matter of putting all that together.

Do we have more M&A in mind in renewables? No, honestly, I think that what we've done this year with Adani was a big chunk, 2 billion, and we don't work on things today. Today, we don't have something else in mind. I answered several times the question. Consider that the 12 billion is a good guideline. But maybe we could have 1 billion more, but it will depend. But then if we have more cash flows, we will allocate that to deleverage the company.

Operator
We have the next question coming from the line of Ryan Todd.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
How many questions do you have? Yes, but I think we'll stop at 5:45. So I take the questions quickly. And so let's go, Ryan, let's go. The 4 questions, but no more after that. Okay, Ryan.

Ryan M. Todd ***Piper Sandler & Co., Research Division - Research Analyst***
Great. Maybe a couple of quick ones. One on the PPA on the renewables business. Your disclosure shows kind of a steady decline in the PPA price from 110-megawatt hour or dollars per megawatt hour to 55 to 45 on the projects under development in 2025. Can you talk a little bit about what's driving that? Where you see the price going in the future? And what does it mean for project returns going forward? And then in that bucket of projects to 2025, where 40% of the takeaway is currently covered by PPA, do you expect that to eventually reach the 90% plus as in the other buckets?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Yes, of course, the idea is that we launch projects if we have PPA. We don't like too much to launch projects based on merchant markets, to be honest. We need to work to continue to find the PPAs, I know that there are different ways. Either some projects will be, like I said, for example, in U.K., there will be some CfD auction rounds, which will allow us to have access to some state PPAs or we'll have to develop more corporate PPAs.

So the second question is quite clear for me. And at a certain point, maybe in the future, we'll see if we accept a certain level of merchant risk. But I would say it's not the business model, and it's not what we are developing with the renewable team.

On the first one, no, it's logic. I think we inherited from the portfolio, which is already operated, in particular from Total Quadran when we acquired Direct Energie, some very old PPAs with high prices. So that's logic. And we have seen in that industry: the PPA price decrease with the cost. So I mean we are

very transparent. I think there is a limit to that at a certain point because you need to make money. It depends as well on the region where you deploy your projects. I think, part of the disclosure that you will find in the “Deep dive” will be also the geographies. You will be able to reconcile. But my view is that I'm not surprised, and I think that it will continue to decline to a certain point because at a certain point, there will be no more profitability. And it's also linked to the technology because there, I gave you some figures. I think it was a question from Christyan, he was right to say that the average for an onshore wind project, an offshore wind project and the solar projects should not be the same. We will find ways to disclose this by technologies. I think that the global trend is that the PPA prices are following, in fact, the decline of the technological cost, which is very logical.

My view is that in the solar industry, we are not far from, I would say, reaching the asymptotic part. The wind onshore as well. Where we are not at yet is when we combine solar and batteries. We still can decrease the cost of storage. And offshore wind, clearly, we are not yet, I would say, at the optimum cost of all that. There is still some improvement. Even when we speak about floating offshore, it's even more right. So no, I'm not surprised. So does it as implication for IRR? Again, we decreased PPA price if we can decrease the cost, and the IRR is a mix of, at the end, of costs and revenues. So there is a link for me between both.

Operator
We have another question coming from the line of Lucas Herrmann from Exane.

Lucas Oliver Herrmann ***Exane BNP Paribas, Research Division - Head of Oil and Gas Research***
Two if I might. The first one is, I guess, that's an English saying, which is there are 2 ways to skin a cat. And in terms of shifting your business, clearly, one way is to accelerate capital going into green, but the other is possibly to think about doing something different with black, and I don't mean just limiting the rate of investment but perhaps spinning out. Could you see a point where -- or would it make sense at any point for refining and chemicals to be a separate business? Or is the tie between electrons, et cetera, and some of the options within refining and chemicals too tight?

And second question, if I might. Just on the Natural Carbon Solutions business, I'm getting slightly confused as to whether this is just an offset business for you or whether actually it's a business that you think you can also drive value from through selling offsets to industry. Again, maybe associated with electrons, maybe associated with what they're doing. So is it a profit center in its own right? Or is it just an offset center?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Second question is very clear. It's strictly for us. We consider that as clearly linked to our capacity to go to carbon neutrality, and so we develop all this business fundamentally to be able to offset our emissions because we'll need them as we want to be carbon neutral. We know that we need to own this carbon credit. So the second question is very clear, and that's where we are.

The first one, no. The business model we want to develop is clearly a multi-energy company with the

integration along the value chain for each of the businesses. So we are developing oil integrated, upstream, downstream, adapting, of course, the footprint of our business to the demand. So if there is less demand, we need to adapt our own capacities. And it's the same for the gas, the same for electricity.

So you speak about chemicals, but what we have within TOTAL is not a lot of chemicals. In fact, we have petrochemicals, which means that we have a cracker, which is like a refinery, and we make just polymers, polyethylene or polypropylene, which is just the cracker plus one. And the few businesses that we have, which are downstream, because we span off a lot or we sold a lot in the last years. Remember, we sold Bostik to Arkema, we divested Atotech. So what we were calling specialty chemicals have been divested. Look, this year, petrochemicals are more resilient than the others. So it's a question for me of integration of the oil value chain, and we keep that in the model and don't need to divest R&C to make more in the renewables. No, it's not true. I mean...

Lucas Oliver Herrmann ***Exane BNP Paribas, Research Division - Head of Oil and Gas Research***
That's not really the question, Patrick. The question is much more about the way the market thinks about capital employed and the value that it's willing to put on your equity. And the faster you shift towards low emission, the more rapidly you're likely to see an appreciation in your price. And that's the rationale behind the question rather than the questions, which have simply been spin-out renewables, attract a multiple that way.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
Okay. Understood. The question is for Bernard. Arnaud was the speaking voice for E&P and R&C, as you've seen. So Bernard has to work hard to lower its emission quickly. That’s the point. At this stage, I see that globally as a group. Yes, it's true that refining and chemicals are part of the Scope 1 and 2 emissions. But today, when you look to our global emissions, it's only part of the issue. We are not there. We are not there.

Operator
We have the next question coming from the line of Jason Gabelman from Cowen.

Jason Daniel Gabelman ***Cowen and Company, LLC, Research Division - Director & Analyst***
I ask 2 quickly. First, on the downstream growth, which I think is stable with what it was previously guided to at $2 billion cash flow growth from 2019 to 2025. But it seems like now there's some component in there for higher margins. So I'm just wondering if you could split out that downstream growth from 2020 to '25 between refining margin improvement, marketing growth and chemicals growth.

And then my second question, just on -- back to the farm downs of the power business. I mean you mentioned the market is currently valuing these assets pretty attractively. Is there a situation where you could accelerate the farm downs and maybe bring some of that cash forward, given you've already hit your gross portfolio target in terms of what's in the backlog?

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Okay. First one, there is no margin growth with 2 billion. It was explained before, it's 1 billion coming fundamentally from the various chemical projects, which we have the cracker in the U.S., I am speaking under the control of Alexis and Bernard. And Bernard, you can elaborate on the component of the 1 billion. And Alexis, same, he has some growth in some retail markets can elaborate on the 1 billion. It was 1 billion from the refining, 1 billion for marketing, and maybe you could explain. So it's not linked to an assumption. It's 2 billion as an absolute. Bernard, Alexis?

Bernard Pinatel ***TOTAL SE - President of Refining & Chemicals***

Yes, there are 2 components. On the petrochemical side, of course, all the big projects that you mentioned, Patrick, starting now in the U.S. Gulf Coast with a new cracker next year with the PE line, our joint venture with Borealis, Borstar. And we have also, let's say, by 2025, the start-up of our larger petrochemical projects in Middle East. And the second dimension is on the renewable diesel. As we will grow our production, we will generate more cash flows. We released last year that 1 ton of renewable diesel generate $350. So you multiply that by the million tons we will do and you come up to the $1 billion additional cash flow.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

So petrochemicals and renewable fuels. And Alexis, is your $1 billion extra that you will bring to the group.

Alexis Vovk ***TOTAL SE - President of Marketing & Services***

Not $1 billion, but our 5-years plan was to add $100 million per year of cash flow. It comes from the existing business, which are a stronghold, which is Europe and Africa, where we can manage our growth of the cash flows, especially from nonfuel revenues in Europe and developing our strong market share in Africa. And we have launched some new developments in new markets, Brazil, Saudi Arabia, Mexico, and we will also get some growth from there.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

Okay. So it's $500 million from growth, and it's $300 million coming from the recovery of the COVID that we lost this year as we rebase it, considering that the demand will come back. So that's $800 million. So you have the fee.

In accelerating farm down, unfortunately, we don't receive the same amount of money if you farm down with uncertainty. It's a matter of maturity of the project because financial institutions love projects with no risk. If you have more risk because you farm-down your interest earlier in the development process, they will give you less. In the same way, we acquired this pipeline with a low cost of entry, and I want to keep this low cost of entry for TOTAL because we have the balance sheet to support the development. Rather than divesting that to people, I prefer to de-risk.

So for me, the only point that we could ask ourselves is once we have all the elements in our hand, including the PPAs, is there a possibility at a development stage to farm down quicker than waiting the COD? But clearly, our strategy is to get access to pipeline with a low cost of entry to mature the pipeline and then we are ready to bear the risk. And if we farm down, we want the people to pay with no risk. So

if they accept the project execution risk, maybe we will look at it. But generally, our experience is that you obtain the better valuation if you wait for having put your assets into production. It's an infrastructure at the end. So if you want to risk your infrastructure fund, it's better not to ask them to bear a part of the risk of construction of the infrastructure. That's simply the logic.

The last question. Who has the honor of the last question? The best one.

Operator
We have the last question coming from the line of Paul Cheng from Scotiabank.

Paul Cheng ***Scotiabank Global Banking and Markets, Research Division - Analyst***
Two quick one. First, in your production guidance for this year, that's flat to 2020, that seems a bit low given last year that we have the government curtailment. So what's the underlying assumption in the government curtailment in this year? Is it similar to last year? Or that you actually have a higher number?

The second one is on the gas and -- the gas and low carbon business in the fourth quarter, at least comparing to what we see seem side earning is low. Just curious is that any one-off item that have negatively impact such as in trading or in derivative that we should be aware.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***
First question, no, it's clear. I mean you have a natural decline of portfolio, let's say, 3%. So 3% of 3 million barrels or 2.9, so let's say, 90,000 barrels per day. We think that Libya will offer something like 30-40-50,000 barrel per day. Then, we make an assumption at which rate, quotas could be relaxed and it's difficult to guess. So again, I'm not sure we are very prudent. Honestly, I think we are reasonable.

Curtailments were mainly in Canada, and I think we don't have any more assumptions curtailment in this figure. So the question mark again is that which rate quotas might be relaxed and it's difficult to anticipate.

So the reality is that it's not new. We don't have start-ups in 2021. We have experienced a lot of start-ups in previous years, but we don't have new projects coming on stream in 2021, except, I may say, the Libya coming back onstream is a sort of re-start-up for us as we didn't experience much production in 2020.

The contribution of GRP, I will give that as a final question to our CFO. No, I will give it to Philippe. As Philippe is the last answer for this type of exercise. So Philippe, it's a good question for you. It's a tricky one, but you will explain this as it will be your last answer to this group of people.

Philippe Sauquet ***TOTAL SE - President of Gas, Renewables & Power***
Yes, I must confess that, yes, performance of trading gas and power in Q4 was disappointing as it was the case for most of our competitors. I could add that we kept some option for the month of January, which was much more interesting than a boring month of December.

Patrick Pouyanné ***TOTAL SE - Chairman, CEO & President***

I think, in fact, our traders did not anticipate the boom of the gas price. We should hire a weatherman, I think, in the team. I think they didn't see all this “boom” coming up, but they've seen it in January. I think in fact, Philippe is very nice to Stéphane, who should become President of Gas, Renewables and Power, giving him all the good results for the first quarter 2021. So that's, I think, the answer.

So on this note, I would like to tell you to all of you, thank you. Thank you for your attendance to this Results and Outlook session. I think you had the opportunity to dig into all what we are building within TOTAL, in particular, in the new businesses, but also the important ones in E&P, Refining and Chemicals, Marketing & Services. And again, I wish you the best for this year, including, of course, a good health, and hope to see you soon physically. Next session for us will be end of September. In the meantime, all of you will be vaccinated probably, and we might meet again.

So thank you for your attendance and see you soon. Bye.