Jennifer K. Driscoll

Good morning. Thank you everyone for joining us today for ExxonMobil's 2022 Investor Day. I’m Jennifer Driscoll, and I recently joined ExxonMobil as the new head of investor relations.
Today, we'll make forward-looking statements, which are subject to risks and uncertainties. For more information on how actual results could vary from any forward-looking statements, please refer to our Form 10-K, filed in February; our most recent 10-Qs and the reminder shown here on the slide.

We'll also reference non-GAAP information today as well. For a reconciliation of any non-GAAP information to the most relevant U.S. GAAP numbers, please refer to the appendix in our presentation, which was posted online earlier today and in our frequently used terms on our website. The presentations you'll see today have been slightly modified for video presentation purposes.

The complete set of slides will be available at exxonmobil.com.
Here’s a quick overview of today’s Investor Day agenda. We’ll begin with a presentation by Darren Woods, Chairman and CEO, on how we’re strengthening our industry leadership now and through the energy transition. Then we’ll hear from Neil Chapman, senior vice president, on Low Carbon Solutions and our Upstream business.

After Darren and Neil take some of your questions, Jack Williams, senior vice president, will share the strategic priorities for our newly combined Product Solutions business. Then Kathy Mikells, senior vice president and Chief Financial Officer, will give our financial plan for 2022 and beyond...followed by a second Q&A panel.

After we wrap that up, we’ll bring Neil back and he will be joined by Joe Blommaert, President of Low Carbon Solutions for a Spotlight on our Low Carbon Solutions business.
Before we begin, here’s a snapshot of ExxonMobil, and the position we hold in the industry.

We have a leadership position in upstream production as well as downstream and chemical production versus other international oil companies or IOCs. We by far are a leader in carbon capture capacity versus our IOC peers.

Altogether, you can see this is a fairly diverse business that provides both the energy and products the world needs to support modern life. From a financial perspective, we reported 2021 earnings, excluding identified items, of $23 billion. Our cash flow from operating activities totaled $48 billion. You can see that our Upstream business is the largest of our reporting segments, accompanied by significant Chemical and Downstream businesses as well.

With that quick overview complete, let me turn the program over to Darren Woods, Chairman and CEO.
Darren W. Woods

Good morning. Thank you for joining us today.

Before we get started, I’d like to welcome Jennifer as our new head of Investor Relations. We’re very excited to have her on the team and look forward to benefiting from the breadth of skills and experience she brings.

Last year at this time, we outlined our plans through 2025 which built on the plans we established in 2018. Plans that focused on increasing earnings and cash flow, sustaining and growing our dividend, strengthening our balance sheet funding advantaged projects, and working to commercialize lower-emissions technologies.

Today, I’m pleased to report our significant progress in achieving these plans.

I’ll begin with how we’re leveraging our competitive advantages and evolving the organization to strengthen our industry leadership. I’ll share our 2021 results, as well as the ways we’re upgrading our portfolio, and lowering our costs, and delivering solutions.

I’ll also address how this important work enables us to deliver sustained competitive returns and long-term shareholder value through any future scenario, including a rapid transition to lower-emissions energy.
So, let me start by focusing on the fundamental role we play and our key priorities in fulfilling this role. As shown at the top of this slide, we’re committed to improving quality of life by meeting the critical needs of society. That’s what we’ve done throughout our history – as the world evolves, so do we, constantly working to meet the changing needs of our customers and stakeholders.

This ability to adapt has been the key to creating long-term shareholder value and will be critical to continued success in the years to come.

As we move forward, we’ll remain focused on five strategic priorities, critical to fulfilling our purpose and growing shareholder value.

First, leading industry across the metrics that are the foundation of success: safety, reliability, environmental performance, earnings, and cash flow growth and ultimately shareholder returns.

Being a valued partner, a partner viewed as essential, through the creation of win-win solutions for our customers, partners and broader stakeholders.

Building on our advantaged portfolio, continuously upgrading it to ensure it leads competition and delivers value across a range of external environments and through volatile and evolving markets.

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<thead>
<tr>
<th>STRATEGIC PRIORITIES</th>
<th>Description</th>
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<tbody>
<tr>
<td>Leading performance</td>
<td>Industry leader in operating and financial performance</td>
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<tr>
<td>Essential partner</td>
<td>Value through win-win solutions for our customers, partners, and broader stakeholders</td>
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<tr>
<td>Advantaged portfolio</td>
<td>Portfolio of assets and products outperform competition and grow value in a lower-emissions future</td>
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<tr>
<td>Innovative solutions</td>
<td>New products, technologies and approaches to accelerate large-scale deployment of solutions essential to modern life and lower emissions</td>
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<tr>
<td>Meaningful development</td>
<td>Diverse and engaged organization with unrivaled opportunities for personal and professional growth</td>
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To do this, we must continue to innovate, providing solutions that meet the growing needs of society reliably and affordably. This means new products, technologies and approaches that better meet today’s and tomorrow’s needs. And that can be deployed at scale to create meaningful impact.

This requires that we fully leverage all of our competitive advantages, the most important of which, of course, is our people.

Continually developing our people and maintaining a strong culture is a core strategic priority and absolutely essential to achieving our long-term objectives.

We remain focused on building a diverse workforce and a productive work environment where individual and cultural differences are respected where every individual is challenged to deliver their best and has the opportunity for unrivalled personal and professional development.

To deliver on these priorities, and fully leverage our competitive advantages we had to evolve our business model and change the way we work and how we’re organized.
This is an effort we’ve had underway for several years now. After Exxon and Mobil merged, we organized the business through functional companies. In 2016, we had nine companies and two research organizations, as you can see on the left. This model worked well following the merger, as we harmonized the processes of two companies and consolidated a large portfolio of assets.

This construct allowed us to develop deep functional expertise and strong operations. With these benefits firmly embedded, we are evolving our operating model to better leverage the full scale of the corporation reduce internal interfaces to fully capture the synergies that exist across our businesses, reduce overhead and eliminate redundant capabilities.

In 2018, we began the work to capture these improvements first by re-organizing the downstream businesses into value chains. The following year, we aligned the upstream along resource types and consolidated our project organizations into a single entity – Global Projects. And, last year, we established our Low Carbon Solutions business – to take our Low Emissions Fuels and Carbon Capture and Storage ventures to market.

These changes resulted in a better line of sight to markets and customers and end-to-end ownership of results. They also reduced complexity and internal interfaces, allowing faster decision making and significant efficiencies.
In addition, they were critical in helping us quickly and effectively respond to the severe market downturn caused by the pandemic and in delivering our 2021 results.

Earlier this year, we announced the next phase of our evolution the combination of the downstream and chemical businesses and the centralization of our technology, engineering and above-site operations into corporate-wide organizations.

These changes will further improve our effectiveness and increase our efficiency contributing to 9 billion dollars in annual savings by 2023, compared to 2019.
As we make these changes, the role of the corporation is evolving. We’re transitioning from a holding company to an operating company working closely with our three core businesses: Upstream, Product Solutions, and Low Carbon Solutions. This is a key driver to moving our corporate headquarters to Houston.

The Upstream, which Neil will speak to in more detail, is going from seven companies to one organized by resource. This organization is focused on strengthening competitiveness, managing and maintaining an industry-leading portfolio of investments, and significantly lowering its emissions.

The Product Solutions business is consolidating three companies into one, the world’s largest integrated Chemical, Fuels and Lubricants Company. This business, as Jack will explain later, is focused on growing high-value products, improving competitiveness and leading in sustainability.

And finally, our Low Carbon Solutions business which leverages our unique combination of capabilities to reduce emissions in our existing operations and establishes new businesses in carbon capture and storage, hydrogen and biofuels to help our customers reduce their emissions. We’re focusing on technologies that align with our strengths and are critical to achieving significant emission reductions for society.

We have decades of experience with these technologies and the skills and capabilities to successfully commercialize them, at scale, around the world. Leveraging our global relationships and competitive
advantages built over decades this business will provide valuable solutions and generate double-digit returns.

As I hope you can see, eliminating the functional companies greatly simplifies the business and reduces a number of internal interfaces. When combined with the consolidation of “like” activities critical to each business, we can now more fully leverage the scale of the corporation.

The horizontal bars along the bottom of the graphic depict these consolidated activities. This approach allows us to more effectively exploit the synergies that exist between our businesses. It allows us to eliminate redundancy but more importantly, it enables us to strengthen these critical capabilities through skill development and harmonization of practices and processes. It also ensures that we can allocate critical resources to the corporation’s highest-value priorities.

These are exciting times preserving the functional excellence we’ve built over decades while, for the first time in our history, opening up the opportunity to fully capture the value of our scale and integration.

Some of the benefits from this are reflected in our current plans. By 2023, we expect 9 billion dollars of annual cost savings, versus 2019. In the years ahead, as we bed in these changes, I have no doubt that we will discover and develop further opportunities.

This is not just wishful thinking, we’re already seeing the benefits in our current results.
Our focus on improving the organization while pursuing key investments during the down cycle, positioned us to realize the full benefit of the market recovery last year delivering 23 billion dollars in earnings and 48 billion dollars in cash flow from operating activities.

Key to these results is our work to lower costs with 2 billion dollars of structural cost reductions in 2021 on top of the 3 billion dollars of reductions delivered the year before. With the on-going changes, we expect a further 4 billion dollars of annual reductions by 2023.

These structural improvements including the high grading of our asset portfolio are making a significant contribution to lowering our breakeven cost. In 2021, it was 41 dollars per barrel of Brent.

The improvement in our business can also be seen in our cash flows the chart on the left shows the change in cash flow from operations in 2021 versus 2020.

The year-over-year increase of more than 220% reflects stronger markets, higher revenues and lower costs in all three segments. We led by a wide margin compared to our integrated peers, which experienced similar market conditions.

If we discount 2020, given the severe economic environment, and compare 2021 with 2019, we still see a substantial lead versus competition. Stepping back one more year, to 2018, when the price and
margin environment was very similar to 2021, our increase of roughly 30% continues to significantly outpace competition and clearly demonstrates the improvements we've made in the business.

Our strategy, and a balanced pandemic response that leaned heavily on the balance sheet, is paying off. In 2021 we paid back nearly all of the debt we took on in 2020 which has taken our debt-to-capital ratio to the lower end of our 20 to 25 percent range and net debt back to pre-pandemic levels.

We also increased our dividend for the 39th consecutive year, and resumed our share-repurchase program in January.

In summary, the organization's hard work is paying off.
In 2021, we delivered across a wide range of metrics.

None of which is more important than the safety of our people. I am especially proud that the organization sustained our best-ever workforce safety and reliability performance despite the significant changes we are implementing. It is a testament to the organization’s focus, commitment and hard work.

That hard work was also reflected in our efforts to reduce emissions. We achieved our 2025 objectives for greenhouse gas emission reductions four years early. The progress we’re making in this area led to even more aggressive emission-reduction plans for 2030 which is an important stepping stone towards our net-zero ambition.

We established our Low Carbon Solutions business to expand, and commercialize, the work we are doing on our low-emissions fuels and carbon capture and storage ventures. We are continuing to make good progress in growing this portfolio of advantaged, lower-emission investment opportunities.

We maintained our focus on developing industry-advantaged projects that improve our competitive position and increase our earnings capacity. For the projects underway, we met critical milestones while improving on the value proposition.
In Guyana, we progressed Liza Phase 2 which started up in February and are moving forward with the next two projects, Payara and Yellowtail ... while growing the resource base with six more discoveries.

In the Permian we grew production while continuing to drive efficiencies. We also started up our greenfield chemical facility in Corpus Christi, ahead of schedule, and under budget. This is a one-of-kind industry design with the world’s largest steam cracker and ethylene glycol plant.

Finally, as part of our efforts to improve the earnings power of our Downstream and Chemical businesses, we grew high-value product sales, including chemical performance products and lubricants.

While we are proud of our 2021 results, we feel even better about the foundation on which they are built and the initiatives underway to further improve our businesses shown on the next slide.
The transformation we’ve made in our operating model will continue to deliver significant improvements across the plan horizon. We expect to see steady progress in safety and reliability, continued reductions in emissions and growing efficiencies in our spend. As projects are commissioned, volumes will grow and the earnings power of our asset base will improve with higher-margin products. In addition, as we progress divestments of less strategic assets, we expect our product mix and portfolio margins to improve.

And, as we discussed last month and Kathy will cover later our ability to advance these initiatives is resilient to a very low price environment with our Brent breakeven price dropping fairly ratably from 41 dollars per barrel last year to roughly 30 dollars in 2027.

Having said this, we retain significant flexibility to adjust spending either by changing the allocation mix or reducing the total options we’ll evaluate as the markets evolve over this time horizon.

With our drive to fully leverage the corporation’s core capabilities and focus on five key strategic priorities we have a clear path to more than double the earnings potential of the corporation by 2027. Importantly, the initiatives we are driving to achieve this, position the company to lead in the energy transition.
Our work to strengthen our competitiveness, grow higher-value products and supply markets at the industry's lowest costs, improves earnings in the short-term and strengthens our future competitive position irrespective of the demand scenario.

Strengthening the integration of our operations, supply chains and market channels aligns with the integrated approach needed to effectively manage life-cycle carbon emissions.

And concentrating technology development in a centralized organization leveraging the experiences and expertise of our top engineers and scientists ensures that our best thinking is applied to our hardest problems including advances needed to lower the cost of reducing emissions. This is consistent with the advantages we’ve seen by centralizing our Projects organization.

These efforts, coupled with our competitive advantages, provide a strong foundation for growing our biofuels portfolio, deploying carbon capture and storage, and developing hydrogen solutions at the lowest industry cost. This underpins our Low Carbon Solutions business and the 15 billion dollars of announced investments which we expect to grow with advances in technology and policy.
To make the point more explicitly, we’ve mapped examples of our competitive advantages to the portfolio of opportunities in our Low Carbon Solutions business.

I’ll touch on a few, starting with one of the most important, scale. The opportunity for accretive, low-emissions investments will vary around the world driven by market developments and supportive policies. The technology and investments required will also vary, depending again on policy and, importantly, the resource endowment of each geography.

Having a global presence with established relationships will allow us to capitalize on opportunities as they develop irrespective of location. Our global experience working with governments and partners to develop complex, world-scale projects will also be an advantage in advancing meaningful emissions reductions.

As I previously mentioned, participating along the entire hydrocarbon value chain lends itself to more effectively managing life-cycle emissions. The deep expertise we’ve developed in technologies to manage and convert hydrocarbon molecules, at scale, will be critical to advancing the technology improvements needed to make emissions reductions affordable.

I could go on, but I think the point is clear. With uncertainty in where, how and when the transition happens, having a strong foundation of relevant capabilities and a global footprint gives us an advantage.
It also helps in balancing today’s demand for reliable and affordable energy with the need for lower-emission solutions.

We’ve illustrated this using an average of scenarios from the Intergovernmental Panel on Climate Change.

As shown in the chart, longer term, the IPCC expects demand for oil and natural gas to decline, as deployment of lower-emissions alternatives increases. Deployment of lower-emissions technologies is expected to accelerate with time, as improvements are made and costs come down. Chemical demand is expected to grow at a rate driven by GDP and global population growth.

As the demand for oil and gas declines, demand for hydrogen, biofuels and carbon capture and storage increases, offsetting the decline in hydrocarbons. In total, the market for our portfolio of businesses grows.

This is a big opportunity for our company. Leveraging a core set of capabilities and existing advantages, we can develop each of our businesses in line with the evolving markets. If the transition happens faster than projected, we can allocate additional resources to our low carbon solutions business. If it happens more slowly, we can retain resources in our oil and gas businesses.
Our approach provides optionality, which in an uncertain world, maximizes value. Bottom line ... we are positioned to grow value across a broad range of future scenarios ... even in an extremely aggressive transition. This is demonstrated on the next chart.
To assess our strategy, we’ve modeled our businesses using the International Energy Agency’s Net Zero by 2050 scenario, one of the most aggressive net-zero scenarios developed.

The pace of de-carbonization assumed in the scenario results in much higher carbon prices and rapid deployment, at scale, of hydrogen, biofuels and carbon capture. This results in new, fast growing markets with accretive investment opportunities.

In responding to this, we would accelerate the shift of resources out of our hydrocarbon fuels businesses and into our low carbon solutions business. You can see this in the bars on the left, with trailing five-year capex averages. Over the time horizon shown, capex shifts from developing oil and gas to investments in biofuels, hydrogen and carbon capture. As demand for chemicals continues to grow with GDP, investments in our chemical business are maintained consistent with our market position.

As a result, our earnings and operating cash flow would shift over time. Ultimately, in this scenario, a majority of our cash flow would come from our low carbon solutions business. This is shown by the donuts in the middle of the page, with trailing five-year averages for operating cash flow.

While the IEA acknowledges that we are far from realizing this scenario, evaluating the implications of it does demonstrate the strength of our strategy, the relevance of our existing capabilities in a lower-emission future, and the value of optionality. Even in an aggressive de-carbonization scenario, we could grow earnings, cash flow, and shareholder value.
As I said earlier, it’s an exciting time, with significant opportunities to grow value across a wide range of future scenarios. Before turning it over to Neil, I want to conclude with a few key takeaways.
I am proud to represent the people of ExxonMobil.

They have overcome major challenges, are managing unprecedented change and delivering outstanding results.

We've made significant progress and developed solid plans to deliver further improvements. As we move forward, we remain focused:

On delivering industry-leading operating and financial performance.

Strengthening our competitive advantages.

Upgrading our portfolio.

Sustainably growing shareholder value across a broad range of scenarios and time horizons ...

And, importantly, leading the industry now, and through the energy transition.

With that ... I want to thank you again for joining us today. I look forward to our discussions this morning.

Let me now turn it over to Neil, who will discuss the Low Carbon Solutions and Upstream businesses.
Neil A. Chapman

Thanks Darren. It’s great to be with you today.

I’m going to provide an overview of two of our three businesses – Low Carbon Solutions and the Upstream.

I’m going to start with a high-level look at Low Carbon Solutions, and a bit later today, the LCS president, Joe Blommaert, will join us to share a more in-depth look at this high-potential business.
As Darren discussed, a broad suite of solutions will be required to meet future energy needs, as society works to transition to net-zero emissions.

When assessing how we could make the greatest contribution to this energy transition, we started with solutions that best fit with our core capabilities.

In this chart, we’ve highlighted our focus areas, technologies that have a strong strategic fit for us carbon capture and storage, hydrogen, and biofuels.

Note the large potential markets for our focus areas, critical to delivering competitive returns for our shareholders.

For areas with a potential fit with our capabilities, like offshore wind, biomass and geothermal, we’re going to continue to monitor signposts to determine if we see a fit with our capabilities and how our participation might serve our shareholders.

Areas where we have no experience or differentiating capabilities, such as onshore wind and solar, are not a current focus for us because we have limited ability to provide differentiated returns in these segments. However, these technologies are important to reduce emissions in the power generation sector, and will support our net-zero ambition through renewable power purchase agreements for our operations.
As I mentioned on the previous slide, our core capabilities and our core competitive advantages form the foundation for all our business lines, including Low Carbon Solutions.

This slide provides more specific examples of how we bring a comprehensive suite of capabilities to be successful in carbon capture and storage, hydrogen, and biofuels.

These technologies will need to be developed at scale and in partnership with host governments and large industry partners. We are already the global leader in carbon capture and storage. We have decades of experience working in partnership with countries all over the world, and we have the financial capacity necessary to lead, what will be, large world-scale projects.

Leveraging and repurposing existing assets will provide a significant competitive advantage. We have one of the largest global refining and chemical footprints in the world. We plan to repurpose assets to produce biofuels, replacing crude with bio-based feedstock and using our existing fuels organization to market biofuels as an extension to our current product offering. The hydrogen businesses is not new for us. We have been a major producer and consumer of hydrogen in refining and chemicals for years.

Leveraging our proprietary technology has been key to our success in delivering higher returns in our existing businesses for decades. It will be the same in these new businesses. We have developed enhanced process and catalyst technologies to produce biofuels. We have been working on new technologies to lower the cost of carbon capture and hydrogen production for the past decade and we continue to work with leading government and academic institutions on breakthrough technologies around the world.

Lastly, our experience in critical functional skills will enable differentiated success in carbon capture and storage and blue hydrogen.
A deep knowledge of reservoir characteristics and subsurface experience will be essential to store carbon dioxide underground safely, securely and permanently. Working in the subsurface has been a core competency of this corporation for more than a century. In time, the scale of these projects is likely to be very large. Our proven capability to successfully execute major capital-intensive projects is something that we pride ourselves in, and this will be pivotal to our success.

So, let me turn to how we are prioritizing our activities.
For Low Carbon Solutions, our strategic priorities focus on helping reduce emissions for our customers and reduce emissions in our operated facilities while delivering robust financial results.

First, we will grow our biofuels business providing the high energy density that is required to meet the needs of commercial transportation while also having a significantly lower emission intensity compared to conventional fuels.

We are rapidly advancing projects that deliver strong returns under today’s policies such as low-carbon fuel standards.

And building off decades of experience in processing challenging feed streams, we’ll maximize profitability through use of low-cost feed options and advantaged yield patterns to improve margins.

Second, we are growing a new business in CCS and hydrogen by working with partners, governments and others in the industry to help them meet their emission-reduction goals in the industry and power-generation sectors. We’re prioritizing developments where today’s policy supports accretive returns. But we are also developing the early stages of larger projects where policy is expected to be introduced, such as the Houston hub, which has the potential to capture 50 million metric tons of CO₂ per year by 2030.

Third, we will reduce the emissions in our existing operations. We’re aiming for net-zero Scope 1 and 2 emissions at our operated facilities by 2050. We are finalizing discrete plans to reach that objective for all of our operated assets, prioritizing the steps based on policy and returns.
This next slide gives you some insight into how we think about advancing our robust set of global opportunities. This graphic illustrates our more material projects, depicted here as separate bars, and their stage of development. The earlier stage projects are on the left. The more advanced projects are on the right.

Some of this work has been ongoing for several years and is now accelerating under the Low Carbon Solutions business. The number of requests for help to develop emission abatement steps both from industry and governments across the globe has grown at an extraordinary pace.

We are advancing each of these opportunities based upon the strategic priorities I’ve described, including the availability of supportive policy, technology for cost-effective abatement, and alignment with our partners and stakeholders.

Enactment of low carbon fuel standards in certain regions incentivizes biofuels opportunities, shown in green. You can see they’re leading through the pipeline, with several projects now in the development phase, meaning that we have reached or are close to reaching a final investment decision. You’ll hear more about one of them in Canada later today during our Low Carbon Solutions Spotlight.

Applying this same advancement criteria to abatement opportunities at our own facilities, we have a series of projects that are shown in purple here to reduce scope 1 & 2 emissions in our existing businesses. Several of these projects are also in the development phase.

Shown in blue are the large-scale CCS and hydrogen projects which are generally in the earlier stages of development. We are actively engaging with stakeholders and continue to add opportunities to the front of this pipeline. We know these projects will be needed on a large scale to reduce industrial emissions and help meet the goals of the Paris Agreement. Given the huge potential for these businesses, we are proceeding with some early-stage investments which also support our advocacy.
programs for sound government policy and constructive regulation that will be critical for their further advancement.

So you can see the depth and breadth of our opportunity set. It gives us flexibility to advance our most advantaged projects. And we’ll continue to monitor policy and technology developments in the years to come and adjust the pace and the level of our capital allocation accordingly.
Our current plans include $15 billion of low-emissions investments over the next six years.

These investments have a better than 10 percent overall return across the portfolio, and are prioritized to ensure we’re maximizing the impact of every dollar spent.

We’ve broken out our investments in the stacked bars, so you can see where the dollars are focused and how the level grows over time.

In the near term, the majority of the spending is directed toward reducing emissions in our own facilities to support our 2030 greenhouse gas emission reduction plans, where project definition is further advanced.

We also have several biofuels opportunities that are nearing a final investment decision, and we plan to increase investment through 2027 as these projects move ahead.

For projects where additional policy is needed, such as the large-scale deployment of CCS and hydrogen, we are making seed investments to establish first-mover advantage and enable our advocacy efforts aimed at driving supportive policy.

Investment plans in the out years remain flexible and will continue to be optimized as policy and technology evolve.

This should give you a sense of the opportunity set that exists for us and the attractive returns we can generate in this space in the near term, where supportive policy exists, and in the longer-term as technology and policy continues to evolve.

Joe will join me to share a more detailed look at this growing business during our LCS spotlight later today.
Now, let’s turn to our Upstream business.
I’m going to start by describing the strategic priorities.

First, we’re strengthening the competitiveness of our portfolio. We have a relentless focus on reducing structural costs. We have generated about $3 billion in savings versus 2019 from sustained structural efficiencies, and there’s more we plan to do.

We’re also actively managing the portfolio and monetizing non-strategic assets through divestments. This provided about $1.5 billion in proceeds last year, and we’re evaluating additional opportunities to accelerate value in the current market environment.

Through these activities and the significantly improved price realizations, our Upstream business contributed $16 billion of earnings in 2021. This was the highest since 2014, coupled with the lowest capital investment since 2005.

Our second strategic priority is to continue to grow our low-cost-of-supply, high-value development portfolio.

Starting with Guyana, where we’ve made more than 20 discoveries in the past few years, including two already this year. This unrivaled exploration success has increased the estimated recoverable resource in the Stabroek block to more than 10 billion oil-equivalent barrels.

In the Permian Basin, we’re seeing the benefits of the development plans we initiated four years ago with improved capital efficiency, lower costs, greater recoveries, and better environmental performance.

We’re also making good progress on several near-term projects including Bacalhau in Brazil, and our growing LNG portfolio with developments in Mozambique, Papua New Guinea and the U.S.
Our Upstream business is well positioned to meet the expected demand for oil and natural gas through the next decade, while also minimizing environmental impacts across our operations, which includes the third strategic priority – further reducing greenhouse gas emissions.

Consistent with the goals of the Paris Agreement, we have made outstanding progress on this front, achieving our 2025 intensity reduction goals four years early.

We’ve established more aggressive plans for 2030 that will further reduce flaring and methane emissions. These plans include our industry-first plan to achieve net-zero Scope 1 and 2 greenhouse gas emissions for our unconventional operations in the Permian Basin by 2030.
On this next slide, I’ll discuss how we’re prioritizing investments based on high-return, low-cost-of-supply and lower-emission projects.

We’re realizing the benefits of the actions we’ve taken to highgrade our portfolio by investing in strategic growth areas and divesting non-core assets that no longer compete for capital within our portfolio. The outcome of our continuous upgrading is a deep, high-quality portfolio that is among the best in industry and resilient under a range of future scenarios.

In fact, more than 90% of our planned capital investments that bring on new volumes over the next six years generate returns that are greater than 10% at, or below, Brent prices of $35 per barrel for the life of the investment.

About 70% of this spend will be focused on the strategic developments in the areas I just highlighted – Guyana, Permian, Brazil and LNG.

This investment portfolio has lower-emissions intensity and plays an important role in our goal to reduce the 2030 greenhouse gas intensity of our Upstream operations by 40 to 50 percent.

On the next few slides, I’ll provide some additional details on these key investments.
We’ll start with the Permian Basin, where we’re seeing the positive results of the development plans we described in 2018.

We have more than 10 billion oil-equivalent barrels of estimated recoverable resource on our largely contiguous acreage position, which enables us to implement a unique development plan, consisting of these multi-well pad corridors. To efficiently develop the resource, we’re leveraging our full set of competitive advantages in subsurface understanding, advanced technology, drilling and completions, and our experience executing large-scale projects.

The Poker Lake area is our largest development in the basin with more than 65,000 acres. At this location, we’re taking a capital-efficient, manufacturing approach that uses cube developments and large-scale surface facilities to drive efficiencies and lower operating costs.

An example is our Cowboy central processing facility, which started its first train in the middle of 2020. It has added takeaway flexibility, rapid movement of our production to market, and lower-cost expansion options to facilitate future developments.

This approach and our team’s execution of the plan has been foundational to improved performance and capital efficiency. The resulting lower operating costs and higher recoveries, are leading to attractive returns of better than 10 percent at $35 per barrel for the life of the development.
This next slide shows how we’ve been able to systematically drive costs out of the business.

We are among the industry leaders in drilling and completions efficiency, which improved by 120 percent and 75 percent respectively last year versus 2019.

2 examples of what we are achieving:

Our teams drilled a horizontal well that was 1.5 miles in length in less than 6.5 days, and completed 5,300 feet of hydraulic fracturing in a single day – both extraordinary achievements.

Overall, our costs in the Permian are down by more than 35 percent versus 2019.

It’s also critical that we continue to drive down emissions, and as I mentioned a few minutes ago, we announced our plans to achieve Scope 1 and 2 net-zero greenhouse gas emissions from our operations in the Permian by 2030.

We’ve already electrified our drilling fleet, and we expect to eliminate all routine flaring by the end of this year in line with the World Bank Zero Routine Flaring Initiative.

We’re maintaining top quintile flaring intensity performance among all the Permian operators and have announced multiple collaborations to advance ground, air and satellite technologies to improve detection and rapidly eliminate methane emissions.

As the program progresses, we’ll source more electricity from renewables and other low-carbon sources, and potentially use high-quality emission offsets to address any residual emissions.

We’ll provide more details during our Low Carbon Solutions spotlight later today.
This next slide shows how we’re growing free cash from the Permian as an outcome of our advantaged Permian position, structural cost reductions and the higher recoveries.

As I described last year, our investment pace in the Permian is set by three objectives:

- Maintain positive free cash;
- Demonstrate industry-leading capital efficiency; and
- Achieve better than 10 percent return at less than $35 per barrel for the life of the development.

The pace of the development remains flexible, due to the short-cycle nature of the asset. It can be rapidly ramped up or down depending on market conditions and other factors of course, as we demonstrated over the past two years.

With the majority of surface facilities already in place for the next few years, our capital investments are focused on drilling and completions. We estimate that our average capex over the next six years will be about 50 percent above 2021, which is still significantly below the levels of 2019.

These plans are expected to deliver 2022 production of more than 550,000 oil-equivalent barrels per day, up 25 percent versus 2021, with a similar number of drilling rigs and frac crews to what we are operating today.

Looking out to 2027, we expect production to reach more than 800,000 oil-equivalent barrels per day. At a Brent oil price of $60 per barrel flat real from 2021 that would potentially deliver free cash of more than $5 billion.
The second low-cost-of-supply, high-value asset I want to discuss today is Guyana, one of the most exciting and successful deepwater developments in the world.

It’s truly remarkable how far we’ve come in a relatively short time.

In under seven years since our first discovery, the estimated recoverable resource has increased to more than 10 billion oil-equivalent barrels, and we are continuing to test the extension of the known plays and searching for new plays outside of the southeast portion of the Stabroek block. Understanding the full extent of this resource, which is the largest discovered by industry in the past decade, remains an important short-term objective.

We made six discoveries last year, and work is ongoing to integrate data that will help guide future activity.

We’ve made two new discoveries already this year and plan to maintain the six rigs we currently have working in the basin, conducting a combination of exploration, appraisal and development drilling.

Two years after achieving first oil, our Liza Phase 1 development is producing above design capacity with excellent reservoir performance.

We started our second major development, the Liza Unity, a few weeks ago. We’re making good progress and ramping up production. The project was delivered on schedule and under budget, despite the challenges created by COVID.

In addition, the Liza Unity floating, production, storage and offloading vessel, was awarded the SUSTAIN-1 notation by the American Bureau of Shipping. This is the first FPSO in the world to achieve this recognition for sustainability of its design and its operating procedures.

Our third major project, Payara, is on pace for start-up in 2024.
Late last year, we submitted development plans to the Government of Guyana for the fourth project, Yellowtail. This will be the largest development offshore Guyana with a capacity of 250,000 barrels per day. And pending government approval of the plans, we expect it will start up in 2025.

We anticipate a fifth project will be developing the Uaru area.

And in total, we expect to have six projects on line, with a capacity of over 1.2 million barrels of oil per day by 2027.

It’s also worth mentioning that we’re making significant progress to advance Guyana’s first gas-to-energy project in cooperation with the Government.

This is a project that could significantly improve access to reliable energy by reducing the cost of electricity for the people of Guyana.
As we’ve grown production and expanded the benefits for the people of Guyana through this project, the plans are also delivering strong financial results.

The projects are highly resilient with double-digit returns at less than $35 dollars per barrel, Brent.

At $60 per barrel, flat real, we expect the Guyana production to potentially generate more than $7.5 billion dollars of operating cash flow in 2027.

In addition, the developments are expected to generate about 30 percent lower greenhouse gas intensity than the average of our Upstream portfolio.

And our partnership with the Government and the people of Guyana will continue to be a priority of our organization. We’ve spent more than $600 million with about 1,000 local suppliers to date, and our operations provide employment opportunities for more than 3,600 Guyanese.

These numbers will continue to grow as our activities increase, and we bring new projects on line.
Turning to LNG, we have a globally diverse and growing portfolio of low-cost, capital-efficient developments to provide more supply of this cleaner energy alternative, which will be critical during the energy transition.

We expect to grow our LNG supply to about 27 million tons per annum by 2027.

In Mozambique, the 3.4-million-ton-per-year Coral South floating LNG vessel arrived in January, and we are on-schedule to start-up this year. Coral South will be the first LNG production in Mozambique.

In the U.S., construction of the Gulf Coast Golden Pass facility is also on-schedule with more than 3,500 workers on site.

This project is a capital-efficient conversion of an import terminal, offering supply source optionality to our customers and providing global logistics optimization and cost savings potential for us and our partner Qatar Energy. The three-train project will have a capacity of around 16 million tons per annum and will start operations in 2024.

Back in Mozambique, we continue to work with our partners, Area 1, and the government to optimize development plans for the Rovuma development of the 85-trillion-cubic-feet of gas resource in Area 4. We’re working to ensure the right conditions are met for full funding, including a sustainable and secure operating environment.

In Papua New Guinea, we are working with our partners on the Papua development to further improve capital efficiency as we prepare to enter front-end engineering and development work this year.

These are highly economic projects at $60 dollars per barrel, flat real, from 2021, we anticipate our LNG portfolio will potentially generate more than $7 billion dollars of operating cash flow in 2027.
As I conclude my Upstream discussion on these next two slides, I come back to where I began, the first strategic priority which is focused on improving the competitiveness of our Upstream portfolio.

This slide demonstrates the improvement through 2022 and the planned improvements by 2027.

At $60 dollars per barrel, flat real, we expect our unit earnings potential in 2027 to more than double.

That is a 60 percent improvement at flat nominal prices, including the impact of inflation on costs. Our unit costs will be reduced by 30 percent.
Neil A. Chapman

As discussed on the fourth-quarter earnings call, we expect production in 2022 to be about 3.8 million oil-equivalent barrels per day. By 2027, we expect production to grow to about 4.2 million oil-equivalent barrels.

More than 50% of our 2027 volumes will be coming from four key growth areas of Guyana, Brazil, Permian, and LNG.

Let me close with my three key takeaways. These are high-return, low-cost-of-supply assets with lower emissions intensity.

We expect them to play a large role in doubling our 2019 earnings by 2027.

Thank you for your interest today, and I look forward to your questions.
Darren W. Woods

Good morning. Before we begin, let me just take a moment to address what I know is on everybody's mind, which is the situation in Ukraine. Yesterday, we announced our position. Let me start by saying, we deplore Russia's military action in Ukraine and are deeply saddened by the loss of lives and the needless destruction. However, we have been very encouraged by and fully supportive of the strong international response and are complying fully with the sanctions.

As you know, in Russia, ExxonMobil operates Sakhalin-1 on behalf of our international consortiums of Japanese, Indian, and Russian companies. We are working with our co-ventures and as we announced yesterday, we are beginning the process to discontinue operations and then developing the steps to exit the Sakhalin-1 venture. Let me just spend a few moments with some perspective on each of those elements.

As we look at the operation in Russia, Sakhalin-1, the sanctions on the banks, the export controls we expect with time, the ability to continue to operate and sustain the integrity of those operations will degrade and will require a discontinuation of operations or a suspension. And that's the work the organization is doing is developing the plans that as we see the situation evolve and going forward, based on what we know today, a cessation of those operations.

Longer-term then, given the direction that the Russian government has taken, our view is we will exit the Sakhalin-1 and we will start to develop the steps required to do that. Now, obviously, as the operator of Sakhalin-1, we have a significant responsibility to make sure that the operation is ran safely and that the integrity of the environmental performance and the operations itself is sound. And that will be a very thoughtful process working with our co-ventures to make sure that that operation is handed over successfully and without incident.

It's a complicated process, one that's going to require careful management and close coordination with our consortium partners, but we’re on that journey and starting that process. In addition, given the situation in Russia, our expectations will make no new investments in Russia going forward.

With that, Operator please give it back to you, and for the first question.
First Q&A Session

Operator: Thank you. We'll take our first question from Jeanine Wai with Barclays.

Jeanine Wai, Barclays
Hey, good morning, everyone. Thanks for taking our questions. We appreciate the time today. Darren, maybe just following up on what you just remarked on Sakhalin-1. Can you elaborate also on how you view your other risks for Exxon related to the Russia-Ukraine conflict, whether they're direct or indirect risks throughout your portfolio?

Darren W. Woods
Well, Jeanine, you know one of the really important parts of managing ExxonMobil's business in its entirety is the risk management. And we have a fairly rigorous process of making sure that we understand those exposures across the globe and have diversified the portfolio so that any one specific incident in any specific country has a mitigated impact on the corporation's results. Just as a perspective, if you look at our business in Russia and the size of that with respect to our total portfolio, roughly one to two percent, when you look at the capital employed or the earnings. I think good demonstration, how well an important business in the context of the fuller portfolio the ability to mitigate that.

I think as we look at those markets, we feel pretty comfortable that the businesses that we have in place, the processes that we have in place, we are able to manage the exposure associated with the current developments. Obviously, the market is pretty volatile right now, but we think that it's not inconsistent with what I would say is our historical experience managing that volatility. I think we're fairly well-positioned to manage this going forward.

Jeanine Wai, Barclays
Okay. Understood. Thank you. And then maybe moving, just too how you view the balance sheet and returns. From a capital allocation perspective, can you talk about what you think are the most important metrics either in terms of net or gross debt that might cause you to re-evaluate either the pace or the level of the share buybacks in either the near or the medium term? Thank you.

Darren W. Woods
Sure, Jeanine. I am going to let Kathy answer that question. Kathy.

Kathy A. Mikells
Sure. So I would actually say, as we sit here in the near term that overall we are generating more robust cash flows because we're in a higher price environment. So we would've announced back in the fourth quarter that we had a share repurchase program starting this year from five to ten billion dollars. Originally, we said that was going to be over a 12 to 24-month period of time.

And then about a month ago, when we announced our fourth-quarter earnings result, we suggested that that in light of the positive overall price environment, we would be at the shorter end of that 12 to 24-month period in terms of execution. And I would say the price environment has only gotten stronger.
since we made that announcement. You would have seen – we will talk, I would say a little bit later about this in the presentation today.

But as we look forward, and as we had announced, when we talked about our corporate plan back in December, at $60 real Brent prices over the six-year plan period through 2027, we expect to generate over $100 billion in excess cash flow beyond meeting our capital program and our current dividend. And so I'd say we have a very robust go-forward plan and we expect to have sustained excess cash flows and increasing shareholder distributions.

Jeanine Wai, Barclays

Great. Thank you.
Operator: All right. Next question will be from Neil Mehta with Goldman Sachs.

Neil Mehta, Goldman Sachs

Thank you team for doing this. I want to go to slide 11 of the deck, and as we think about cash flow build from 2019 to 2027, there's a lot of it that's coming from those structural cost reductions and you've taken a lot of cost out already. So Darren, Kathy, and team, I'd love your perspective on where the incremental cost reductions are going to come from and how we should think about the offset in a world where the oil price might be higher than $60 barrel real?

Darren W. Woods

Yeah, sure. Good morning, Neil. I think you touched on a really important part of the equation for growing the value of the corporation, growing earnings, and growing cash flow, which is streamlining the organization and making it more effective and more efficient. The changes that you've seen to date have been a key part at lowering our cost. And then what we've got built into our plans now continue to build on what we've done already and anticipate some additional reductions with the changes that we're currently making.

And I think you can probably appreciate with all these changes, it's always difficult to know the full extent of the benefit. We found that when we made our initial changes in the downstream and the upstream, I think as our organizations worked through that, developed that clear line of sight, greater responsibility ownership from end-to-end, the opportunity set grew and the delivery and the improvements on our cost structure accelerating.

We saw that last year, we saw it in 2020 and my expectation is we will continue to see that. So right now, we've got plans that deliver $9 billion of cost-efficiency through 2023, driven by the elements that we've talked about with respect to that reorganization. My sense is as that organization gets its arms around operating the new model, we'll find even more opportunities.

But I have to tell you too, I'm very excited by the effect of the side of the equation. I don't want to underestimate the value that that will also bring to the bottom line. I just gave you just a couple of examples that we think are going to manifest themselves in a lot of different ways going forward. And I've used the chemical plant that we started up in the Gulf Coast and Corpus Christi, as a great example of where we brought our upstream projects engineers into a projects organization to look at how do you build a cost-efficient world-scale chemical complex.

And that design, as I mentioned in my comments unique to the world, delivered at a cost 75% of what the competitor are in the Gulf Coast and starting up very well and running very effectively. And so a great example of how some different thinking within the organization applied to a different area has brought great value. Also seeing the same as we bring some of the downstream optimization opportunities and technologies from our refining facilities into our upstream plants. And some of the controls that we've put in place are delivering well above design capacities at some of our manufacturing plants, Papua New Guinea is a great example of that.

And then bringing some downstream technology into, believe it or not, downhole operations in the Permian, we see some opportunities there. So I think just a couple of examples of where pulling across
the corporations and the capabilities that we have and concentrating them on high-value opportunities we're seeing some real significant benefits, and my view is we're just now scratching the surface.

Neil A. Chapman

Darren, if I can add, even if you think about leveraging the scale of the corporation in terms of maintenance, enormous scale we have in the corporation upstream, downstream, and chemicals, large geographic spread, but getting the best practices in any one area, and applying that across the corporation more effectively using this new organization, that's been absolutely key over the last two or three years to getting these structural efficiencies.

Neil Mehta, Goldman Sachs

Thank you. And Neil, the follow-up is for you, and in the Permian slide 28, you kind of talk about where you are right now and where you're going to get to in 2027, but I guess the question is sort of the path to get there. And I recognize there's a lot of uncertainty in the macro, but how do you think about front-loading versus back-loading versus level-loading that program and does the higher commodity price environment and the calls on potential US barrels as sources of energy security cause you to pull forward any of that plan?

Neil A. Chapman

Yeah, I think Neil we've had this conversation now, we're not volume-driven. We're about getting value out of this resource. And, and I've always said you have to balance production rate versus capital efficiency versus resource recovery. And that's what we're absolutely focused on. And by doing that, by executing the plan that we laid out back in 2018 and 2019, you've seen some of the results in terms of improvements in drilling, improvements in fracturing and lowering costs. That's been absolutely critical for us.

We're very comfortable with the rate and pace we're going at now. I think you're aware we have, ordered magnitude, 10 to 11 rigs in the Permian and six to eight frac crews. And that's delivering that growth you see on the chart. We're always looking for opportunities, but we are not going to do it at the expense of capital efficiency. I said the pace that we will go at has to do three things.

It has to deliver free cash flow under any scenario and we demonstrated that in 2020. When the prices go down, we'll cut back on our capital investment. We have to demonstrate that our capital efficiency is benchmarked with the very best in industry. And that's something that we set as an objective. So we're not just putting capital in. We have to assure ourselves that we are the most competitive in terms of the dollars that we invest versus everyone else.

And the cost of supply must be less than $35 a barrel, meaning it needs to generate a 10% return at less than $35/barrel. And that's the criteria that we've set for the organization in terms of pace. For sure, we always look for opportunities to go faster and to do more, but it will not be at the expense of capital efficiency. And that's the way we see this.

Darren W. Woods

Yeah, I guess the other point that I would add Neil, as you think about the philosophy that we've adopted there, you recall back in 2018, when we talked about the work that Neil covered earlier this
morning around the corridors and establishing a manufacturing mindset. So we could drive efficiency in production, with that kind of an approach, you can expect a fairly rateable increases or not large chunks or discontinuities and that that program is paying off.

**Neil A. Chapman**

Yeah. And I think the other point, Neil, which is really important to us is the application of technology. And that's been really pivotal to our improvements. And we see a lot of running room in that space and what I mean by that is getting lower costs and higher resource recovery. This is about measuring the fracs about drilling tangential wells so that we get the frac length we really understand it. And it's different whether in the Wolfcamp or the Bone Spring or Wolfcamp A versus Wolfcamp B, all different. That's critical to getting the spacing to get that resource recovery back to where we want it to be.

It's not just about drawing quickly. It's about making sure when we're drilling on those laterals, we hit the landing zone and for all 10 or 11 of those drilling rigs, all that information now goes back into one central location in Houston, where 24 hours a day we monitor those drilling operations. It's all about applying technology to get higher capital efficiency. And we see a lot more running room in that space as we go forward.

**Neil Mehta, Goldman Sachs**

Okay. Got it.
Operator: All right. Next question comes from Doug Leggate with Bank of America.

Doug Leggate, Bank of America

Good morning everybody. Hopefully, you can all hear me okay. Is that a yes?

Darren W. Woods

Yes.

Kathy A. Mikells

Yes.

Doug Leggate, Bank of America

Yeah, yeah. Okay. Just checking. Okay. So I'll do two questions if I may. First one is for Neil and – I think it's for Neil. And Neil, I apologize. Slide 29 and slide 30, one shows well over a million barrels a day in Guyana, and slide 30 shows 850,000 barrels a day, which is it? And which one is in your plan through 2027 to double earnings and cash flow?

And my follow-up is simple one, maybe for Kathy. When you talk about the dividend breakeven trajectory, what is the assumption for the dividend or, sorry, the corporate breakeven trajectory? What is the assumption for the dividend burden in absolute terms over that period? Thanks.

Neil A. Chapman

Yeah. Thanks, Doug. Why don't I start on Guyana? I think the two numbers you are referencing is we're saying over 850,000 barrels a day of production, 1.2 million barrels a day of capacity. The sixth boat will come online in 2027. We don't know this date exactly when that will be in 2027. So what we're saying is we'll have that much capacity online. We will have at least 850,000 barrels. Clearly, our objective is to fill up those boats and keep them full all the time.

And you know that's one of the great advantages of the Guyana resource. As you're aware, we have these foundational boats and we are looking to tie back many of the discoveries that we have had, and we are continuing to have to keep those FPSOs full. So there's no reason to take anything more from that. We were just saying it's going to be greater than 850,000 barrels a day. In 2027, we'll have a capacity of 1.2 million barrels a day.

Doug Leggate, Bank of America

What's in the plan, Neil?

Neil A. Chapman

In terms of production or in terms of capacity?

Doug Leggate, Bank of America

When you talk about doubling cash flow, is it 850, or is it 1.25?
No, it's over 850.

Okay. All right. Sorry. And on the dividend?

Sure. So if I come back to talking about the dividend, we had overall $41 a barrel breakeven as you know Doug, in 2021, and that would've been using our current dividend. And we've held the dividend flat in terms of the breakeven numbers that we've discussed previously. So over our plan period, that breakeven coming down to $35 a barrel at $60 real Brent, which we're using, obviously we've talked about being able to generate over $100 billion in excess cash flow over that plan period. So we have clearly room to provide additional returns to shareholders, which could come either in the form of dividends or share repurchases.

Great. Thank you.

Thanks, Doug.
Operator: All right. Next question will be from Roger Reed from Wells Fargo.

Roger Read, Wells Fargo

Yeah. Good morning. Thanks for the presentation here. Going to kind of continue with the theme of going back to some of the specific slides, but slide 31 with the LNG on it, and given the fact that you'll be at some point exiting Sakhalin-1 and some of the other stuff in Russia may also not go forward. How does the outlook for LNG potentially improve beyond just the projects you're looking at here? And I'm thinking either an acceleration of the onshore part of Mozambique, if things can settle down there, or any other regions where you think things could accelerate thinking Qatar or the Gulf Coast of the US?

Neil A. Chapman

Yeah. Why don’t I start that one? I would say in terms of the overall market, of course, let’s go back to what happened in 2020 in the gas markets. Inventories were down very low in Europe and in Asia as prices were very low. And as we were in through the COVID period, and then of course, what happened is the economies were recovered faster. We had cold weather in Europe and in Asia, and there were some operating difficulties in the industry. And of course, that raised that spot price, and that spot price as you’re well aware, got up to $30 and has pretty much stayed there as the industry has been challenged to rebuild the inventory.

The challenge with LNG is you can’t bring that capacity online that quickly, the only way that you can get more gas into the market really is through liquefied natural gas. And we have two of the new capacity steps coming online, as we discussed in Mozambique, the first one will be Coral. And the second one in the Gulf Coast in 2024 will be Golden Pass. Those are the two blocks that we’re bringing online during this period before 2027.

We’re looking at two other big steps, of course, as you mentioned in Rovuma, in Mozambique, that will really depend on the security situation. We’re working closely with the government, with our partners, and with Area 1. As you’re aware Area 1’s development has been suspended. So we’re working during this period to improve the capital efficiency of that investment. And we’ll see in time if that security situation is stabilized and I think the government have made great strides in that area.

So I think that’s our perspective and I think that offers that potential, but it really depends on the security situation. In PNG, as you aware, we’re pursuing with our partners, the Papua development, which is order of magnitude five to six million tonnes. We have the gas agreement with the government and we plan to enter feed this year on that area. So what we’re seeing overall is there is a stronger demand for LNG and that’s really been driven by, we think, by a growth in the economies and by what’s happened in terms of the tightness in the market. And we will bring on these first two steps, Coral and Golden Pass. And then in the future, of course, Papua and Rovuma.

Roger Read, Wells Fargo

Okay. Thanks. And then change in tact a little bit, going back to slide 22 which has the investment in the lower emissions. The other slide had where you were in terms of project evaluation, screening, and so forth before we get to sanctioning. The part on the emissions reductions, I think is pretty easy to understand, and obviously, has very specific goals. But I was curious as you looked at both the biofuels
and the carbon capture side, is there anything that needs to happen on the policy side to support the spending and the goals and the sort of 2025 to 2027 period that's highlighted here? Or does most of this go forward? It's just a question of getting the right projects to bring forward. Maybe some partners on board and a little bit on just kind of working the project, right, getting all the engineering done and things like that. I was just curious, how concrete we should look at these things on these specific timelines.

Neil A. Chapman

Yeah. I would characterize it this way, for the ExxonMobil emissions, the purple area of that chart all based on policy that's in place today. On the biofuels, it's based on policy that's in place today. We will talk about some specific examples later on this morning, but the bio typically in California and Canada, and in Europe where the policy exists to get the returns that we're looking for. Very solid, I would say for our own emissions and for the biofuels.

Once you get into the CCS and hydrogen, as we'll talk about this afternoon, there are some opportunities where we can progress CCS projects based on existing policy and get accretive returns that we're looking for. Some of the spend in the blue, and I would say it's a very small part is based on what I call foundational steps, where we anticipate policy will be there to support the investment and/or market incentives will be there to support the investment.

It's relatively small. It gives us a flexibility. What we are doing is we are doing the early stage work on those projects because we believe the world will need it. We believe policy will be there to support it. If we get so far down the road and policy's not there, or the market incentives are not there, of course, we will pause those projects, but I would suggest it's a very small part of the $15 billion.

Darren W. Woods

And maybe, let me just add to Neil's comments with respect to that seeding in the small capital that we've put there. We think it's incredibly important to begin to take some of these concepts and develop them to a point where policy makers can see the real application, the application in the real world, and the potential for those types of projects. If you think about the Houston hub, which is one of these large-scale industry approaches by 2040, 100 million tons per annum of carbon capture, largest reduction in the world. Done at a price, which is very competitive, in fact, much lower than existing policy here in the US and other places in the world.

And so it's a great example of taking a concept, doing the development work, and translating that into something that people can get their hands on and touch and feel and begin to understand exactly how this would work. And I think that's going to be a really important part of catalyzing policy, not only here in the US, but all around the world to start down this path of achieving a lower emissions future.

Neil A. Chapman

And we announced yesterday early stages of a 1 million ton, which is a really large hydrogen plant on the Gulf Coast. And that plant we'll describe it in more detail this afternoon, which goes exactly to the points that Darren was making. We are very close in terms of being able to progress that project based on current policy and market incentives, but we want to be able to demonstrate that this is possible, and you can get significant carbon reductions by investing in this technology.
Roger Read, Wells Fargo

Great. Thank you.
Operator: All right. Next question will come from Stephen Richardson with Evercore ISI.

Stephen Richardson, Evercore

Good morning. Neil, a follow-up regarding Guyana appreciating that the outlook is extremely bright for the asset. Execution has been at least from an external point of view, flawless to date, the plus 10 billion barrel resource number was unchanged today in addition to the 10 projects. And I was wondering if you could talk about how we should think about upside from that asset. Appreciate you just talked about gas, but wondering is the focus reducing the cost of these incremental FPSOs as they come to market, resource upside, obviously uptime is a huge lever. Maybe you could just talk about how you think about upside on the asset from here.

Neil A. Chapman

And Stephen, I think, let me start just by describing how we're approaching the whole basin because we are doing something which the world typically doesn't do, we're exploring, appraising, and developing in parallel. And so our development plans are changing. What I described two years ago Investor Day, or three years ago Investor Day, I don't think we had Yellowtail in that mix because we've had explorations at the same time as we're developing projects. And that's really, really important and I'll just give an example of that.

One of the two discoveries we've had this year, which is called Fangtooth. Fangtooth is up-dip or to the west of Liza, same quality of oil. That investment alone, because it's at a deeper horizon has given us new insight into how that basin can develop and it's impacting what our next level of exploration will be. So that is happening all the time. We're doing exploration between the existing operations or investments and on the outer edges.

So that's constantly changing our development plan. What's really important about this is that because of the density of the resource that we have the potential to keep those boats to the question that was asked earlier full by tie backs, as we make more discoveries to those FPSOs. I think you're well aware one of the challenges with an FPSO is from the first production you get, the decline comes quite quickly. Well with this asset and with the discoveries that we are making, we have the potential to keep those boats full.

Right now, we have said we've got 10 billion barrels, over 10 billion barrels of resource. We have not accounted for the Lau and Fangtooth discoveries we have had this year. I would estimate that we will do order of magnitude 10 exploration wells this year, 10 exploration wells next year, that's kind of the pace that we are at. As we said previously, we see potential for that resource from 10 billion barrels to more than double, but its exploration. And we will see, and as we will evolve our development plans as our exploration program progresses.

Jack P. Williams

So, Neil I'll just also mention from a global projects perspective, there's a group in global projects looking at that full development. So we have a model looking at the whole development, not each individual development, but the whole thing, looking for opportunities to integrate across all the developments as we develop these things. So there's a look leveraging what Darren talked about, that global projects
organization, the strengths, bringing that full capability to Guyana. And I think that full development model is fairly unique.

Neil A. Chapman

Agree. Thanks, Jack.

Stephen Richardson, Evercore

Thank you very much.
Operator: All right, we’ll go next to Ryan Todd with Piper Sandler.

Ryan Todd, Piper Sandler

Great. Thanks. Maybe starting out on the Permian, how much risk do you see in terms of cost inflation, labor supply bottlenecks in a particular potential risk to take away capacity, especially for gas over the next few years? And if you see any risks there, how are you working to mitigate any of these, particularly in terms of gas take-away?

Neil A. Chapman

Yeah. Ryan, maybe I'll start the question. I think in terms of take-away capacity, we put a lot of effort in the last few years in making sure we have surface facilities in place, both on the liquid side and on the gas side, and to make sure that we have crude stabilization and cryo, which is separating NGL facilities in place. So we feel very comfortable about where our assets are in terms of take-away capacity.

In terms of inflation, we are seeing some signs of inflation, but I have to say not a tremendous amount. And what we have done because we have this development plan where we have these drilling rigs on these corridors, and we have stability of operations, we've got some pretty extended contracts in place to protect us from potential inflation. It doesn't mean to say it won't come, but so far we haven't seen a lot. And what we've seen, we've managed to largely offset.

Darren W. Woods

Yeah, I would just add to that, Ryan. It does reflect this more strategic approach that we took back in 2018 to develop the unconventional resources in a different way than what had been done in the past. And this stepping back, having a long-term plan, building out the facilities at the time, you'll recall a lot more investment up front for very little production. But it was laying the groundwork to establish this manufacturing mentality that doesn't chase the cycles, doesn't move up and down with the rest of industry, but instead just focuses on driving efficiency and growing production and growing value. And that's what you're seeing play out today. That strategy is coming to fruition, and we feel very good about that.

And as Neil mentioned earlier our view is, and certainly, my view is, there's additional upside as we continue to learn, as we continue to have that constant foundation to bring technology into that operation and test it, see the benefits of it, evolve and implement. I'm very, very enthusiastic about what we're seeing there and the potential as we move forward. But it goes back, it is anchored in the strategy that we laid out in 2018 with respect to how we were going to approach Unconventional. This is the long ball game that I talked about versus the short game.

Ryan Todd, Piper Sandler

Okay. Thank you. And then maybe shifting topics to the idea of portfolio management. Can you talk about how you would characterize the environment for portfolio actions at this point? As we think about your disposal program, what is assumed in the plan, and does the current environment mean tailwinds for the disposal of assets, given high prices? And maybe on the flip side, as the combination of
volatility or energy transition, uncertainty created opportunities where you could still look to be proactive.

Darren W. Woods

Yeah. Neil, you want to take it?

Neil A. Chapman

Yeah, no, I think in the upstream, if you go back a couple of years, we announced the $15 billion divestment program, and I think you're aware we've secured $7 billion of that and built into our plan is the $8 billion. Today we have assets in the market that are public like Iraq and like Chad and like the Nigerian JV. And in the Unconventional space, we have the Canadian Unconventional, we have Fayetteville, we have Barnett and we have Ohio. Of course, in this environment, there is a lot more interested parties than there were in the middle of 2020.

So we're optimistic, but as we've always said, we're selling for value here. The basis for which we will divest is if somebody is going to pay more for that asset and that resource, then we think it's worth to us. So we're optimistic, it's built into our plan, the $8 billion additional to close that and that's where we see it right now. I would also tell you that we have several other assets, of course, that we are in confidential negotiations and we have not made public right now.

Darren W. Woods

And I would just add to Neil's comments that again, it goes back to this approach. We focused on this as a strategic priority to high grade the portfolio, and then take opportunities in the marketplace as they came it was a value-driven basis that work that we did continued even in the pandemic and in the down cycle when there wasn't a whole lot of market interest. But the work that we were doing laid the foundation with the expectation that at some stages there would be a recovery, having that done, that work done, would be advantageous in an up market. And that's certainly what we're finding today.

But I think, again, comes back act to looking across these cycles, constancy of purpose focused on high-grading the portfolio, and then taking advantage of the opportunities when they present themselves and not rushing to meet some artificial metric around moving assets, but instead staying very focused on the value proposition.

Neil A. Chapman

Yeah. I think that's key Darren that we're not rushing to divest. If the opportunity is there and the value is there, then we'll progress to those divestment programs.

Ryan Todd, Piper Sandler

Good. Thank you.

Neil A. Chapman

Thank you.
Operator: I think we have time for one more question. We'll take the last question from the line of Paul Cheng with Scotiabank.

Paul Cheng, Scotiabank

Good morning. Thank you for the time. Two questions, if I could. First, Neil for Permian, you're talking about 800,000 barrel per day by 2027. Two-part one is, what is the longer-term sustainable production that you guys is targeting? I think at one point many years ago, you guys were talking about a million barrels. I that still roughly the number? And the capital investment for the next several years, should we assume the 2022 pace is a reasonable level or in order to reach that type of production we need to accelerate, see further investment over there?

The second question I think maybe is for either Neil or for Darren. When we are looking at the low carbon solution investment, you are targeting return in excess of 10%. The corporate return is far in excess on that, or at least in your target of 17%. And then that if we are looking at, in your upstream and chemical, you are also better. So as you shift in the energy transition which is lower return how that is going to balance your desire or your goal to push up your return and generally higher free cash flow? Thank you.

Neil A. Chapman

Yeah. Thanks, Paul. And we'll start with the Permian one. Yeah, the answer is yes. So yeah, we see a long-term plateau in excess of a million barrels a day. We believe we can do that with a capital level that we illustrated in the slide earlier on today. And the reason that we believe we can do that is because of these advancements in technology, the advancements in capital efficiency, and the advancements in performance. But I think you should take the million barrel a day plus as the potential plateau. Of course, our plan only goes out to '27 and we've said greater than 800,000 barrels per day, but that would be a good number to have in the plateau.

I think in terms of LCS investments, I'll start, and maybe Darren you want to add something else. What we said here, Paul is the portfolio has a greater than 10% and return, but a lot of the projects in here are way in excess of 10% return. We're just saying that of this total portfolio, including some of the seed investments, it's still going to generate more than 10% return, but our target returns are not changed. That we still target the same sort of returns that you talk about. And I would tell you in the biofuels area, the projects that we're progressing are in excess of that number.

Darren W. Woods

Yeah. Let me add Paul. I think it's important as we think about low carbon solutions and the potential for those markets to keep in mind what I would say is where the maturity or the development of those markets are at. Some are in very early stages. And so some of the work that we're doing, we're holding ourselves to generate a return in the anticipation that those markets will develop. And as the need grows that the margins and the returns will grow with that. But we're starting off to lay that foundation, to develop the concepts, and making sure that as we do that, we don't regret those investments, but clearly, our objective longer return is to grow those returns and make them competitive in our portfolio.
And to the extent the society moves into this lower emissions future, and we start to realize this ambition of net-zero, those markets will develop, the returns will be there to drive those investments. Our view is we will have a leading position in that space, having done this early work with no regret investments that allow us to move further down that learning curve and develop that technology.

I think the other important thing to keep in mind as you think about that portfolio is we use some of these investments as kind of what I would call our license to operate in some of the operations that we are running. That we're going to hold ourselves to a standard to make sure given the concerns with additional CO2 emissions that we, as we develop new projects, as we run these businesses, that in order to continue to operate that and have that license, we've got to drive those emissions down.

And so it starts to, with that philosophy, get a little blurred as to what are the returns on your base business versus what are the returns with these specific projects, which we think enable the base business. Similarly, as we bring in our new projects, we're basically insisting that those projects lead industry with respect to GHG intensity. And so we're building in the necessary investments to reduce those emissions.

And again, we think that's part of what's required to be successful in this business. And so whatever returns are associated with that broader project, we think you achieve those by investing on that side. But in total, as we look at all those investments, making sure that we're holding ourselves to generating return no matter how you choose to look at it, but making sure that we don't lose sight of some of these more philosophical strategic approaches.

**Paul Cheng, Scotiabank**

Thank you.

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**Jennifer K. Driscoll**

Thank you for your questions. If we weren't able to get to your question, please keep in mind that we'll have a second opportunity for questions following Kathy Mikells' presentation. And now, I'll pass it over to Jack Williams who will discuss our Product Solutions business.
PRODUCT SOLUTIONS

BAYTOWN, TEXAS
Jack P. Williams

Good morning, I’m pleased to share with you our plans for the newly created ExxonMobil Product Solutions Company.

This new company consolidates our fuels, lubricants and chemical organizations into a single entity.

It will be the world’s largest combined downstream and chemical company, focused on developing innovative products needed by modern society.

We are the only IOC with a large, integrated Chemical business offering differentiated products and a global customer-facing workforce that includes sales, marketing and technology.

Our downstream includes the largest manufacturing capacity amongst the IOCs, and is highly integrated with lubricants and chemicals. Our Mobil 1 brand is the market leader in the high-value synthetics segment.

The competitive advantages Darren discussed earlier form the foundation for Product Solutions. They enable us to better meet customer needs by delivering innovative solutions, and maximize value through an improved product mix and lower costs.

By combining these industry-leading businesses:

- We will capture synergies from value chain adjacencies;
- We’ll bring more focus to our highest earnings growth opportunities through a prioritized single opportunity set;
- We’ll operate our integrated sites more seamlessly to extract the highest value from every molecule;
- And be positioned to better adapt our product offerings to meet future changes in market demand.
Our strategic priorities for the Product Solutions Company are straightforward.

- Grow high-value products.
- Improve portfolio value.
- Lead in sustainability.

There is strong demand for lower life-cycle emission products that enable modern living, greater mobility and efficiency. This need will continue to drive significant growth in the high-value products we offer, as evidenced by the 7 percent growth in our chemical performance products last year versus commodity chemical growth of about 3.5 percent, which contributed to record Chemical earnings.

We also made progress expanding our biofuels production, including a proposed renewable diesel project at Imperial’s Strathcona facility.

That project will produce 20,000 barrels per day of renewable diesel using locally grown plant-based feedstock, and hydrogen with carbon capture and storage.

We’re also focused on upgrading the portfolio to improve competitiveness and optionality. Late last year we began operations at our world-scale 1.8 million tons per annum Corpus Christi Chemical Complex.

It is industry’s first fully modularized steamcracker, which enabled cost performance 25 percent below the U.S. Gulf Coast average, and a startup well ahead of schedule ... despite peak project activity being conducted in the middle of a global pandemic.

Portfolio value was further improved with more than $2 billion of structural cost reductions and more than $1 billion of non-core divestments.
Additionally, we converted two refineries to terminals. One of these, the Slagen terminal in Norway, will support our equity investment and offtake agreement with BioJet AS, a Norwegian biofuels company producing renewable fuels from forestry waste.

Underpinning our earnings growth plans, we are focusing on sustainability through product offerings in the circular economy space and developing greenhouse gas emission-reduction roadmaps for all assets.

These straightforward priorities will drive further earnings growth beyond the industry-leading $9 billion delivered in 2021. Let me walk through our plans for each, starting with growing our high-value products.
By high-value, I mean not only higher margins, but importantly lower lifecycle greenhouse gas emissions, products needed for a lower-emission world.

By 2027, we expect sales of high-value products to increase our earnings by about $4 billion per year versus 2019. Representing only about 10 percent of total volumes, these products will account for about 40 percent of earnings.

Biofuels growth will leverage our existing manufacturing footprint to grow production to 80,000 barrels per day by the end of 2027, and about 200,000 barrels per day by 2030.

Lubricants demand is expected to grow in the industrial, aviation and marine sectors, offsetting potential decline in light-duty vehicles. We’re focused on key growth markets in China, Indonesia, India, and the U.S. leveraging our large-scale projects in Rotterdam and Singapore.

Demand for chemicals is expected to grow faster than the economy as a whole, driven by population growth and improving living standards. To meet this demand, we’re investing in new capacity along the U.S. Gulf Coast and in China.

Proprietary technology is fundamental to innovative chemical performance product solutions. Our focus is on solutions that enable lighter and more durable products that use less material, save energy, and reduce cost and waste.

These high-value products offer lower life-cycle greenhouse gas emissions. For example:

- Using biofuels versus conventional fuels will enable consumers to lower greenhouse gas emissions by 25 million metric tons each year.
- Using Mobil 1 products improves vehicle efficiency and helps consumers avoid 4 million tons of annual emissions versus alternatives.
And using plastic for packaging applications in the U.S. alone could help avoid 13 million tons annually versus alternatives as a group, including aluminum, glass, paper, and wood.
Chemical performance products are core to our high-value product growth.

These products have superior properties, and thus, out-perform alternatives. For instance, by using our Exceed polyethylene, customers are able to produce packaging film that is 30 percent thinner, using less material and reducing weight. Lighter weight means lower transportation and shipping costs, and less waste.

Other customers have been able to achieve significant improvements in packaging integrity, reducing leakage by 80 percent, resulting in cost savings and waste reduction.

And the improved sealing properties of our performance polyethylene helps customers increase packaging speed.

Better performance translates to higher demand – which is expected to continue to outpace both commodity chemicals and the global economy as a whole.

Which is why we’re making competitively advantaged investments to add production capacity that is expected to grow earnings from these products by more than 70 percent between 2021 and 2027.
This brings us to our second strategic priority – improving portfolio competitiveness today, and building future optionality to evolve our product mix as the needs of our customers change.

We are reshaping our refining portfolio through competitively advantaged investments and by converting lower-profitability refineries to terminals. We expect these actions to increase overall net cash margin by 30 percent, generating more than $2 billion of cash flow growth by 2027.

The projects listed here enable this improvement, strengthening our first quartile position and upgrading our product mix toward lubricants, chemicals, and biofuels ... and away from fuel oil and gasoline. The result is higher per-barrel margins at constant throughput.

A good example of this is the Rotterdam Advanced Hydrocracker, which is delivering above expectations and is on track to fully payout by yearend. Leveraging our proprietary catalyst technology we are uniquely upgrading lower-quality feeds into higher-quality lubricant basestocks allowing us to grow our advantaged position in Europe.

A further extension of this technology underpins the larger Singapore resid upgrading project expected to come on line in 2025.
Consistent with our plans to double high-value product sales by 2027, we are upgrading our manufacturing product mix to produce more chemicals, lubricants, and biofuels.

Looking at our U.S. Gulf Coast and Singapore assets, representing about 60 percent of our current capacity, our ongoing and mid-term planned investments grow biofuel and lubricant basestocks, while reducing gasoline and fuel oil production.

Beyond 2030, our configurations at these integrated sites offer significant opportunity for repurposing to further increase the yield of chemicals, lubricants, and biofuels at the expense of gasoline and distillates, with only modest revamp.

Biofuels units will be added to selectively process a wide range of feedstocks, and lower profitability units will be shutdown. And this results in a lower overall product volume, but higher unit margins, and these changes can be sequenced over time as customer demand, markets, and policies evolve.

This future potential configuration change alone would result in a 50 percent reduction in Scope 1 and Scope 2 greenhouse gas emissions.
Which brings me to our third strategic priority – Leading in sustainability.

We’re starting from a firm foundation, as our refineries already have a 15 percent lower Carbon Emissions Intensity than the global industry average. By 2030, we aim to deliver a 10 percent reduction in both greenhouse gas emissions intensity and absolute emissions.

This reduction is underpinned by comprehensive emission-reduction roadmaps for each of our major operated assets. These roadmaps include actions such as:

- fuel switching to blue hydrogen;
- renewable power purchase agreements;
- energy efficiency projects; and
- ongoing asset conversions to lower emission service.

Beyond emission reductions, we’re also working to lead in supply of certified circular polymers through advanced recycling of plastic waste, leveraging our technology and integration advantages.

Last year at Baytown, we successfully piloted a new process for advanced plastics recycling that delivers yield improvements, cost advantage, and lower greenhouse gas emissions.

When completed, our Baytown project will be one of North America’s largest advanced recycling facilities; and by year-end 2026, we plan to expand total advanced recycling capacity to 500,000 metric tons per year.
These three strategic priorities for Product Solutions leverage our heritage competitive advantages of integration, scale and technology to yield an outlook of profitable growth.

And the heart of this growth is enabled by our competitively advantaged investment portfolio that generates more than $4 billion in annual earnings improvement by 2027, at an average 30 percent return.

This investment will translate to industry-leading cash flow.

In fact, our combined downstream and chemical cash flow already led the IOCs in 2021, and the ongoing investment should grow that advantage in the years ahead as these new projects are streamed ... like the Corpus Christi project that is already delivering additional cash flow and the Baton Rouge polypropylene project that will start-up by year-end.
These projects constitute about half of total Product Solutions earnings growth through 2027. The focus on these investments is increasing high-value product yield, and as such, total sales volumes will not materially increase.

Another 30 percent of the earnings improvement comes from structural cost efficiencies that are well underway. Cost savings include maintenance optimization, work process redesign, midstream logistics, and converting low-profitability sites to terminals.

The remaining portion is from smaller improvements, optimizations, and digital enablement. Small high-return projects that are collectively material but individually much smaller than the major projects.

So in total - our expectation is that by 2027, with a flat margin environment equivalent to the 10-year average, earnings will potentially triple versus 2019. That’s a $10 billion annual earnings increase.

So, to summarize, we’ve combined two strong businesses with distinct competitive advantages into a single organization that has enormous scale and outstanding market position. It is positioned well for the energy transition with aggressive emission-reduction plans and has a portfolio of high-value products that will evolve with changes in customer demand.

We are looking forward to the opportunities ahead that will drive value for our shareholders.

And with that I will now hand over to Kathy who will share our financial plan.
Thank you, Jack. Good morning everyone. We’re pleased to share our strategic priorities and plans as we continue to position ExxonMobil to deliver leading financial performance.

I’ll be showing you how what you’ve heard today comes together in our Corporate Plan. The plan was built from the ground up with strong business line ownership and accountability to deliver results. It’s flexible and provides optionality to manage the uncertainty of the energy transition. The improvements we’re making across the business position us to double our earnings and cash flow potential by 2027, reduce our breakeven by roughly $10 per barrel, boost returns on capital and sustainably grow both shareholder value and distributions.
Our financial priorities are focused on sustainably growing shareholder value.

Across our businesses, we’re taking the actions needed to drive industry leading performance, advance our strategy to lead in the energy transition and provide strong distributions to our shareholders.

You’ve heard from the members of our management team this morning how we’re continuing to drive both capital and expense efficiency.

Our strengths in scale, technology and integration have served us well over the years and will continue to play a foundational role as we expand into lower-emissions opportunities with a portfolio of projects that have projected returns in excess of 10 percent and above our cost of capital.

Sustainably growing shareholder value starts with industry-leading earnings and cash flow growth.

We had the highest earnings among international oil companies in 2021, helped by reductions in structural costs and improved efficiencies. The organizational changes we announced in January will continue to build on that success.

We also continue to upgrade our portfolio through investments in lower cost of supply barrels and growth in higher-value lubricants, lower-emission fuels and chemical performance products, which all drive higher value mix.

Strong earnings and cash flows have enabled us to restore our balance sheet and financial strength. We enjoy a strong investment-grade rating and have reduced our debt-to-capital ratio to about 21 percent, which is well within the range we target of 20 to 25 percent. We plan to reduce debt by another $2 billion in 2022.

We offer attractive shareholder returns, paying out $15 billion in dividends last year and celebrating nearly 40 consecutive years of annual dividend growth.
We also recently initiated a $10 billion share-repurchase program that we expect to complete in the next 12 to 24 months.

While we’ve made good progress, we see further upside potential.
Sustainably growing shareholder value means consistently leading in both returns from our projects and returns to our shareholders.

In 2021, we delivered a ROCE of 11 percent, above our ten-year average and the highest among our peers.

In terms of total shareholder return, our performance in 2021 was 57 percent, significantly above our ten-year average and also the industry’s highest.

The improvement in both metrics reflects key actions taken over the past few years to restructure the organizational model, reduce structural costs and improve our asset and product mix. This enables us to fully capitalize on the improved market environment. Our business is more resilient today as a result.

Our go forward plan builds on this momentum to drive sustained growth in shareholder value across a wide range of future scenarios and market environments.
Here you can see the progress made to date reducing structural costs, and some of the opportunities that we see going forward.

Starting at the left, we’ve achieved about $5 billion of reductions in structural costs in 2021, compared with 2019. These savings are underpinned by the reorganization of the business that Darren outlined which began in 2018 and continues.

We estimate another $4 billion in reductions over the next two years by eliminating additional redundancies, further centralizing functions, optimizing turnaround and maintenance activity and leveraging our scale to drive further procurement and supply chain efficiencies.

The savings are partially offset by market inflation, and a higher level of activity including new low cost-of-supply project start-ups. By 2023 we expect $9 billion in total structural cost savings, lowering our nominal cash operating costs by about $6 billion versus 2019 with relatively flat volume.

Looking beyond 2023, the additional structural savings we can already see are expected to offset anticipated inflation and effectively fund both replacement of upstream depletion and growth beyond 2024... and we’re clearly aiming to do better than that.

By holding base expenses at least flat, the full benefits from improved mix can flow through to the bottom line...with our investment program a key enabler in achieving these benefits...
We are accelerating our advantaged projects. We plan to invest $21 to $24 billion of capex in 2022, and between $20 billion to $25 billion annually from 2023 to 2027.

Our investment plan supports the high return, competitively advantaged projects that Neil and Jack discussed; from additional FPSOs in Guyana to expansion of our chemicals business in China. About 50 percent of Upstream volumes in 2027 will come from post 2020 start-ups which transform the mix of our asset base with higher-value barrels and we are doubling our volume of high value lubricants, lower emission fuels and performance chemicals.

We will retain flexibility within the portfolio to adjust our capital expenditures to changing market conditions as well as the pace of the energy transition. You can see that over time, we have a lower proportion of our planned capex in committed projects with more flexibility from projects that are still in the evaluation stage, as well as from shorter-cycle work programs. This gives us the ability to capitalize on additional opportunities as the energy transition progresses and climate policy takes shape. We’ll also be keeping a close eye on market conditions, aiming to invest through the cycle, and adjusting as needed.

While the absolute level of investment won’t change in the short term, we anticipate that the allocation of that investment will. For example, in 2022, the majority of the capex is expected to support the Upstream business and Product Solutions, significantly improving mix which accelerates our earnings and cash flow growth.

Although investments in lower-emission solutions are relatively small at first, we anticipate a tripling of investment by 2025. This reflects our commitment to reducing our own emissions and confidence in the market adoption of lower-emission solutions, such as carbon capture and storage, hydrogen and biofuels, where we have distinct competitive advantages. Altogether, we’ve earmarked $15 billion toward lower-emissions projects in the next six years.
We intend to lead the industry by offering low cost, innovative solutions that enable our customers to reduce their emissions, thereby advancing society’s shift to cleaner energy and a lower emission future.

We can help spur supportive policies through advocacy as well as seeding large-scale projects. This work is synergistic with reducing Scope 1 emissions in our own facilities, where we’ll be using many of the same solutions.
The work to strengthen our competitiveness positions us to deliver industry-leading earnings and cash flow growth. Let me put that in context.

This waterfall chart shows our planned earnings growth from 2019 through 2027. When comparing 2027 against 2022, the largest driver of the expected improvement in earnings growth is improved mix across our business.

The mix benefits reflect two main factors. The first is a stronger margin contribution from the Upstream business, reflecting growth from low cost-per-barrel assets. This includes production growth from Guyana, the Permian Basin and Brazil, which offsets higher cost depletion.

The second is margin accretive mix within the Product Solutions business, reflecting the increase in Chemical performance products, lubricants and lower-emission fuels that we discussed earlier.

The other important driver of the earnings growth is reductions in cash operating expense, supported by the organizational improvements and cost savings we’re driving.

Volume is also expected to contribute to our improved earnings beyond 2024.

Altogether we project earnings doubling between 2019 and 2025, with another 20 percent increase between 2025 and 2027. The stronger earnings drives improved ROCE; growing to 14 percent in 2025 and to 17 percent in 2027.
That strong earnings growth flows through to cash flow growth. From 2019 to 2027, our cash flow is projected to roughly double.
Our actions to improve mix, reduce costs and drive capital efficiency have significantly lowered the Brent breakeven price needed to fund our capital program and pay a reliable dividend.

On our last earnings call, we showed a $35 per barrel breakeven, on average, for the next six years.

On this slide you can see the drivers of the improvement in breakeven cost per barrel as well as the expected pace of that improvement. Favorable mix is a primary factor for lowering breakevens, reflecting portfolio upgrading from low-cost-of-supply barrels and higher-value fuel, lubricant and chemical products.

Cost reductions and volume gains also play an important role. Those benefits are expected to be partly offset by the impact of higher capital investments and lower asset sales versus 2021.

On the chart on the right, you see the breakeven drops from about $41 per barrel in 2021 to as low as about $30 per barrel by 2027. The roughly $10 per barrel reduction in real breakevens fundamentally improves the resiliency of the business across a broad range of scenarios and puts us in a stronger position to lead through the energy transition.
Here you see cumulative cash generation potential over the plan period.

Structural cost savings, upgrading of the portfolio, and capital efficiency and discipline underpin our strong cash generation.

At a real Brent price of $60 per barrel, we generate about $100 billion of cash in excess of capex and dividend distributions. That’s based on the current dividend of about $15 billion annually and the midpoint of the guidance that we provided for capex. At $50 real Brent we generate about $60 billion of surplus cash.

On average, dividend yield in 2021 of 6 percent reflects the recent recovery in our stock price, which has continued into 2022. Our dividend payout ratio last year was approximately 65 percent and indicates our strong commitment to a reliable dividend.

We repaid about $20 billion in debt in 2021, nearly all that we borrowed in 2020, and plan to retire more than $2 billion this year.

I mentioned earlier that we recently initiated a $10 billion share-repurchase program. We would anticipate deploying that program at the faster end of our 12 to 24-month period if economic conditions continue to hold.
Before we begin Q&A, let me recap the key themes Darren and the rest of our management team covered today.

Our effective pandemic response, including our focused and sustained investments during the down cycle, and structural cost savings... positioned us to realize the full benefit of the market recovery last year.

The credit for this accomplishment really goes to our people. They overcame challenges and managed unprecedented changes. I’m really proud to be part of this team.

Their performance enabled us to deliver industry-leading operating and financial results. At $23 billion, we had the highest earnings among our peers in 2021, and our best year since 2014. We improved our returns versus historical levels. We also delivered our highest cash flow from operating activities since 2012.

We’re upgrading our portfolio... another key takeaway we discussed today...executing competitively advantaged investments that drive higher-earnings barrels and margin-accretive product mix ... and we’re continuing to improve capital and expense efficiency. Our plan will enable us to potentially double earnings and cash flow by 2027 versus 2019, outpacing our peers.

In addition, we’ve restored our balance sheet, and we carry a strong investment-grade rating. Debt reduction remains a priority, as does our commitment to increasing shareholder distributions.

Overall, we’ve improved the competitiveness and resiliency of the business. We’re better positioned to capitalize on future opportunities at the lowest cost, and to drive stronger shareholder returns in any demand scenario.
This goes to the final and perhaps most important takeaway from our discussion today: ExxonMobil is well positioned to continue to lead in meeting society’s evolving needs... including the growing need for reliable, affordable energy and sustainable products, and innovative solutions to enable a net zero world. By applying our unique strengths and competitive advantages, we’ll continue to adapt – which is key to creating long-term value both for our shareholders and for society.

And with that, we’ll open up the line to take your questions.
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**Second Q&A Session**

**Operator:** We'll take our first question from Phil Gresh with JP Morgan.

**Phil Gresh, JP Morgan**

Yes. Hey, good morning, Kathy. Thanks for taking the questions. First question here, with the $100 billion dollars of excess cash that you’re talking about. Are you looking to lower the long-term net leverage ratio below 20 to 25%? Or should we assume that nearly all of this cash can go back to shareholders such that it would be reasonable to think that your $10 billion buyback program that you’re executing on in 2022 could continue for the foreseeable future at a $60 Brent real price deck?

**Kathy A. Mikells**

Thanks very much, Phil. Overall, we've talked about the fact that we ended last year with that debt to cap leverage ratio at a bit over 21% and that our intention was to drive that down further. I had mentioned in my prepared remarks that we expect to pay down about $2 billion or so in term debt additionally this year. And our net debt to cap ratio is clearly going to be below the bottom end of that range of gross debt to cap, which is the 20 to 25% range. So in a buoyant market price environment, it clearly makes sense for us to reduce our leverage to really have a very strong balance sheet so that we can weather whatever cycles come forward.

But I’d say we both have the $100 billion that you mentioned at $60 real Brent, but we will also have incremental debt capacity as well as the cash balance to lean into again, through the cycle. So you should think going forward that our expectation is through the cycle, we’re really looking to make sure that we sustain shareholder returns. And I think we have really great positive momentum in increasing those shareholder returns beginning this year.

**Phil Gresh, JP Morgan**

Right. Okay. Okay. And then my second question, it’s a bit of a clarification question on a prior one with respect to the dividend. So you've talked about the dividend to cash flow ratio. And obviously, in the past, you've mentioned that it's a bit on the higher end. Are you comfortable growing the absolute dividend burden moving forward? Your breakeven goes down to $30 at the out year target in 2027, which is a pretty low breakeven. Are you willing to grow that dividend over time, or is it more grow the dividend per share as the buybacks come in and reduce the share count? Just philosophically, wondering how you think about that.

**Kathy A. Mikells**

Sure. And so what we've really said is, we look at a couple of different metrics as we are evaluating the dividend and as the Board is considering the dividend on a go-forward basis. We obviously want a competitive dividend yield. And I would say if I looked at the last year, our dividend yield, would’ve been on the high side of peers, but what we’ve talked about is an expectation of that dividend yield becoming competitive with an improvement overall in our share price, which certainly we saw last year and continues this year.
We're also focused on the payout ratio. Last year, our payout ratio. So I'll just use earnings as an example, relative to that total dividend of about $15 billion with 65%, that is on the high side. Now, as we repurchase shares that absolute dividend amount comes down. And so we're looking to balance all of those things as we look to make decisions on the dividend going forward. I'd also just reiterate that we do understand how important the dividend is to our shareholders and ExxonMobil has about 45% retail shareholders, and clearly, during the pandemic we made it clear we understood that was important and stood behind the dividend.

So, I'd say we need to make those decisions, and I don't want to get out in front of our Board in making those decisions going forward, but those are some of the metrics that we look at and how we think about the dividend. And we have sustained annual dividend growth for 39 consecutive years in a row. And so again, I would tell you it is something that we're focused on and we know it's important to shareholders.

**Phil Gresh, JP Morgan**

Thank you.
Operator: All right. Next question comes from Sam Margolin with Wolfe Research.

Sam Margolin, Wolfe Research

Good morning. Thank you. I also wanted to ask about that $100 billion surplus cash projection. I think what stands out about that number is it's actually higher than a prior iteration of the same exercise that ExxonMobil once published at an Analyst Day earlier. And I think if I'm following the elements, it's a combination of mix effects and operating expense and lower CAPEX maybe offset by some of the volume growth that's no longer in the mix. But the question is you clearly reap some free cash flow benefits from the focused approach and I just wonder if there's an end to that road, if there's further sort of cash flow benefits to extract from going even harder into more and more focus on a smaller and smaller sort of suite of projects?

And then secondly if there's any cost to that exercise, whether there's sort of an NPV optimization level around the streamlining that you're conscious of as you continue down the path? Thank you.

Kathy A. Mikells

Sure. So I'll start in and Darren, if you want, you can certainly add to this. I would start in with, I think, as you heard earlier today, we are not focused on volume growth as a key metric that we're trying to drive. Right, we're focused on overall driving efficiency and productivity and investing in projects that really increase our mix. If I think about how we ultimately generate the improvement in earnings, which flows through to cash flow, which ultimately leads into the $100 billion of excess cash, kind of over that six-year plan period, about 50% of that is really coming from mix improvements.

So those are those focused and targeted investments. Whether we're talking about the Permian, Guyana, LNG, the investments that we're making in Brazil. Or what Jack talked to you about in terms of the investments that we're making across the Product Solutions business to drive higher cash margins in our refinery to drive those overall high-value products, lower emission fuels, performance chemicals, and high-value lubricants. Those really help to drive that earnings improvement over time.

And then the second measure that I would point to is those really focused cost reductions. I think we feel great about the cost reductions that we've made to-date overall $5 billion since 2019. We've clearly talked about another $4 billion over the next two years, and that work continues through the plan period. And I would describe what we have in the out years as still at a high level, and that what our experience is, is as we do more work we ultimately find more cost savings.

So clearly, we're looking to drive even a better performance than sits in our plan right now. So overall, I'd say, as I look at the different drivers that are both driving earnings and cash flow growth, we feel very good about the sustainability of that performance and the strong foundation that it's built upon. I don't know if you want to add.

Darren W. Woods

Yeah. Yeah. Let me just add a few points, Sam. And I want to – maybe I'll start with the organization then come back to the projects. I think it's important to know that the organizational changes we made were not driven by setting an Opex or a cash Opex reduction target. What we are looking at is how do
we more effectively leverage the advantages that we think this corporation has with respect to scale and the portfolio of businesses, the integration of those businesses. That's what drove the changes that we've made in the organization.

And as a result of that, we recognize there would be efficiencies and focus the organizations on generating those efficiencies, and that's been the progression we've been on. And I would tell you, the Opex reductions have been fairly organic with respect to the organization, finding those in driving those efficiencies. So it hasn't been a top-down target-driven exercise. It's been a focus on how we more effectively organize to execute our work and deliver the value that we know is inherent in the portfolio of businesses that we have. And then where does that value manifest itself? And part of it is a more efficient organization, and that's what we see.

And so this trade-off that you mentioned in terms of how far do you go before you start to lose value? I certainly think if it was a pure cost-cutting exercise, you would see that tip point. But I think it's important to recognize that's not, what's been driving this. And so our view is you take this change to the logical point where it makes sense in terms of growing the effectiveness and efficiency of the organization. That's been made very clear across all the organizations.

This is about delivering value to the business, not about just cutting costs. Obviously, efficiencies are part of a value proposition, but only one part. And I think it's important to keep that in perspective, and that's what you've seen happening here and what we have built into the plans and why I think Kathy and I both mentioned we expect to see more as the organization's focused on this because those opportunities will materialize.

And then to your point about Capex and the investments, and whether there's more value in focusing more on there, I would just remind you that the portfolio of investments that we have today, that projects that we're talking about are the same ones we had back in 2018. So this has not been a reduction or a slimming of the investment portfolio. This has been the evolution of driving value through our projects.

And let me just mention two, I think really important developments since we first started talking about this portfolio of investments. The first is the Global Projects Organization. As we brought that organization together, we gave them a suite of advantaged investment opportunities and unleashed the capacity of the broad corporate organization on those specific opportunities. That really paid off when we were in the pandemic and had to pause these projects.

But more importantly, as that new organization looked at the projects, found additional efficiencies, and grew the value of that reduced the capital for the same amount of benefit, if not more. And so we've seen a real value enhancement on that very similar level of investment, similar project portfolio. And our goal going forward is to continue to find similar opportunities. And then leverage that project's organization to deliver those to add value.

The other big area I think it's important as you think about investments in the reduced investments, early on in the Unconventional space you'll recall we were working on this long ball game, which was a lot of delineation, a lot of infrastructure put in, understanding what we had as we were developing the concept. And then as we developed that concept and started implementing it, you've seen the benefit of that where we now have a very clear understanding of what I would call the limits and the
capabilities. We have a better understanding of the resource. We’ve applied the technology and the reservoir modeling.

So I think what you’re seeing in that space again, is not so much a streamlining of the investments, but the optimization of those investments in terms of maximizing the resource recovery and the productivity of the capital spend. And again, I would say we’re going to keep looking for opportunities to do that without losing those benefits. And that’s the way I would think about it.

Sam Margolin, Wolfe Research

Thank you.
Operator: All right. Next question will be from Biraj Borkhataria with RBC.

Biraj Borkhataria, RBC

Hi, thanks for taking my question. I wanted to touch on biofuels, the 200,000 barrel a day target in 2030. It's quite a big number in the space at the moment. Would it be possible to give some clarity on the split between first and second-generation fuels, and also maybe if you could touch on your view on the feedstock markets at the moment, because there's been some concern around tightening market already?

Jack P. Williams

Yes, thanks Biraj, let me go ahead and take that one. We launched our low emission fuels venture, our biofuels venture back in 2020. So we've been working this space for a while and the platform for our biofuels is really our existing refinery platform, that if we talked about 75% integrated with chemicals and lubricants. So we have a very attractive platform to work from, and we can utilize that platform to have advantaged projects in biofuels.

So if you think about the Strathcona Project that I mentioned in the slides, and then you think about other projects in Canada on the East coast, our US Gulf Coast assets, our Singapore assets. We have a lot of assets – in Europe as well. We have a lot of assets that are positioned well to repurpose units or add units within our existing refineries, and therefore take advantage of all the utilities and savings and manpower savings.

So 20 Kbd for Strathcona, we've got repurposing plans in the US Gulf Coast of 20-ish Kbd, 15 Kbd more in Canada. So pretty big steps relative to small, new builds that others are approaching. So we're leveraging that infrastructure. We've also announced a couple of other ones to the feedstock aspect of your question, the global clean energy investment in California and this Norway investment I mentioned with Bio-jet. Both of those are focused a little more on the feed side.

So as we're looking beyond the current feed sources today, looking at something that's outside of the food chain that we think is more long-term sustainable and more long-term cost advantaged, that's what those ideas were after. We're going to get some volumes out of that as well, but we're really focusing on some of that second generation, as you said, or some advantaged first-generation, like a camelina, that's more of a cover crop versus actually being in the food chain.

So we feel pretty good about the 200,000 barrels a day by 2030. We've got a line of sight to all of at and it's all within either the ventures I just talked about or within our existing footprint. And we got pretty clear line of sight.

Darren W. Woods

Yeah, I might add to that, Biraj. I think you've touched on a really important perspective or advantage that we have as you think about 200,000 barrels a day in the context of 4.4 million barrels a day refining capacity. And the advantages that we've built over the decades in refining leveraging very similar technologies and changing some of the feedstock to develop that biofuel. And so it's tapping right into a significant advantage that exists today. And a key element of that is compared to, I think a lot of the
grassroots investments that you're seeing out there, we can do that at scale and therefore at a much lower cost, which then makes lowering emissions for society as a whole much more cost-effective.

And so that, I think you're beginning to see what we believe is going to be a real competitive advantage in this transition where biofuels are going to play a really important part is this refining footprint that we have is going to lend itself, to advancing the emissions reductions across society. And we feel really, really good about that. And the other point I'll make is with respect to environmental performances, that integrated footprint that we have with refining and chemicals, and the ability to process feeds to recycle plastic and to make bioplastics, I think's going to be another area of growth using our existing integrated footprint.

**Jack P. Williams**

So I tried to give you a sense of that on that slide, where I talked about the future configuration of our refineries in the US Gulf Coast in Singapore, and there's a lot of biofuels component to that and lubricants and chemical feedstocks, much less gasoline, and distillate. And that's where we see things moving towards over time. So this is, think about mid-2030s to 2050 timeframe, and we'll be taking those steps over time as demand evolves, but a lot of flexibility because of these large integrated sites that we have.

**Biraj Borkhataria, RBC**

That's very clear. Really appreciate the color. The second question and this is a very quick one for Kathy. Are you able to disclose what your book value of your investments in Russia is at the moment? Thank you.

**Kathy A. Mikells**

Sure. Our book value of investments, kind of PP&E that we have in Russia is about $4 billion. And so, as Darren mentioned earlier, kind of any stat you choose, it's kind of one to two percent of the total denominator. But that's what it is.

**Biraj Borkhataria, RBC**

Okay. Thank you very much.
Operator: All right. Next question will come from Alastair Syme with Citi.

Alastair Syme, Citi

Thanks very much for the presentation. I just wanted to come back to the point on Capex because if I go back to the 2019 capital markets day, you've really moved the budget here by 30% with much the same growth ambitions. And so Darren, I think I heard you say that was all efficiency, but I just wanted to clarify that or if there's any scale back and pre-FID stuff, or phasing that would've contributed to a different growth trajectory. Thank you.

Darren W. Woods

Yeah, no, I appreciate the question Alastair and there is an element if you recall one of the impacts of the pandemic was pushing out some of the investments and phasing that, and we're now certainly for the downstream and chemicals, starting those back up. We had some LNG investments that were built into that plan that frankly weren't showing any benefits because they were early in that investment cycle. As we shifted some of those back out, they fell out of that profile and they were, if you think about it from a plan standpoint, fairly unproductive capital. And so you're going to see that spend, as we extend the timeline of our planning horizon. You'll see that spend pick back up again, and then obviously, the benefit of that spend will come even further down the pipe.

Alastair Syme, Citi

Okay. Thank you for the clarification. My follow-up was really for Neil, I'm sorry, just go back to the first presentation for the day, but I was intrigued by your market size analysis in low carbon and particularly the observation that CCS will be two and a half times the addressable market of hydrogen. Now it might be an accusation that European policy makers do not always get energy policy right, but there's a lot of people over here that would suggest that the relative market sizes would be the other way around. Can you just sort of clarify how you see it?

Neil A. Chapman

Yeah. Well, look, I think as the markets evolve between CCS and hydrogen, I think we're going to find out how this goes. We're going to talk a lot this afternoon about where hydrogen will play a role and where CCS will play a role on its own. Now, I think in some of those addressable markets, you have to understand that in blue hydrogen, you've got CCS as a component of that. So blue hydrogen of course takes gas, produces hydrogen, a single stream, concentrated stream of carbon dioxide, which you then subsequently sequester.

So I would say, when you look at to addressable markets between CCS and hydrogen, the way we look at them, we add them together and say, that's probably a realistic assessment of where the markets will go.

Darren W. Woods

Yeah. And I might add, those are obviously third-party estimates that we're using to assess the sizes of markets. But I think there's a more important point that you touch on Alastair, which is the solution and the mix of solutions. The most effective and economic solutions will vary by the region. And when you
talk about what makes sense over in Europe, if you think about the natural endowments within Europe, you can see where electrification and green hydrogen will probably play a bigger role than say in North America or the US where you have an abundance of methane, an abundance of underground storage.

And so blue hydrogen with CCS, as Neil talked about will play probably a much bigger role in North America than it would in Europe, simply because of the natural endowments associated with those two regions. And I think that's something frankly, that hasn't really been picked up on as people talk about the transition. And in fact, if you look at a lot of the forecast out there, people talk about this transition on a global basis. The reality is this transition is going to happen country by country, region by region, market by market.

And so will look very different as those develop and evolve both from a policy standpoint, a market standpoint, but then also on the resources available to take advantage of that. And so I think as this progresses and you move from concept to practice, people put pen to paper, you're going to find the solutions do look different with the same objective, which is lowering cost. And from our perspective, lowering it at the lowest cost to society.

Alastair Syme, Citi

Thank you.
Operator: All right. Next question will be from Jason Gabelman with Cowen.

Jason Gabelman, Cowen

Morning. Thanks for taking my questions. I wanted to ask about capital allocation. I know you alluded to a few times a $15 billion low carbon energy budget, but on the slide, at least, it looks like that number could come in up above $15 billion. Is there a potential for that? And when you think about potential environment that would warrant an acceleration in that spend, what are the kinds of things that you think about? And lastly, if you decide to increase that spend over the five-year period, would there be a likely offset somewhere else in the budget or not? Thanks.

Neil A. Chapman

Yeah, maybe I'll start on the $15 billion and that spend because you have to start with, these are large projects. Like all of our businesses and the businesses we're in today, they’re capital intensive projects, and they take a lot of development time before you bring them online. And so projects that we’re starting on now, as you know, will take several years before they come online. I think it's very unlikely that that $15 billion will change over the coming years, but it will depend very much on policy and on market incentive.

If the policy is there and the market incentives are there, and we can combine that with our assets and our capabilities to get the kind of returns that we're looking for, then of course we could lean into that space more. But I don't see us being able to develop projects that quickly, that would materially change that $15 billion over this period. It's just simply the size of these investments.

Darren W. Woods

Yeah. And I might add to that don't forget that the portfolio that we're talking about today in terms of the early work, to identify the opportunities and start developing the concepts really began back in 2018, 2019, 2020. And so the capital profile that you see today, the actual Capex and the spend are concepts that we began developing several years before we actually established a Low Carbon Solutions Business.

And so to Neil's point, if the markets begin to develop and transition faster with the incentives and the policies or the market drives that portfolio will grow with respect to the opportunities that we're pursuing. And we hope that's the case because we can bring a lot to that portfolio and we believe if the market picks up and the policies get put in place with the advantages that we have, they will be highly accretive projects for us, but we'll have to develop those concepts into practice, into actual projects. And therefore, while the activity may pick up, the actual CAPEX would probably start to fall outside this time horizon, which is the point that Neil's making.

Neil A. Chapman

I think the other point to make it as we've lent into this space over the last 12 months, the opportunity set has grown. And that was really the point of the pipeline chart. We're getting so many opportunities from either industrial partners or government partners looking for our help, particularly in the CCS and hydrogen space that we're building the front end of that pipeline. It gives us tremendous flexibility.
within that budget to accelerate one project or another, depending on the advantage we have and depending on the incentives that exist associated with those projects.

**Jason Gabelman, Cowen**

Great. I appreciate that color. And maybe just a follow up on the downstream, you have an element of performance product, chemicals growth that remains pretty opaque to us and who try to model the business. I think back in 2018, you had discussed a $2 billion earnings growth from 2018 to 2025, and it's tough to see that in the numbers. Can you just discuss what that progress has looked like to date has that come in line with expectations, and is the earnings you're embedding through 2027 kind of capturing that growth that you initially intended from 2018 or is it above and beyond that given the longer timeline? Thanks.

**Jack P. Williams**

Yeah. Thanks, Jason. It's very much in line with what we've been saying. Really, nothing has changed a lot there. The China One project it comes in at the tail end of the period obviously has continued to mature. We FID that project. The Corpus Christi project is online obviously completely de-risked there. So think the chemical performance products, as we've talked about this 10 to 25% uplift versus commodity chemicals, they're driving the returns on these projects.

So as you think about our group of projects, there's an element of performance products in almost all of those, certainly in all the ones that are chemical driven. And there's some commodity elements as well, but the performance products are really carrying the projects and really leading the projects or they are the driver for the projects. In terms of how you think about that, what's now $4 billion for total performance products. The chemical performance products is a big piece of that.

It continues to be a big piece. Nothing's different from the $2 billion I talked about earlier maybe a little bit higher now, but just with the maturity of the projects. And think about that fairly rateable over the period. We showed that earnings potential and performance products chart, it's pretty, rateable up through 2027 because we have projects coming on in larger chunks, but through there, we have some mix upgrades that we're doing with smaller projects as well. And that's why you kind of see that smooth line between now and 2027.

**Jason Gabelman, Cowen**

Great. Thanks for that.
Operator: All right. Next question will be from Manav Gupta with Credit Suisse.

Manav Gupta, Credit Suisse

Thank you for squeezing me in. You're moving ahead with your US Gulf Coast Permian processing project that increases the amount capacity by about 250,000 barrels. This is Gulf Coast is a slightly oversupplied region. And so you need exports to balance it, and I'm trying to understand there are sort many assets on the Gulf coast, which are available at discounted prices. So why not buy one of those and make a convert, why build your own? Can you give us the benefits of building your own versus buying something at a discounted price and converting it into a running Permian crude? And I have a follow up.

Jack P. Williams

Thanks, Manav. Remember, this is not a full greenfield refining investment. This is at our Beaumont facility. It's adding one oil train onto our existing facility and not much conversion capacity. So it is creating about 120,000 barrels a day of new product, but it's also backing out that same amount of products that we're purchasing, intermediate products we're purchasing at Beaumont, and also at Baton Rouge and Baytown.

So it's really filling in a conversion gap, enabling us to get the pipeline capacity to fill in a conversion gap that we have with our Gulf Coast refining capacity. And the reason is because the barrels that are exported from the US are going to come right by Beaumont. And by us taking those barrels off the pipeline, refining them, and turning them in refined product, we get number one, the advantage I just talked about in terms of we already have surplus conversion capacity, we're having to fill with third-party purchases.

And secondly, we're going to have the most efficient way to convert those barrels into products of anywhere in the world. No matter where those barrels are headed, what we're doing at Beaumont is going to be more efficient than to convert them into products. So it's leveraging a perfect position we had from a logistics standpoint, a conversion standpoint, to have a very capital efficient project that would be online, that would be filling that need. And just too kind of confirm that for you, if today that's kind of a $250, $300 million type earnings, annual earnings over time. If we had that project on today, we'd be making double that.

Darren W. Woods

Yeah, I might add to when we first started that concept, it was justified with just the transportation differentials that you would save by backing out the exports to fill the capacity that Jack talked about and doing that internally. And so it's a very robust project in the base case. And then on top of that, you get the benefits of the Permian crude processing and some of the upside that we've built into that project.

Manav Gupta, Credit Suisse

Perfect. I have a very quick follow-up, if you could provide, you highlighted a 14% return on capital by 2024 and 17% by 2027. If you could please provide us a little bit of a breakup upstream versus
downstream. I'm not looking for absolute numbers, but if you could give us a range where would upstream probably get to in 2024, and then where would downstream probably get to in the 2024, 2027 range? Thank you.

Kathy A. Mikells

So overall, I would say the way you should think about it is our earnings improvement slightly more than half of that comes from upstream and then we get downstream and a little bit of earnings improvement coming through from Corp and that flows through to cash flow, which ultimately helps to drive that return on capital investment. Now the other thing you have to just intersect with that is that upstream is today if you looked at 2021 about 70% of earnings to start with, but from a growth perspective, the growth is split a bit more than half into upstream. So that's how you can think about it as you try and think about the 14% in growing to the 17%, but clearly return on capital investment is growing across the business.

Manav Gupta, Credit Suisse

Thank you for taking my questions.
Operator: I think we have time for one more question. We'll take the last question from the line of Neil Dingmann with Truist Securities

Neal Dingmann, Truist Securities

Morning all. Thanks for squeezing me into end of the day. My question is kind of counterpart of what you said, a couple things and on one about going forward, I think Neil was talking about projects would need to be capital efficient. Totally understand that. And then I appreciate that Kathy has given kind of a longer-term CAPEX suggestion. So I'm just wondering when you look at that capital budget down the road, how elastic is that? Is that going to be just dependent on the efficiencies of these projects? Again, as an analyst, we appreciate the long-term guide, but I'm just wondering how elastic is that sort of capital budget guide in the out years.

Kathy A. Mikells

Sure. So I'll start with that question. And then Darren, if you have anything to add, please go ahead. Overall, as you would expect, we start any given year on not having, I'd say fully filled up the capital projects. So, we're always leaving a little bit of room for ourselves, and those are rooms for incremental projects, incremental investments, or incremental acquisitions for that matter.

But as time goes by, more of those projects get committed. And so what we were trying to show in the slide with flexibility is early on, we don't have as much space, I would say, just in terms of flexibility because we have more FID projects, but over time, many more of those projects are still under evaluation. But as you think about the overall long-term $20 to $25 billion, we would clearly be looking to leave ourselves some room within that overall range.

So I'd say, we have pretty good line of sight. You've heard about the projects are pretty long-term in nature. And so even if they're not FID'd yet, I would say we have pretty good line of sight to what they are. And I think our global projects organization does an incredible job, not just in terms of engineering and driving a high capital efficiency on projects, but having a good eye for what they think those projects are going to cost over time. So we do have a little bit of flex within that as you would expect. But the projects are pretty well laid out, including the low carbon emission projects that Neil talked about earlier.

Darren W. Woods

Yeah, I would just add to that. While we have a very clear line of sight of the projects and so we've got line items that back up that. Obviously, the organization is very focused on improving the returns leveraging technology. And so that global projects organizations they are constantly working at, as we're going through the project development process of how do we make this project more robust, better leverage technology, and lower its cost.

And so that is part of the evolution that as we move through and get closer to FID that, and the project starts to get one more refined, we'll see some movement in that space. And of course, our objective and push for that organization is to find those optimization opportunities, which I think as Kathy mentioned, they do a very good job of that.
And the other thing is worth just noting is recognizing the portfolio mix. And the fact that in many of these projects, particularly in the upstream, we’re working across governments and partners, there's always movement around. And so you could have something on one edge of a year pop into another edge of a year. And so there's always that kind of movement that as you move forward, you have that move from one year to the other. But the thing that I think then kind of offsets all that is just a diversification effect. The fact that we’ve got a number of projects in there, and when you see something, move out, something else moves in and generally tend to kind of hit within the ranges that we’re laying out there.

Neal Dingmann, Truist Securities

Yeah. Great details. And one last one, maybe for Neil, just on I think you said 10, 11 rigs in the Permian, just wondering sort of near term plans for the remainder of the year. There's sort of two questions there, already seen inflation there and if so, how much? And then is the plan – I forget how many rigs have you talked about that you may have by the end of the year in the Permian?

Neil A. Chapman

Yeah, well, it's the same. I think we're currently running, I think 10 or 11 and we anticipate being around that level for the year. That's certainly our planning basis. It doesn't mean to say that we couldn't go up a rig or two towards the middle or back end of the year, but the current planning basis is we'll stay at that 10 to 11 rigs. In terms of inflation, I made some comments earlier.

We have seen some inflationary effects, but not a lot so far. It's in specific assets and specific materials where we've seen it, but the development plan that we laid out back in 2018, and we've talked a lot about again this morning has allowed us to work with the contractors and suppliers on longer-term contracts than if you are having smaller type of developments. And so I think we feel well-positioned in terms of offsetting what we anticipate will be inflationary impacts. So today, we have not seen a significant impact on that.

Neal Dingmann, Truist Securities

It's great to hear. Thank you all.
Jennifer K. Driscoll

Thank you for all your questions. Darren Woods will now provide a few closing comments.

Darren W. Woods

Well, let me just start by thanking all of you, again for attending this event, and more importantly, for your interest in the company and for your questions. I hope you get a sense today from the presentation and the management team that we’re extremely excited about the work that we’ve been doing and the future that we had ahead of us. I hope too, that you can see how the work that we outlined in 2018 is beginning to come to fruition. And really it helps position the company to outperform competition with respect to earnings and cash flow growth.

And hopefully too in the results that we’ve delivered in 2020 and 2021, despite the significant changes the organization was going through delivered best ever safety, best ever reliability. And what I would say is industry-leading safety and reliability, and that remains a core fundamental for us in terms of driving this business. I think also you’ll see that we led earnings and cash flow growth in 2021, which is, I think the example of the work that we’re doing and the benefits that we think will come. The organizational structure that we’ve put in place is leading to a more effective organization and a more efficient one that fully leverages the advantages that we have as a corporation.

We talked about the $5 billion of cost efficiencies that we’ve already captured and the $9 billion in total that we have in plans by 2023 versus 2019. You’re seeing, I think the benefits of the investments that we made, the advantages those investments have, and the mix and the improvements that we’re seeing in the earnings associated with that. Doubling our earnings potential and cash flow potential by 2027 versus 2019. And then growing our ROCE, which has always been an important focus of ours from 11% in 2021 to 14% in 2025 and 17% in 2027.

I think, as you look at all that, a lot of pride in driving the improvements in that base business, but on top of that significant improvements in managing emissions and driving reductions through the organization, extremely proud of the organization’s focus and the results that they delivered in 2021, meeting our 2025 objectives, four years early. The portfolio that we’ve developed and the lower emission space that generates returns while reducing emissions, the $15 billion spend that Neil talked to and we’ll come back to in the low carbon solution spotlight, we feel very good about that.

But again, the fruition of work that started several years ago. And I think more importantly, as you look at the strategy we have laid out, the ability to leverage proven, demonstrated advantages and capabilities within the organization that are driving results in the base business. But at the same time will drive results in the lower emissions business, I think is a powerful, powerful strategy that gives the corporation lots of flexibility to manage this uncertainty as we move forward and shift resources, as the opportunities evolve, which we know they will. Feel very good about that. Feel very good about those advantages.

And I would say feel very good about the organization’s capability and the focus that they have on growing the value of this corporation and delivering bottom-line results. I have no doubt today, and
hopefully, you are seeing it, our company is stronger today than ever. It’s positioned to lead the industry, both today and in the future through the transition.

So again, thank you for joining us today. I appreciate your time and your questions and look forward to our ongoing dialogue.
Neil A. Chapman

So we’re now pleased to have the opportunity to speak to you in greater detail about the strategy, priorities, and the focus areas for Low Carbon Solutions.

Joining me here is Joe Blommaert, he is our President of Low Carbon Solutions.

Joe has more than 30 years with the company and was named LCS’s first president upon the creation of the new organization in February of last year.
I’ll start the discussion with three slides to reconnect to our discussion earlier today. This slide provides an overview of the differentiating capabilities that will enable ExxonMobil to be a leader in the energy transition.

Our technical expertise, scale and ability to integrate with our existing business, uniquely position us to win in biofuels, CCS and Hydrogen arenas.

Joe and I will spend time now to provide additional insight into how we’ve leveraged our competitive strengths to define our strategic priorities for the Low Carbon Solutions, as well as share specific plans on a few of our key projects in each of our focus areas.
Our three strategic priorities are simple and are clear.

We will grow our biofuels business, we will deliver carbon capture and hydrogen solutions and we will reduce emissions in our existing business.

All of this work is underpinned by our ongoing technology programs that are focused on advancing new, step-out solutions and lowering the cost of carbon abatement in the most difficult sectors to decarbonize, which of course includes industrial, heavy duty transportation and power generation.
I’ll now refer back to our broad opportunity set and share specifics on some of the exciting projects in our portfolio.

The individual project opportunities are advancing based upon a number of factors, including availability of supportive policy, technology for cost-effective abatement, and alignment with our partners and with our stakeholders.

You can see in the graphic that our biofuels projects, in green, are progressing through the pipeline, with several in the final Project Development stage.

We’ve previously announced that we are partnering with Global Clean Energy, which is converting a refinery in Bakersfield, California, to produce 4 million barrels of renewable diesel per year. Production will begin this year, initially utilizing soybean oil as a feedstock, then gradually transitioning to camelina oil, which will reduce renewable diesel carbon intensity by 50 percent.

We are also progressing advanced biofuels projects in Europe and in Canada.

Joe will share more details on the Strathcona project in Alberta, Canada, where we will produce more than 20,000 barrels per day of renewable diesel starting in 2024.

Additionally, we have been working within our existing businesses to progress initiatives to reduce the emissions in our own facilities. Many of these projects, shown in purple, are moving quickly through the development pipeline.

I’ll later be sharing more about our progress on the LaBarge CCS expansion in Wyoming, where we announced a final investment decision just last week.

We’ve also previously communicated that we expect to reach a final investment decision later this year on our participation in the Porthos carbon capture and storage project in the Netherlands. As one of
Porthos’ potential customers, we have signed agreements with the project for the transport and storage of CO₂ from our operations. The Porthos project aims to collect approximately 2.5 million metric tons of CO₂ emissions per year from industrial sources in and around the Port of Rotterdam and to transport them by pipeline to depleted natural gas fields in the North Sea.

Both of these opportunities are in advanced stages in our development pipeline and will contribute to our emissions-reduction commitments.

The carbon capture and storage and hydrogen opportunities, shown in blue, have the potential to make a significant impact in reducing industrial emissions. These apply to hard-to-decarbonize sectors where there are few proven technologies that can help reduce emissions. We have a number of opportunities in the early stages of development where we are progressing front-end investment and advocating for both policy and regulation that will support the advancement of these prospects.

One example is the Houston carbon capture and storage hub concept that we’ve discussed previously and we’re continuing to progress.

Joe will give you more information about an exciting new project in Baytown that represents an initial activation step for this significant opportunity to help decarbonize the Houston industrial area.
As Neil said, we’re focused on the areas where we believe we can provide the biggest impact to society, and where our strengths and capabilities can be best utilized. And that is in three areas:

1. Carbon capture and storage
2. Hydrogen
3. And thirdly, where I’ll start our discussion – biofuels
Biofuels have the high energy density that is needed for commercial transportation, while also having a significantly lower carbon intensity than conventional fuels. The potential is enormous. Looking at the average demand needed under the IPCC’s Lower 2 degree C scenarios, the potential addressable market could be $1 trillion dollars by 2050.

We’re focused on growing our biofuels business using cost-advantaged bio-feeds and processing them through our existing refineries, which can keep costs down and margins up. We’re leveraging our technology to co-process these feedstocks, such as first-generation vegetable oils – like camelina and canola. We are also using second-generation agricultural waste and woody biomass.

We recently completed successful trials in Europe and Canada. We are also continuing our longer-term research into other forms of advanced biofuels for the future, such as step-out technology leveraging third-generation biofeeds like algae.

In addition, we’re looking at opportunities to combine these forms of bio-energy with carbon capture and storage. This combination provides a unique opportunity to develop negative emission fuels across their entire life-cycle of development, production and end use.

Today, we are focusing on markets with existing lower-carbon fuel policies, such as in Canada, California and some countries in Europe, which incentivize the broad deployment of these lower-emission fuels.

We plan to grow our biofuels production to more than 40,000 barrels per day by 2025 and up to 200,000 barrels per day by 2030. Doing so could help society reduce more than 25 million metric tons of CO₂ emissions from the transportation sector alone.

One place where we’re doing that is in Canada, so let’s talk about our project at Strathcona.
Last fall, we announced plans to produce renewable diesel by repurposing parts of the Strathcona refinery near Edmonton, Alberta. When construction is complete in 2024, the refinery is expected to produce about 20,000 barrels per day of renewable diesel, which could reduce transportation emissions in Canada by about 3 million metric tons per year.

The project will use locally grown canola oil as feedstock, along with blue hydrogen as part of the manufacturing process. Blue hydrogen is a term for hydrogen produced from natural gas, with carbon capture and storage used to capture the CO₂ emissions that are produced when making the hydrogen. I’ll talk more about blue hydrogen in a few minutes.

A proprietary catalyst will then be utilized with the blue hydrogen and canola oil to produce the premium lower-carbon diesel fuel.

Canada’s proposed low-carbon fuel policies are incentivizing projects like this one, which can make meaningful emissions-reduction contributions. The Strathcona project is an example of how well-designed policies can help us leverage our existing global facilities to develop lower-emission fuels. We can keep costs down and get these new-generation products to market sooner.

While we continue to support a globally harmonized, economy-wide price on carbon as the most efficient approach, Canada’s proposed Clean Fuel Regulation could be a model for other countries considering a sectoral approach. Technology-neutral, lifecycle carbon-intensity based policies like this one can bring projects like Strathcona from concept to reality.
Let’s shift gears and talk about two critical technologies to help decarbonize the industrial sector: carbon capture and storage and Hydrogen.

The photo you see here is the Fred Hartman Bridge in Baytown, where I used to work, where just this week we announced a significant project that encompasses both technologies. I’ll talk more about Baytown in a few moments.
As many of you know, carbon capture and storage is the process of capturing carbon dioxide before it is emitted into the air, and then injecting it deep underground for safe, secure and permanent storage. We have more experience with carbon capture than any other company.

It is one of the few proven technologies that could enable some of the highest-emitting sectors to reduce their emissions, such as manufacturing, power generation, and the refining, petrochemical, steel and cement industries.

Experts – including the International Energy Agency and the U.N. Intergovernmental Panel on Climate Change – believe carbon capture and storage is critical to reach society’s emissions-reduction goals. The IEA has said getting to net zero will be “virtually impossible” without carbon capture and storage. Looking at the average demand needed under the IPCC’s Lower 2 degree C scenarios, the market potential in 2050 could be upwards of $4 trillion dollars.

Our Low Carbon Solutions organization has made the broad deployment of carbon capture and storage one of our primary focus areas. We have the experience and expertise to do it, and supportive policies can incentivize the development of projects at the pace and scale needed to help meet society’s net-zero goals. Now let’s take a closer look at the economics and what it takes to develop these projects.
The economics are highly dependent on the concentration of the CO2 stream being captured, as well as the proximity to sufficient underground storage.

In simple terms, the higher the concentration, the easier it is to separate the carbon dioxide from the other components. That has a direct impact on costs.

High concentration emission streams, such as those from natural gas processing or bioethanol production, contain 95 percent carbon dioxide or more. If there is sufficient storage nearby to limit the construction costs of pipelines and injection wells, then carbon dioxide can be economically captured and stored under existing policy in the United States, such as the current 45Q tax credit. Unfortunately, these types of CO2 streams represent less than 5 percent of global emissions.

Most CO2 emissions are at lower concentrations, such as those from furnaces and boilers which typically have 5-15 percent carbon dioxide. In those cases, costs increase significantly and the economics for individual carbon capture and storage projects become more challenging with current policies and technologies. Policy support will likely have to increase to deploy CCS for broader ranges of carbon dioxide concentrations.

Shown on the right of the chart, capturing CO2 directly from the atmosphere via direct air capture, or DAC, relies on CO2 concentrations of about 400 parts per million, which increases cost significantly. Breakthroughs in technology will be critical to provide an economically viable process for DAC at scale.
Our Low Carbon Solutions business is looking at potential carbon capture and storage projects all over the world. The U.S. Gulf Coast, for example, is home to a lot of heavy industrial activity, and it also has some of the largest potential storage reservoirs in the world.

The map on the slide shows EPA emissions data that illustrate the high density of industrial emissions in the region. Unfortunately, we estimate less than 10 percent of these emissions are from carbon dioxide streams that are concentrated enough to be economically feasible under existing policies.

The on and offshore storage in the region is large enough to safely store about 500 billion metric tons of carbon dioxide, which is equivalent to 130 years of industrial and power generation emissions in the entire U.S., based on 2018 data.

So you can see why we believe the cross-industry effort to advance carbon capture and storage in Houston has so much potential. We’re one of 14 companies aiming to capture and store 100 million metric tons of carbon dioxide per year by 2040.

We are actively working on multiple projects in this region, including the project at Baytown we announced earlier this week. I’ll talk about that in a bit more detail in a couple of slides.

We’re also looking beyond Houston and Baytown. We’re in the early stages of several developments that do have high-concentration carbon dioxide streams. These have the potential to deliver accretive returns using existing 45Q incentives and I anticipate we’ll be in a position to announce additional details in the coming months.

I’m very excited about the potential for these projects along the U.S. Gulf Coast. The combination of heavy industry and world-class storage make this an attractive area to scale up carbon capture and storage, and potentially provide the blueprint of these types for projects to be replicated around the world.
Another option for abating CO₂ emissions in industrial applications is hydrogen fuel switching. If the concentration of CO₂ is not high enough to economically deploy carbon capture and storage as a standalone decarbonization solution, hydrogen fuel switching offers an attractive alternative.

Fuel switching, as the name implies, involves switching from natural gas to hydrogen to fuel certain industrial processes without the CO₂ emissions. When combusted, hydrogen only emits water, so industrial processes using hydrogen are zero carbon. Looking at the average demand needed under the IPCC's Lower 2 degree C scenarios, the hydrogen market could be $1.5 trillion dollars by 2050.

When hydrogen is produced today, it is typically made from methane (hydrogen and carbon), with the resulting CO₂ emitted to the atmosphere. This is sometimes called gray hydrogen.

However, when using carbon capture and storage, you get blue hydrogen. So not only is the hydrogen zero-carbon when it is combusted, it is also nearly zero carbon when it is produced. When the price of natural gas is low and suitable storage is nearby, blue hydrogen can be a low-cost de-carbonization solution.

The image on the left depicts a conventional scenario, with multiple industrial facilities each burning hydrocarbon fuels, resulting in low concentration carbon dioxide streams.

The image on the right depicts the blue hydrogen fuel switching solution resulting in zero emissions for the hydrogen consumers.

We believe hydrogen will play an important role in a lower-emission future for hard to decarbonize sectors.
So with that as background, let’s talk about our early stage planning to build our first blue hydrogen plant at our refining and petrochemical facility in Baytown, Texas.

This new, world-scale plant could supply up to one billion cubic feet of low-carbon hydrogen per day to our Baytown complex and other Houston-area industrial facilities.

Fuel switching from natural gas to blue hydrogen at Baytown could significantly reduce the CO₂ emissions at our olefins plant, and cut emissions across the entire site by up to 30 percent. And importantly, it supports our ambition to achieve net-zero Scope 1 and 2 emissions across our operated assets by 2050.

Because it’s blue hydrogen, there will be a carbon capture and storage project associated with it. In fact, it would be one of the world’s largest carbon capture and storage projects, capable of capturing, transporting and safely storing up to 10 million metric tons of carbon dioxide per year. That is equivalent to taking approximately 2 million cars off the road.

In addition to reducing our emissions in our own operations, we intend to market blue hydrogen and carbon capture and storage to other Houston area facilities. A final investment decision could come in the next 2-3 years, subject to regulatory permits and market conditions.

The project marks ExxonMobil’s initial contribution to the broader, cross-industry effort to capture and store about 50 million metric tons of CO₂ per year by 2030, and 100 million by 2040.

This project leverages low-cost natural gas, local underground storage, and the unique combination of our expertise in the subsurface, technology, integration and project execution.
Joe Blommaert

I hope you can see why we are confident in the potential of our Low Carbon Solutions business and what it represents for the future.

At this time, I’ll hand it back to Neil to talk about the steps we’re taking to reduce emissions in our existing operations.

Neil A. Chapman

Thank you Joe.
In addition to advancing the critical technologies Joe discussed, we continue to be focused on reducing the emissions in our own operations.

In 2021, we met our emission intensity reduction plans four years early. Based on this success, we’ve set more aggressive plans for 2030, which are expected to deliver a 20-30 percent reduction in corporate-wide greenhouse gas intensity. This equates to an absolute reduction of 20 percent, or 23 million metric tons compared to 2016 levels.

We’re continuing to build and execute our site specific emission-reduction roadmaps, which are tailored to account for facility configuration and maintenance schedules. They will be updated as technologies and policies evolve.

Companywide, we expect to have roadmaps for major assets, covering about 90 percent of our greenhouse gas emissions completed this year, with the remainder completed in 2023.

This will give us a very clear understanding of the specific steps that are needed, asset by asset, in order to bring our Scope 1 and 2 emissions to net zero, prioritizing the most cost-effective solutions.

To date, we have identified more than 100 potential modifications across all upstream asset types including energy efficiency measures, equipment upgrades and the elimination of venting and routine flaring. Examples of further high-impact reduction opportunities include the use of power and steam cogeneration, electrification, carbon capture and storage projects, and blue hydrogen.

We are developing these roadmaps and are committed to deploying innovative lower-emission solutions as technologies evolve and supportive policies are enacted.
We recently made a final investment decision to expand the carbon capture and storage capacity in our facilities in LaBarge, Wyoming, building on more than 30 years of carbon capture experience at this asset.

LaBarge is one of the world’s largest helium plants. And helium, is an essential component for health care equipment such as magnetic resonance imaging, as well as high-tech products including fiber optics and semiconductors, and materials for space travel.

Our existing facilities at LaBarge have a capacity to capture up to 7 million metric tons of CO₂ per year; and we have now completed front-end engineering and design work to expand that capacity by an additional 1 million tons per year. We expect to issue the engineering, procurement and construction contract next month, with start-up of the expanded facility anticipated in 2025.

This is an example of a carbon capture and storage project that is economically attractive under existing 45Q policy because the CO₂ stream is high concentration and suitable pore space is close to the operations. It’s also a good example of how we will reduce emissions from our operations while continuing to demonstrate the viability of large-scale carbon capture and storage to address emissions from vital sectors of the global economy, including industrial manufacturing.
As I touched on earlier this morning, we aim to lead the industry by achieving net-zero emissions in our Permian operations by 2030.

This is a major undertaking, as the Permian accounts for just under 40 percent of our net production in the U.S.

Our net-zero roadmap in the Permian begins with building an abatement curve, which allows us to prioritize discrete projects that deliver the largest benefit for our investment as we seek to reduce emissions to net zero.

And we are making great progress...

In the Permian, we’ve already implemented an aggressive program to rapidly drive down methane emissions by:

Enhancing leak detection and repair surveys;

Ending the use of high-bleed pneumatic devices;

Monitoring low-pressure gas well liquid unloading to reduce releases;

Enhancing leak inspections and training programs for operations personnel; and

Improving facility designs, and moving to full electrification of our drilling and completions equipment

Since initiating this program, we’ve reduced methane emissions across our U.S. unconventional operations by approximately 40 percent as of year-end 2020, which equates to about 1.7 million metric tons of CO₂ equivalent.
We are also making great strides in minimizing flaring and are progressing plans to further electrify operations with low-carbon power, which may include wind, and solar, and natural gas with carbon capture and storage, or other technologies.

These ambitious plans are being made a reality by leveraging the integration, technology and major project execution capabilities of the broader ExxonMobil organization.
Neil A. Chapman

We’ll close our LCS spotlight with a re-cap on our investment plans in the lower-emissions space through 2027.

Our strategy informs our capital-allocation priorities, making near-term investments where we can have the greatest impact and deliver the strongest returns; our planned investments will deliver strong double-digit returns.

Project definition on opportunities to reduce emissions of our own facilities in support of our 2030 greenhouse gas emission reduction plans is further along, so capex (shown in purple) is weighted heavily to these activities in the early years of our plan period.

Supportive policy exists for biofuels in many areas of the world, so as a result, we have several opportunities that are nearing a final investment decision, with spend ramping up through the plan period as execution of these projects advance to achieve our production target of 200,000 barrels per day by 2030.

For projects where additional policy support is needed, such as large-scale deployment of CCS and hydrogen, we are making initial investments to establish industry leadership and form a basis for constructive policy advocacy.

Our plans are flexible, and we’ll continue to strategically optimize our developments as the policy environment and as the technologies continue to evolve.

Joe and I are both passionate about the importance of the business we’ve just described and are determined to advance this pipeline of projects at pace where strong returns are available. We know that many opportunities lie ahead, and we are actively engaging with our customers, industry partners.
and government to apply our unique set of capabilities to help society address the challenge of climate change.

So thank you, and we welcome your questions...

Jennifer K. Driscoll

At this time, we will open the line for Q&A.
Operator: Thank you, Jennifer. We'll take our first question from Jeanine Wai with Barclays.

Jeanine Wai, Barclays

Hi, good afternoon, everyone. And good morning. Thanks for taking our questions. Our first question – I think we're only allowed one, but our first question is on maybe pricing and customer demand. I guess the way we look at it, governments they've made emission reduction commitments but also so have a number of companies. So are you seeing any indications that companies are willing to step in and fill the role of government subsidies via contract terms that you think would be sufficient to support acceptable returns on your current investments?

Neil A. Chapman

Maybe I'll style start Joe, if it's okay. I think Jeanine, it's a really good point because we believe the incentives to progress these projects, to enable the world to get to the net-zero targets that we all aspire to get to is going to be a combination of government policy and market incentive. And I think those policies are evolving all the time and the market incentives, I think will evolve over time. So many governments, so many industries have made commitments that they're going to reach net zero. Obviously, they need to put the projects in place to do it.

I think there are examples in industry, maybe the plastics industry is a pretty good example of what can happen. Today in plastics, consumers, customers are paying more for plastics that have a recyclable feedstock. The product is exactly the same that they're buying. It's the same as with Virgin feedstock, but society is prepared to pay a premium because it's doing the right thing because it includes recyclable feedstock.

And I think it's a pretty good potential comparator to what could happen in the low carbon space. But I think that's going to evolve over time and obviously, we're in discussions with many companies around the world, not just governments on policies, but also on potential market incentives. So I think the short answer to your question is we think it will happen. We think it must happen, but it's still in the early stages.

Joe Blommaert:

And maybe Neil, if I may add –

Neil A. Chapman

Sure.

Joe Blommaert:

In Houston, the 14 companies are very much committed to emission reduction, very enthusiastic collaboration actually but we all realize, of course, there's a need of emission reduction. Solutions can be provided, but that there is therefore a market opportunity that needs to be created. And that's that policy aspect can really drive actually the creation of a market and therefore attract the rights public and private investment.
And there are actual projects that may progress under the current policy. Others may wait for a policy, but this is a unique opportunity actually to create that policy, and therefore this collaboration between industry and government is so essential. So I’m confident that there will be but particularly, collaboration will be critical for the development of this policy.

**Neil A. Chapman**

Yeah. And again, I think we touched on it, Darren touched on it a little bit today. It's not going to be exactly the same everywhere in the world, not just in terms of the endowment, and what technology you use, but in terms of how you shape these commercial constructs, we think they'll be different around the world. But there's a great opportunity because of the footprint that we have and because of the opportunities that we're progressing all over the world to shape those commercial constructs, to deliver the type of returns that we require and the shareholders expect.

**Jeanine Wai, Barclays**

Okay. Great. Thank you for all that color. That was really helpful. Maybe for our second question, moving to CCS. Does Exxon already own the assets that allow you to participate in a Gulf Coast CCS plan at sufficient scale, or are there really other elements of the value chain that may be more easily be built out via M&A? And I guess maybe, for example, we're thinking about storage capacity or maybe pipelines just any comment you have on that. Thank you.

**Neil A. Chapman**

Maybe I'll do the general, Joe, you may be able to do some more specifics on it. One of the beautiful things, as we talked about in the prepared comments, is that on the Gulf Coast, not only do you have a lot of carbon emissions, which you're trying to mitigate, but you have the sequestration possibility, not just offshore, but onshore. And I would say there is tremendous opportunity that we're progressing and we don't see that as an impediment to any of our steps. We see plenty of geological storage onshore, and ultimately we think when the regulatory framework is in place offshore as well, but for the short term Jeanine, there's a lot of geological storage onshore that can be used for the projects that we're working towards. Joe, anything you want to add to that?

**Joe Blommaert**

Yeah. Maybe Jeanine, when you think about carbon capture and storage, the specific assets, of course, is there a capacity that needs to be built. Of course, the capturing of the carbon dioxide, that specific facilities, pipeline infrastructure. Obviously, there is storage capacity available, but that needs to be tied, of course, to the supply of the carbon dioxide. And clearly, this is very significant, we talked about a very significant market to be established, and that really is a significant source of organic growth. So it is not such that readily as you can buy actually that whole infrastructure that needs to be actually built again is supported by the right kind of market policies. But a significant actually is built out of an infrastructure.

**Neil A. Chapman**

Yeah, I think we'll have to stitch this infrastructure together. Obviously, on the Gulf Coast, tremendous amount of pipework exists already, but no doubt that we will work with partners that may involve some asset acquisitions. It may involve us laying pipework ourselves. And I think all that is to be determined.
So certainly, that opportunity exists. Infrastructure is going to be a big part of it. But I think the Gulf Coast is a location where a lot of it already exists and a lot of opportunities to put it in place where necessary.

Jeanine Wai, Barclays

Great. Thank you.
Operator: All right. Next question will come from Doug Leggate with Bank America.

Doug Leggate, Bank of America

Thank you, Joe and Neil. Appreciate you taking my questions. I also have two if that's okay. I don't know which one of you wants to take this, but when you look at the $15 billion budget through 2027, what is the role of M&A? And I'm thinking about scaling the business, we saw Chevron do a deal with the Renewable Fuels Group as I'm sure you saw. Have you made any allocation for that in the budget? And I guess I'm really just trying to understand how firm the $15 billion dollar budget is given all the caveats around government policy and so on. So that's my first question.

My second question is just very simplistically if I think about $15 billion capital outlay with a 10% return – and to be fair, I asked this question to Chevron yesterday, the value proposition is not obvious if I just run a discounted cash flow valuation through this. So can you kind of walk us through how you see the – how you define the value for this business and how it can possibly compete with the other parts of your portfolio given what is pretty skinny returns that are somewhat immune to the commodity cycle?

Neil A. Chapman

Yeah. Thanks, Doug. I thought you were going to ask a question on Guyana but –

Doug Leggate, Bank of America

I'll save that for later.

Neil A. Chapman

Yeah, I think in terms of – there's a lot of flexibility in this $15 billion I think that's the important point to make. We are seeing a greater than 10% return across this portfolio, but let me be really clear, the projects at the front end, the projects where we have FID or are close to FID are competitive with the other returns in our portfolio. It's the projects at the backend where policy doesn't exist today, where we've taken a lower assumption, and where the policy doesn't exist, of course, we can't put a higher return on it.

So we're saying on average, this is over 10% return, but the projects that we're appropriating today, like Strathcona, and like some of the other projects that Joe discussed generate returns, which are consistent with the rest of our existing portfolio of assets. I think that's a really, really important point to make.

I think in terms of flexibility in that portfolio to make merger and acquisitions, of course, there is flexibility in it. And so little bit like the chart Kathy showed this morning, in the early years, there's less flexibility because we're committing capital to projects. In the outer years, there is more flexibility. If we see an opportunity, which is accretive and it furthers our strategic objectives in the acquisition space, there's no question we'll assess it and we are assessing opportunities and we will lean in.

I would just say this though, that in CCS and hydrogen, there is really no such thing as a CCS company out there. There are industrial players who do sequester carbon. We're of course the largest already.
There's no CCS company, even in hydrogen. Of course, the big supplies of hydrogen in the industry are the big gas suppliers that you're aware of and in big industrial gas.

And I would say hydrogens, maybe 15 to 20% of their business. In biofuels, there are smaller niche start-up companies and smaller companies that are out there. And obviously, there are opportunities in that space, but we see tremendous advantage in the biofuel space by repurposing our existing assets and not putting new capital in the ground.

We think this is a great opportunity for us. We have the technology, we have the conversion capacity, we're repurposing existing assets. The key is to identify the competitive feedstock to enable that to happen. And do those projects where the policy exists to give the kind of creative returns that you're discussing. I don’t know, Joe do you have anything to add?

**Joe Blommaert**

I think you're right. As Neil has said, particularly on the biofuels, the example of Strathcona, the 200 Kbd. That is mostly organic growth and that is very attractive returns, considering the policies that are in place and for the portfolio as a whole, as we have the flexibility, as you mentioned. We're populating that portfolio seeking accretive returns, attractive returns, such that they can compete for the capital within the corporation and we can flex accordingly. So I feel comfortable with the quality of the portfolio that we have.

**Neil A. Chapman**

Yeah. And the key is to have that perspective looking across, not just for company acquisitions, but for specific asset acquisitions. Jeanine asked the question about infrastructure, I can certainly see potential where there's going to be opportunities with specific assets, specific infrastructure where we could lean into further to do something, get with one of our projects at a lower cost, and building it ourselves. So yeah, the aperture is open and we continue to look, Doug.

**Doug Leggate, Bank of America**

All right. Thanks, fellas. Appreciate the answers.
Operator: I think we have time for one more question. We'll take the last question from the line of Paul Cheng with Scotiabank.

**Paul Cheng, Scotiabank**

Thank you, guys. Joe and Neil, two question. First, you're talking about the Rotterdam CCUS project could be sanctioned by the end of the year. Can you share with us that what are EBITDA margin or internal rate of return you expect from the project and what will be – or what the corresponding assumption? That is the first question. The second question is that if we look at your carbon capture and sequestration technology is Exxon technology really fundamentally different than the technology of other people, or you just believe you will be able to do it better than others?

**Neil A. Chapman**

Joe, why don't you do the Rotterdam, and I'll add some commentary on CCS?

**Joe Blommaert**

Yeah. Paul, for Rotterdam is particularly in Europe, there is obviously, market policies in place supported by the policies in the Netherlands. The expectation is actually is an attractive return, a double-digit return to be achieved on that investment. Very pleased with the progress made and we certainly look forward to the FID later this year.

**Paul Cheng, Scotiabank**

Joe, any idea that what is the EBITDA and CAPEX related to this project on your share?

**Joe Blommaert**

I would've to come back on that, Paul. I don't have those numbers readily available.

**Neil A. Chapman**

Yeah. So let me talk about CCS or specifically around sequestration, which I think Paul is where your commentary was. There's two parts to CCS, or you could argue three parts. There's the capturing the carbon, transportation of the carbon, and then sequestering. The key here is you have to get the carbon dioxide into what we call a dense phase. Dense phase means you can pump it. And then you've got to find the right geology to sequester it.

So for all of the companies that are trying – in the industrial space that are trying to capture carbon dioxide and sequester, think about steel companies, think about refiners, think about cement companies, not a lot of them have experience in geology and working under the ground. Of course, upstream companies like ExxonMobil have years and years of experience and knowledge of understanding the geology and understanding where to sequester.

And I think its exactly the same as in the exploration phase, if you have that skill set, you have the knowledge where to sequester and how to sequester it gives you an advantage. I think what's most important in this space is there are only a few upstream companies out there who have experience of
both, either in the exploration phase or in the sequestration phase. The vast majority of carbon emissions are going to come from companies who have no experience in that space.

So it gives a unique opportunity to apply our functional skills. When you are sequestering carbon under the ground, you either got to put it into a reservoir where there's a secure cap or a secure seal. That’s one technology that typically exists. The second one is you can sequester it underground and there’s a chemical reaction underground. So with a carbon dioxide, you form a sludge. And then the third one, which is typically what we talk with saline aquifers, which is a little bit like soda. You put carbon dioxide under the ground and it acts the same as a soda. It goes into the saline aquifer into the water and is captured there. But the knowledge on how to sequester really comes with the upstream companies.

**Paul Cheng, Scotiabank**

Thank you.

**Neil A. Chapman**

Sure, Paul.

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**Jennifer K. Driscoll**

That concludes our presentation. Thank you for participating in ExxonMobil's 2022 Investor Day Webcast.

For a replay of this program and for a full presentation slides please visit the Investor Relations section of our website.

We will also publish a transcript of the presentation in the coming days.

We appreciate your interest in ExxonMobil, and look forward to a continued discussion about our business. Please enjoy the rest of your day.
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