

# SHELL ENERGY **TRANSITION STRATEGY**

**2021**

ROYAL DUTCH SHELL PLC



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### SPECIFICATIONS

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Cover: Shell offers electric vehicle drivers access to Shell Recharge points in 19 countries. Working with our customers and sectors to accelerate the energy transition to net-zero emissions

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# CHAIR'S MESSAGE



## **This publication describes Shell's energy transition strategy as we work to become a net-zero emissions energy business by 2050, in step with society's progress towards the goal of the UN Paris Agreement on climate change.**

It aims to help investors and wider society gain a better understanding of how Shell is addressing the risks and opportunities of the energy transition. It shows how we will navigate the transition profitably and in line with our purpose – to power progress together with more and cleaner energy solutions.

We have prepared this Energy Transition Strategy publication for submission to a shareholder advisory vote at the Annual General Meeting of Royal Dutch Shell, on May 18, 2021. It follows detailed conversations with shareholders and describes Shell's energy transition strategy, including our emissions targets.

Your Directors recognise their responsibility to set the company's strategy. This is unchanged. We consider this publication, and the strategy it summarises, to be aligned with the more ambitious goal of the Paris Agreement, to limit the increase in the average global temperature to 1.5 degrees Celsius above pre-industrial levels.

Shell is the first energy company to submit its energy transition strategy to shareholders for an advisory vote. We will publish an update every three years until 2050. Every year, starting in 2022, we will also seek an advisory vote on our progress towards our plans and targets.

The vote is purely advisory and will not be binding on shareholders. We are not asking shareholders to take responsibility for formally approving or objecting to Shell's energy transition strategy. That legal responsibility lies with the Board and Executive Committee.

While the energy transition brings risks to the company, it also brings opportunities for us to prosper and to build on our positive contribution to society. Our strategy, as outlined in this report, is designed to minimise those risks while enhancing our ability to profitably lead as the world transitions to an energy system that is aligned with the goal of the Paris Agreement.

It is important for shareholders to have a clear understanding of the company's strategy as we work together to meet the goal of Paris. The Board and management also believe it is important for all shareholders to have a vehicle to express their views on whether our strategy is reasonable in the current environment. This advisory vote is designed to be that vehicle. It does not shield or abdicate the Board's or management's legal obligations under the UK Companies Act.

The support of our shareholders is critical for us to achieve our target to become a net-zero emissions energy business by 2050, in step with society. We hope to gain your support for the approach described in this publication. In addition to your vote, we invite your continued feedback ahead of the publication of our next Energy Transition Strategy which will be presented to shareholders before the Annual General Meeting in 2024.

The Board recommends that you vote in favour of resolution 20, in support of the energy transition strategy described in this publication.

**CHAD HOLLIDAY**  
Chair

# CHIEF EXECUTIVE OFFICER'S INTRODUCTION



**Tackling climate change is the biggest challenge the world faces today. Our Powering Progress strategy, which we launched in February 2021, sets out how Shell can and must play a leading role in helping society to meet that challenge.**

As we transform our business, it is more important than ever for our shareholders to understand and support our approach. That is why we are publishing details of our energy transition strategy and, for the first time, submitting it to shareholders for an advisory vote at our Annual General Meeting this year.

Our target to become a net-zero emissions energy business by 2050, in step with society's progress towards the goal of the Paris Agreement on climate change, is at the heart of our energy transition strategy. That means continuing to reduce our total absolute emissions to net zero by 2050.

We have set our net-zero target, and our short- and medium-term carbon intensity targets, so that they are fully consistent with the more ambitious goal of the Paris Agreement: to limit the increase in the average global temperature to 1.5°C above pre-industrial levels. And our targets cover the full range of our emissions, Scopes 1, 2 and 3 of all the energy we sell, not just the energy we produce.

We are asking our shareholders to vote for an energy transition strategy that is designed to bring our energy products, our services, and our investments in line with the temperature goal of the Paris Agreement and the global drive to combat climate change. It is a strategy that we believe creates value for our shareholders, our customers and wider society.

## **WORKING WITH OUR CUSTOMERS**

Most of our emissions come from the use of our fuels and the other energy products we sell. So it makes sense to place our customers at the centre of our energy transition strategy. It is where we can make the biggest difference. We will work with our customers to change and grow demand for low-carbon energy products and services, sector by sector, using the strength of our business relationships, knowledge and expertise.



We will increasingly offer low-carbon products and solutions, such as biofuels, charging for electric vehicles, hydrogen and renewable power, as well as carbon capture and storage and nature-based offsets. In this way, we expect to build low-carbon businesses of significant scale over the coming decade. In addition, we will drive down emissions from our own operations as we continue to provide the oil and gas products our customers need today, while at the same time helping them move to a low- and zero-carbon future.

To be clear, the best way for Shell to contribute to the energy transition is to work with our customers to help shape demand for low-carbon energy products and services. In turn, the increasing need to supply low-carbon energy products and services will accelerate Shell's transition to net zero. Ending our activities in oil and gas too early when they are vital to meeting today's energy demand would not help our customers, or our shareholders.

### **SEEKING SHAREHOLDER SUPPORT**

The decision to seek an advisory vote on our energy transition strategy follows our continuing engagement with shareholders, including with Climate Action 100+, which represents investors with assets of around \$54 trillion. This vote does not replace the responsibilities of our Directors in setting the company's strategy. We have based the structure of this publication around the net-zero disclosure standard developed by Climate Action 100+ for the oil and gas industry.

In the following pages we set out our short-, medium- and long-term targets, our decarbonisation strategy and how we intend to allocate capital across our three business pillars of Growth, Transition and Upstream in the years ahead. We also explain our approach to climate-related policy and advocacy, an important part of how we are working with governments and others to accelerate the transition to low- and zero-carbon energy.

As the world continues to grapple with the impact of COVID-19, companies also play an important role in powering lives. In this publication, we describe how we will support livelihoods and communities as we transform our business.

We also outline our strong governance and a commitment to transparency. As we continue to implement the recommendations of the Task Force on Climate-related Financial Disclosures, we show how we are managing the risks and opportunities of climate change.

I would like to thank the investor groups we have worked with as we have developed our energy transition strategy, including the Institutional Investors Group on Climate Change (IIGCC) and Climate Action 100+. We must continue our dialogue with investors as Shell continues to evolve. We will be transparent so that investors can continue to assess our climate strategy and compare our progress to that of other companies.

This is a critical time in the world's efforts to tackle climate change. It is also a time of tremendous opportunity for Shell. By transforming our business in line with our energy transition strategy, we will contribute to achieving a net-zero emissions energy system, help society reach its climate goals and create a compelling investment case for our shareholders, today and in the future. We ask our shareholders to vote for resolution 20 and support the execution of our energy transition strategy.

**BEN VAN BEURDEN**  
CEO

# SHELL'S PATH TO NET-ZERO EMISSIONS

This is the first time that Shell has offered investors an advisory vote on our energy transition strategy. This vote represents the next step in our continuing dialogue with our investors. It is also one of many firsts on our path to becoming a net-zero emissions energy business.

## 2021

- Launched Powering Progress strategy to accelerate the transition of our business to net-zero emissions, including targets to reduce the carbon intensity of energy products we sell: by 6-8% by 2023, 20% by 2030, 45% by 2035 and 100% by 2050.
- Published the 2021 Industry Associations Climate Review, extending our coverage to 36 industry associations.
- Offered advisory vote on Shell's energy transition strategy.
- Increasing the weighting of the Energy Transition performance metric in the Long-term Incentive Plan (LTIP) from 10% to 20%.
- Introduced an absolute greenhouse gas (GHG) abatement target to the annual bonus scorecard, and the total weighting of measures connected to GHG emissions is increasing from 10% to 15%.

## 2020

- Announced target to become a net-zero emissions energy business by 2050, in step with society's progress as it works towards the Paris Agreement goal of limiting the increase in the average global temperature to 1.5°C.
- Published the Industry Associations Climate Review Update, including Shell's updated climate-related policy positions and our payments to key industry associations.
- Energy Transition performance metric extended to around 16,500 employees through the performance share plan (PSP).

## 2019

- Published the first Industry Associations Climate Review, which reviewed the alignment between our climate-related policy positions and those of 19 key industry associations of which we are a member.
- Announced a programme to invest in natural ecosystems as part of our strategy to act on global climate change, including addressing carbon dioxide (CO<sub>2</sub>) emissions generated by customers when using our products. This programme contributes to Shell's three-year target, beginning in 2019, to reduce our Net Carbon Footprint by 2-3% by 2021.
- Introduced the Energy Transition performance metric into the LTIP. The LTIP includes short-term targets linked to our Net Carbon Footprint target, as well as a number of other strategic business transformation targets that measure progress towards achieving our longer-term ambitions. We were the first major energy company to connect executive pay to the energy transition in this way.

## 2018

- Published the Shell Energy Transition Report, describing how we manage climate-related risks and opportunities, as part of our response to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
- Promoted the implementation of the TCFD recommendations and worked with the Oil and Gas Preparers Forum and the World Business Council for Sustainable Development (WBCSD) to strengthen our sector's response to these recommendations.
- Signed a joint statement with leading institutional investors on behalf of Climate Action 100+ announcing steps that Shell had decided to take to demonstrate alignment with the goals of the Paris Agreement on climate change [A].

## 2017

- Announced ambition to reduce the carbon intensity of the energy products we sell by around half by 2050 and by around 20% by 2035, measured by our Net Carbon Footprint, including the full life-cycle emissions from the use of our energy products by customers.
- Initiated the Methane Guiding Principles coalition, announcing a methane emissions intensity target.
- Introduced GHG intensity measures to our annual bonus scorecard.

[A] <https://www.shell.com/media/news-and-media-releases/2018/joint-statement-between-institutional-investors-on-behalf-of-climate-action-and-shell.html>

# OUR ENERGY TRANSITION STRATEGY

## OUR GOAL to become a **NET-ZERO ENERGY BUSINESS BY 2050**

Aligned with Paris

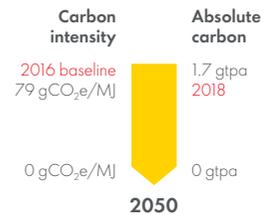
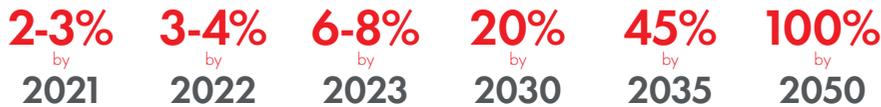


In step with society

## OUR CARBON TARGETS for **ALL ENERGY WE SELL, SCOPES 1, 2 & 3**

### REDUCING NET CARBON INTENSITY $gCO_2e/MJ$

2016 baseline



### REDUCING ABSOLUTE CARBON EMISSIONS: FROM 1.7 GTPA TO NET ZERO BY 2050

We believe total carbon emissions from energy sold peaked in 2018 at around 1.7 gigatonnes  $CO_2e$  per annum (gtpa) and will be brought down to net zero by 2050

### WORKING WITH OUR CUSTOMERS ACROSS SECTORS



### TO ACCELERATE THE TRANSITION TO NET-ZERO EMISSIONS

### OUR ACTIONS

#### AVOID

By providing, investing in and scaling up low-carbon energy solutions for our customers

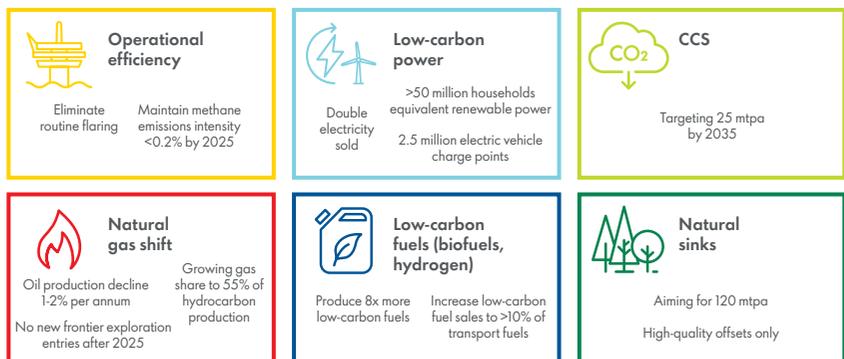
#### REDUCE

By limiting emissions as much as possible today

#### MITIGATE

By capturing and offsetting any residual emissions

### OUR 2030 MILESTONES



# BECOMING NET ZERO BY 2050

**Tackling climate change is an urgent challenge. It requires a fundamental transformation of the global economy, and the energy system, so that society stops adding to the total amount of greenhouse gases in the atmosphere, achieving what is known as net-zero emissions.**

That is why Shell has set a target to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the goal of the Paris Agreement on climate change. We believe our target supports the more ambitious goal of the Paris Agreement: to limit the increase in the average global temperature to 1.5°C above pre-industrial levels.

It is aligned with the findings of the Intergovernmental Panel on Climate Change (IPCC) which concluded that the world must reach net-zero carbon emissions by around 2050 to limit global warming to 1.5°C and avoid the worst effects of climate change.

Becoming a net-zero emissions energy business means that we are reducing emissions from our operations, and from the fuels and other energy products such as electricity that we sell to our customers. It also means capturing and storing any remaining emissions using technology or balancing them with offsets.

## COLLABORATION

Increasing numbers of countries and companies have announced targets to achieve net-zero emissions by the middle of the century, and we are starting to see some changes in the demand and supply of energy.

Achieving the 1.5°C goal will be challenging but it is technically possible. The extent of global collaboration required will be unprecedented. The pace of change will also be different around the world. The wealthier, more developed countries and regions must move faster. If they do not, then those countries and regions that cannot move so quickly will not have the time they need. The European Union (EU), for example, must achieve net-zero emissions by no later than 2050 if the world is to succeed in limiting global warming to 1.5°C.

Shell has built a scenario looking at what the EU might need to do to decarbonise which gives some insight into the scale of the significant challenge involved. The scenario identified nine areas for action.

## THE SCALE OF THE CHALLENGE

As an illustration, achieving net-zero emissions in the EU in the next 30 years could mean:

### Accelerating clean technologies

- Double the generation of electricity, triple its share of final energy
- Shift the electricity mix to 75% renewables, no coal
- Target 10% hydrogen in final energy, including as a fuel for heating, industry and heavy transport
- Triple the use of biofuels, with a shift to advanced forms

### Targeting behavioural incentives

- Invest in infrastructure to improve energy efficiency per unit of GDP by almost 45%
- Incentivise green consumer and business choices in support of the green economy
- Progressively raise the government-led carbon price in the EU to more than €200/tonne of CO<sub>2</sub> equivalent in 2050

### Removing emissions

- Build at least two major carbon capture and utilisation facilities every month (more than 1 million tonnes each)
- Reforest at least 220,000 square kilometres in the EU (about half the area of Spain) to remove the remaining 300 million tonnes of CO<sub>2</sub> in 2050

Source: Shell Scenarios Sketch: A climate-neutral EU by 2050



Achieving the goal of the Paris Agreement will require simultaneous growth in supply and demand for low-carbon energy. Crucially, it will also require significant changes to the way our customers use energy, whether they are motorists, households or businesses.

All parts of society including energy producers, consumers and policymakers will need to take action. That is why our strategy is based on working with our customers and others to accelerate the transition of the energy system. This includes supporting government policies that will help the world achieve net-zero emissions by 2050.

We will build on our strengths, our global scale and deep knowledge of energy markets to help grow demand for low-carbon energy. In this way, we will continue to build a strong business while playing an important role in the transition to low-carbon energy.

### NET ZERO FROM OUR OPERATIONS AND PRODUCTS

Our net-zero target includes emissions from our operations, our Scope 1 and 2 emissions, and the life-cycle emissions, including from the end use, from all the energy products we sell, our Scope 3 emissions.

We will reduce emissions from our own operations, including the production of oil and gas, by increasing energy efficiency and capturing or offsetting any remaining emissions.

More than 90% of our emissions come from the use of the fuels and other energy products we sell, so we must also work with our customers to reduce their emissions when that energy is used [B]. That means offering them the low-carbon products and services they need such as renewable electricity, biofuels, hydrogen, carbon capture and storage and nature-based offsets.

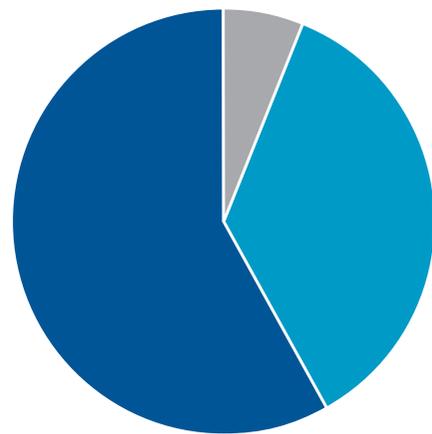
Importantly, our target includes emissions not only from the energy we produce and process ourselves, including oil and gas, but also from all the energy products that other companies produce and we sell [C]. This is significant because we sell more than three times the energy we produce ourselves.

In summary, our targets include all emissions from the energy we sell, and the majority of the emissions we include in our targets are not related to our own oil and gas production.

[B] This includes emissions from the use of energy produced and sold by Shell as well as full life-cycle emissions from energy produced by others and sold by Shell. Combined, these are reported under relevant categories of Scope 3 emissions (<https://reports.shell.com/annual-report/2020/>).

[C] Sales from retail stations that use the Shell brand but are not operated or supplied by Shell are excluded.

### WE ADDRESS THE EMISSIONS FROM ALL THE ENERGY WE SELL



■ Scope 1 & 2 = Our operational emissions

■ Scope 3 = Emissions from use of energy sold by Shell (own production)

■ Scope 3 = Full life-cycle emissions from energy sold by Shell (produced by others)

# OUR TARGETS: SHORT, MEDIUM AND LONG TERM

**We believe our total absolute emissions peaked in 2018 at 1.7 gigatonnes and our climate target means we will have to bring that down to absolute net-zero emissions by 2050.**

As we work to achieve that target, and to measure our progress over the next three decades, we have set short-, medium- and long-term targets to reduce the carbon intensity [D] of the energy products we sell. Carbon intensity is the total amount of greenhouse gas emissions associated with each unit of energy that we sell, and that is used by our customers.

We use carbon intensity targets to measure our progress because we think they are the clearest way to demonstrate changes to our mix of energy products over time, as we add and then shift to low-carbon energy products and services.

**We have set specific carbon intensity reduction targets for the following years. These targets are compared with 2016 and linked to the remuneration of around 16,500 Shell employees:**

**2-3% by 2021**

**3-4% by 2022**

**6-8% by 2023**

**We also have medium- and long-term carbon intensity targets, in step with society:**

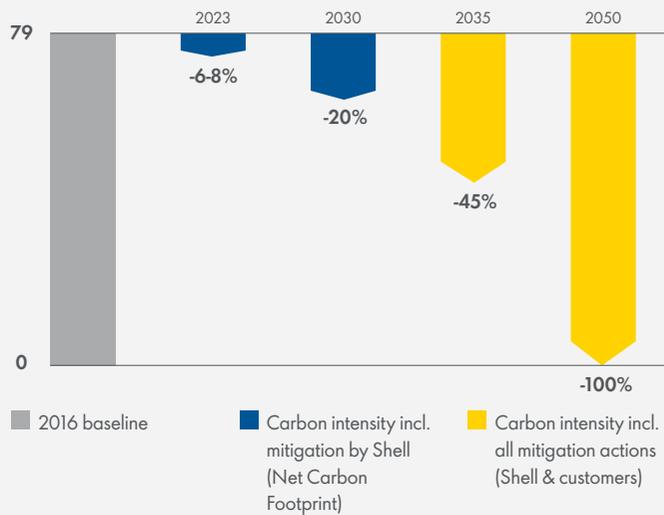
**20% by 2030**

**45% by 2035\***

**100% by 2050\***

## REDUCING THE CARBON INTENSITY OF ALL ENERGY SOLD

gCO<sub>2</sub>e/MJ



We measure our carbon intensity with our Net Carbon Footprint methodology [E] which calculates the carbon intensity of the portfolio of energy products sold by Shell expressed as grams of CO<sub>2</sub> equivalent (gCO<sub>2</sub>e) per megajoule (MJ) of energy delivered to, and consumed by, our customers.

\* These targets include mitigation actions by our customers such as carbon capture and storage and nature-based offsets.

[D] Carbon intensity as used in this report refers to net carbon intensity, which includes offsets and is measured by our Net Carbon Footprint methodology.

[E] <https://www.shell.com/ncfmethodology>

Petrochemicals and other products such as lubricants are not included in our short- and medium-term targets because they are not burnt and do not produce Scope 3 emissions. Their production and processing produce emissions, and we include these within our target to achieve net-zero emissions (Scope 1 and 2) from our operations by 2050.

## ALIGNING OUR TARGETS WITH PARIS

Shell's target is to become a net-zero emissions energy business by 2050, in step with society. We also have short-, medium- and long-term targets to reduce our carbon intensity, measured by our Net Carbon Footprint methodology. We believe these targets are aligned with the 1.5°C scenarios used in the IPCC Special Report on Global Warming of 1.5°C (SR 1.5), most of which show the global energy system reaching net zero between 2040 and 2060.

There is no established standard for aligning an energy supplier's decarbonisation targets with the temperature limit goal of the Paris Agreement. In the absence of a broadly accepted standard, we developed our own approach to demonstrate Paris alignment by setting carbon intensity targets using a pathway derived from the IPCC scenarios aligned with the Paris goal.

We determined our targets using scenarios taken from a database developed for the IPCC SR 1.5 [F]. We filtered out certain outlying IPCC scenarios to ensure that Shell's targets are aligned with earlier action, and low-overshoot scenarios. Overshoot refers to the extent to which a scenario exceeds an emissions budget and subsequently relies on sinks to compensate for the excess emissions.

### We then take the following steps:

1. The total energy in each of the scenarios is calculated at the point of delivered energy (energy that is processed by refining or liquefaction, for example, but before it is used for electricity generation) using a fossil fuel equivalence approach for electricity. This more accurately reflects the energy delivered by an energy supplier like Shell to the market.
2. The total net emissions of each scenario are calculated taking into account emissions stored using carbon capture and storage and offset using natural sinks.
3. The carbon intensity for each scenario is calculated by dividing the net emissions by the total delivered energy. The range of carbon intensities of the scenarios allows for the construction of a benchmark range after removing any outliers.

By using the benchmark range produced by this approach to set our targets, we aligned them with the necessary reduction in carbon intensity shown in the 1.5°C scenarios. This is illustrated in the graphic on the right that demonstrates how Shell's targets are positioned within the range of 1.5°C pathways. The upper and lower lines represent the upper and lower boundaries of the benchmark range derived from the IPCC scenarios.

Until 2035, our calculation of the total net emissions of each scenario includes only the expected mitigation actions by Shell such as carbon capture and storage and offsetting using natural sinks, including any use of offsets included in the carbon-neutral energy products we offer our customers. After that date, we also include mitigation actions taken separately by our customers.

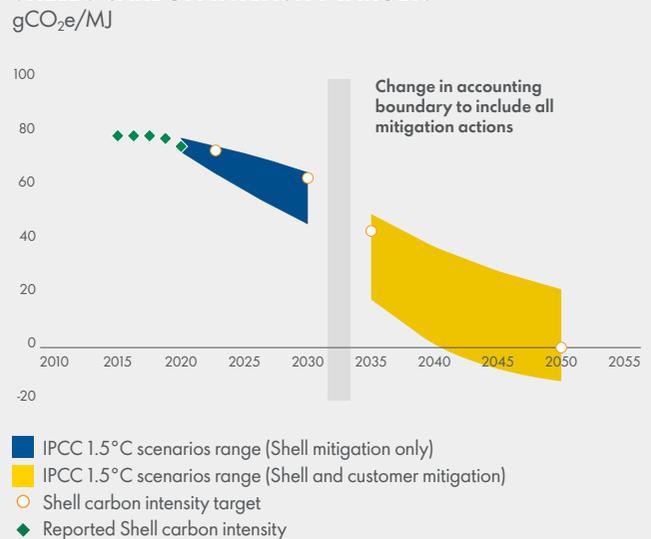
Today, we do not include any mitigation steps taken separately by our customers. That is because the accounting standards to include those actions do not exist. Under existing protocols, energy suppliers report the Scope 3 emissions from the use of their products, which are equivalent to the Scope 1 emissions reported by the users of those products.

However, when users of energy mitigate their Scope 1 emissions by use of carbon capture and storage or offsets, there is no accounting protocol for reflecting the corresponding reduction in the Scope 3 emissions reporting by the energy supplier.

To account for reductions in emissions across full energy value chains it is necessary to build on the existing greenhouse gas reporting and accounting protocols to include mitigation actions by both energy suppliers and users. Shell is in discussions with standard-setting bodies such as Greenhouse Gas Protocol, the World Resources Institute and CDP to develop the accounting protocols and frameworks to include mitigation actions by energy suppliers and energy users.

Reporting and accounting for mitigations in this way will also need new systems for the exchange of data between suppliers and users of energy. We expect these developments will take three to five years. Our carbon intensity targets for 2035 and 2050 reflect this expected change in accounting approach.

## SHELL'S CARBON INTENSITY TARGETS



[F] These scenarios do not include Shell's Sky 1.5 scenario.

## OUR TARGETS: SHORT, MEDIUM AND LONG TERM continued

### OUR APPROACH

We have set our targets to be in line with climate science and in step with society's progress as it works towards the Paris Agreement goal of limiting the increase in the average global temperature to 1.5°C.

This progress will depend on whether governments and businesses, including Shell, provide the right conditions and incentives for low- and zero-carbon choices, and on whether consumers embrace these changes.

We must work towards our long-term target of net-zero emissions immediately. That is why we have set a series of short-term targets that are reflected in the remuneration of 16,500 employees. These short-term targets are not conditional on whether society progresses towards the goal of net-zero emissions; and while extremely challenging, they are aligned with our current operating plans.

If we moved too far ahead of society, it is likely that we would be making products that our customers are unable or unwilling to buy. That is why we wish to work together with customers, governments and across sectors to accelerate the transition to net-zero emissions. Shell cannot get to net zero without society also being net zero.

For example, if we invested in producing sustainable aviation fuel, and made it available on commercial terms at all the airports Shell serves today, the investment would not significantly lower our or society's carbon emissions. Most aircraft are not yet certified to fly on 100% sustainable aviation fuel and the cost of the fuel is considerably more than traditional jet fuel, making it an uncompetitive choice for the airlines.

Our strategy instead is to work with partners – including aircraft manufacturers, airlines, airports, major airline users and governments – to stimulate and accelerate demand for sustainable aviation fuel. As demand grows, we will increase our investments.

### WORKING TO MEET OUR TARGETS

The transport sector is a good illustration of how the energy transition is likely to unfold. As in other sectors, the reductions in carbon intensity will be slow at first, reflecting the challenge of switching today's forms of transport to new technologies. The IPCC Special Report shows that the energy intensity of fuels in the transport sector has fallen only slightly in the past 10 years, through the blending of biofuels with traditional fuels, the increased use of liquefied natural gas as a transport fuel, and the growth in electric vehicles. But as the cost of low-carbon vehicles comes down, for example, they will replace vehicles powered by internal combustion engines. The IPCC scenarios show the tipping point to be somewhere between now and 2030, leading to net-zero transport after 2050.

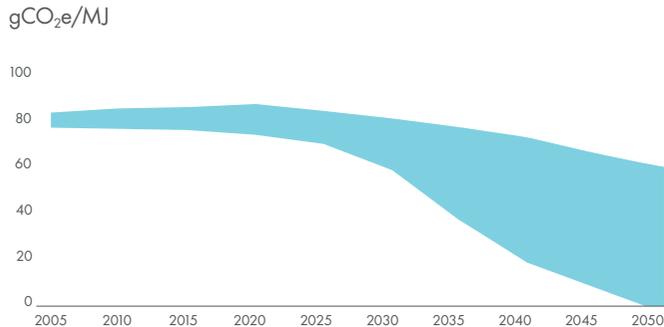
Shell will reduce the carbon intensity of our energy products by working with our customers, sector by sector, to help them navigate the energy transition. As we do so, we intend to build even deeper relationships with our customers and meet more of their energy needs. We will start by adding more low-carbon products, such as biofuels and electricity, to the mix of energy products we sell. Eventually, low-carbon products will replace the higher carbon products that we sell today. This transformation of our business will require a fundamental change to energy-related infrastructure and assets across economies (see box Structural change on page 14).



We are working with partners – including aircraft manufacturers, airlines, airports, major airline users and governments – to stimulate and accelerate demand for sustainable aviation fuel. As demand grows, we will increase our investments.

For example, in the road freight sector, we are working with transport companies, truck manufacturers and policymakers to identify pathways to decarbonisation. In the near term, we will continue to increase production of low-carbon biofuels. And we will offer biogas and LNG for trucks to customers in Europe, China and the USA. In the longer term, we intend to increase our sales of hydrogen for transport. We are also part of the H2Accelerate consortium, which looks at ways to create infrastructure for generating and supplying clean hydrogen to hydrogen trucks as they become available across Europe.

### CARBON INTENSITY RANGE FOR THE TRANSPORT SECTOR IN THE IPCC 1.5°C SCENARIOS



■ Transport intensity range based on IPCC scenarios

Method: Shell methodology  
Source data: IPCC 1.5°C scenarios

### OUR PLANS

Shell's operating plans, outlooks and budgets are forecasted for a 10-year period and are updated every year. They reflect the current economic environment and how we can reasonably expect our business to develop over the next 10 years. Our short-term targets are aligned with our current operating plans.

However, our operating plans do not yet reflect our long-term 2050 net-zero emissions target, as it is not feasible to make a 30-year detailed operating plan. In the future, as society moves towards net-zero emissions, we expect Shell's operating plans, outlooks, budgets and pricing assumptions to reflect this movement and continue to be in step with society. This movement will also be reflected over time in our energy transition strategy that we are offering for an advisory vote.

### OUR SHORT-TERM PERFORMANCE

Shell's carbon intensity in 2020 was 75 gCO<sub>2</sub>e/MJ, a 4% reduction from the previous year and a 5% reduction from the 2016 reference year. In 2020, one of the major causes of this reduction was lower demand for energy. Demand for oil products experienced the most significant reduction, followed by natural gas and LNG. Another important factor contributing to the reduction of our carbon intensity was the increase in our power sales in absolute terms as well as in their share of the energy mix sold by Shell. The power we sold also had a lower average emissions intensity than in previous years, which further contributed to the overall reduction.

# OUR DECARBONISATION STRATEGY

**As a leading energy company, we serve the transport, industry, built environment and power generation sectors. Each has different needs. Some sectors are global while others are highly centralised and local. Some have assets that are designed to last more than 50 years, others less than 10 years. Our deep understanding of these sectors and our customers, and of the opportunities and challenges they face, will help us transform demand for our products.**

Transforming energy demand is the focus of our decarbonisation strategy. To transform demand, we will work sector by sector across the energy system. We will change the mix of energy products we sell to our customers as their needs for energy change.

This is where we can make the greatest contribution to the energy transition, by increasing sales of low-carbon energy products and services. Today, we sell around 4.6% of final energy consumed in the world and produce around 1.4% of total primary energy. Our share of energy production may decline over the coming decades, but we intend to grow our share of low-carbon energy sales.

We are restructuring our company so that we can better identify opportunities and the role that we can play in each sector to help transform demand. We are moving from an approach focused on types of products to one where our customer and account management is focused on sectors.

We are introducing sector-based businesses accountable for driving the decarbonisation of the sectors they cover such as aviation, commercial road transport, passenger transport, shipping, technology and industry. We will build on our existing relationships across each sector, with consumers, infrastructure owners, other suppliers and policymakers to help to accelerate change.

## TRANSFORMATION OF THE ENERGY SYSTEM

The transformation of the energy system to net-zero emissions will require simultaneous action in three areas – an unprecedented improvement in the efficiency with which energy is used, a sharp reduction in the carbon intensity of the energy mix and the mitigation of residual emissions using technology and natural sinks. While it is difficult to predict the exact combination of actions that will deliver the net-zero goal, scenarios help us to understand the direction and pace of the transition needed.

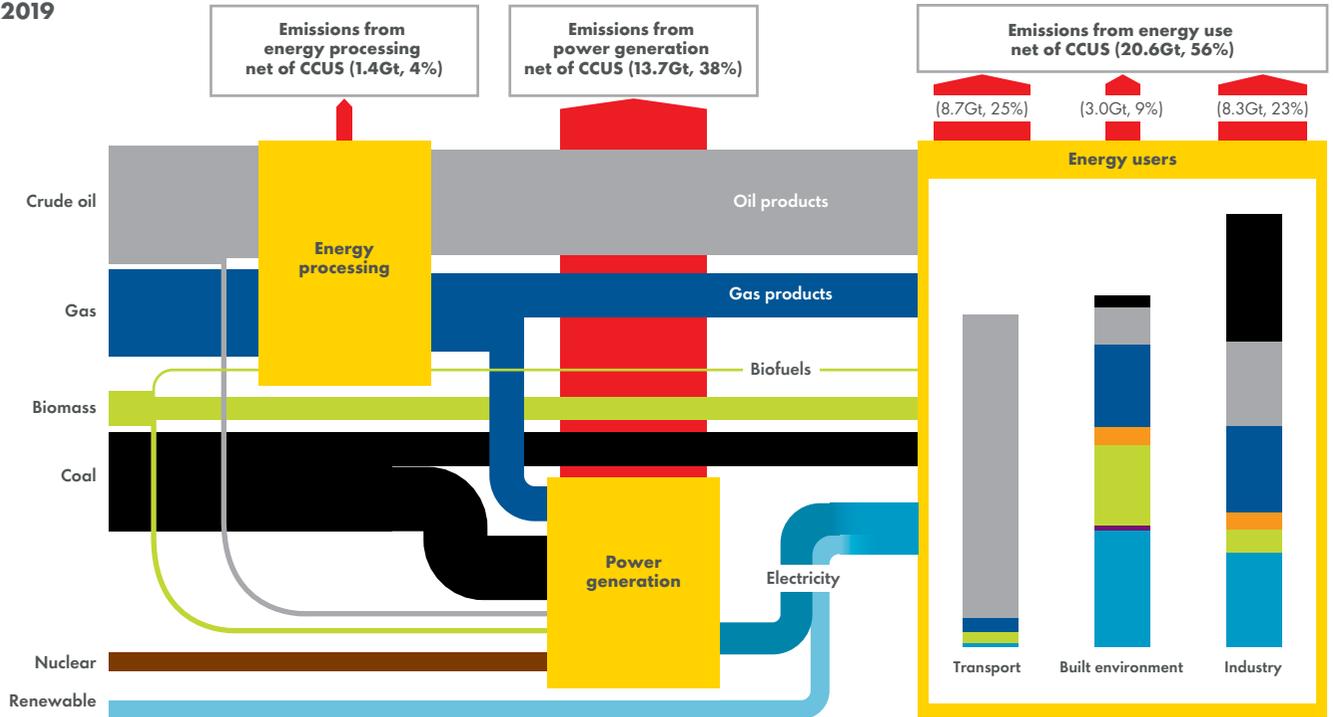
The diagrams on the next page use data from the International Energy Agency's Sustainable Development Scenario (IEA ETP 2020). They show how the energy mix and carbon dioxide emissions could change between 2019 and 2050.

A fundamental shift is needed in the way energy is used and produced. For example, it will require a deep electrification of most energy end-uses and decarbonisation of that electricity. By 2050, most of the residual emissions come from energy use, while in comparison energy supply is far more decarbonised. Low- and zero-carbon energy, including hydrogen and biofuels as well as CCUS, will be needed to mitigate most emissions in hard-to-abate sectors, such as parts of transport and industry.

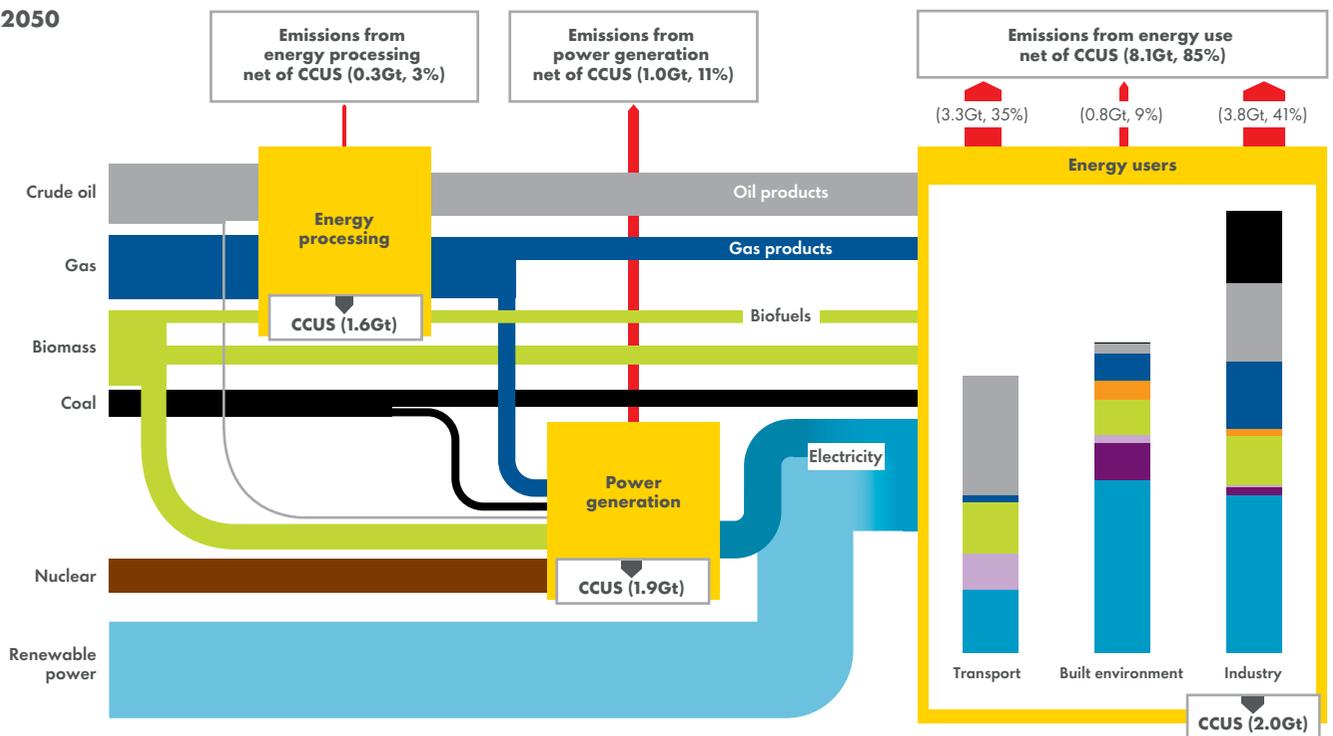
While the Sustainable Development Scenario is a well-below 2°C scenario reaching net-zero emissions by 2070, it helps to show the scale of the transformation of the energy system needed. The IEA's Faster Innovation Case, which builds on the Sustainable Development Scenario, demonstrates how the transformation can be accelerated to achieve net-zero emissions by 2050. For example, compared to the Sustainable Development Scenario, it would need a 55% increase in hydrogen use, 25% more energy from electricity and 20% more bio-energy use. The use of CCUS will also need to be 50% higher, reaching 8 gigatonnes a year by 2050.

## GLOBAL ENERGY EMISSIONS: 2019-2050

2019



2050



Note: Flows in the diagrams are representative and are not to scale, with percentages totals rounded. Data shown are taken from the IEA ETP 2020 Sustainable Development Scenario

Key: Energy users



### STRUCTURAL CHANGE

As well as changes to the supply of energy products, decarbonising the energy system requires structural change in the end use of energy as well. It requires energy users to improve, update or replace equipment so that they can use carbon-based energy more efficiently, or switch to low- and zero-carbon energy. For example, in the transport sector, decarbonisation includes replacing internal combustion engine vehicles with electric and hydrogen vehicles.

In industry, replacing oil- and coal-fired furnaces with electrical furnaces would be one solution, carbon capture and storage is another. And in buildings, replacing gas heating systems with electric heating systems would also contribute to decarbonisation.

Such structural changes will help to trigger transitions along the supply chain of individual sectors and across sectors, including the production of energy and emissions over time. The International Energy Agency suggests that these changes in the end use of energy will require substantial investment. Of the more than \$1.5 trillion extra annual spending on energy-sector investment which is required under the IEA's Paris-aligned Sustainable Development Scenario, 55% will need to be spent on end use or what is more commonly known as demand-side investment.

### RENEWABLE POWER

Our sector-based business model reinforces the place of customers at the heart of our strategy. It allows us to work together to identify opportunities for immediate carbon reductions, including low-carbon fuels, as well as for longer-term solutions that will help customers get to net zero. For example, in the Netherlands we have entered into an agreement to provide renewable power to Amazon from an offshore wind farm being constructed off the coast of the Netherlands, enabling Amazon to power more of its business with clean energy.

The guaranteed demand from Amazon helps us to invest further in the production of green hydrogen and CCS through the creation of a green energy hub in the port of Rotterdam. Shell aims to produce green hydrogen there using electricity generated by wind power, hydrogen that will be used at the Shell refinery in Pernis to decarbonise the production of fuels.

Through its air cargo fleet, Amazon also has a growing interest in aviation. Shell has one of the world's most extensive aircraft refuelling networks. We have agreed to supply Amazon with up to six million gallons of blended sustainable aviation fuel for its cargo aircraft. This biofuel, produced by the company World Energy using agricultural waste fats and oils, has lower life-cycle carbon emissions than conventional jet fuel. In December 2020, Shell and Amazon also announced minority investments in ZeroAvia, a company in the USA with ambitions to decarbonise aviation with hydrogen-powered planes.

### OUR PARTNERSHIPS WITH OTHER COMPANIES

#### STRATEGIC ALLIANCE WITH MICROSOFT

We have formed a strategic alliance with Microsoft which includes us working together on digital technologies that help Shell and our customers manage and reduce our carbon footprints. Shell is also supplying Microsoft with low-carbon energy products and services, including renewable energy.

#### ROLLS-ROYCE

Rolls-Royce and Shell have collaborated for more than 100 years, pioneering technology, fuels and infrastructure that have shaped commercial aviation. Today, Shell and Rolls-Royce are working together to test Rolls-Royce engines to show they can run on 100% sustainable aviation fuel.

#### CLEAN SKIES FOR TOMORROW

In the aviation sector, Shell is a founding partner of the Clean Skies for Tomorrow Coalition, an initiative with the Mission Possible Platform. This platform was launched by the World Economic Forum and the Energy Transitions Commission to achieve net-zero carbon emissions by the middle of the century from a group of traditionally hard-to-abate industry sectors.

The Clean Skies for Tomorrow Coalition consists of airlines, airports, fuel providers and engine manufacturers. It is working to reduce emissions from the aviation sector by making sustainable aviation fuel more widely used and available. The Clean Skies for Tomorrow Coalition has jointly developed and published policy proposals which it has put to the European Union to promote debate on how to accelerate the transition to climate neutrality and increase the uptake of sustainable aviation fuels [G].

[G] <https://www.weforum.org/reports/joint-policy-proposal-to-accelerate-the-deployment-of-sustainable-aviation-fuels-in-europe-a-clean-skies-for-tomorrow-publication>



## SHARING INSIGHTS INTO THE TRANSITION

Our strategy includes participating in coalitions of companies and organisations to accelerate the transition to net-zero emissions. We will help to develop paths to low-carbon energy in different sectors, identify opportunities for low-carbon solutions, and advocate government policies and financial market regulations that support the transition.

In the shipping and road freight sectors, for example, we have partnered with Deloitte to explore paths to reducing emissions [H].

## SIX LEVERS TO HELP DECARBONISE ENERGY

As Shell works with our customers to identify the best paths to decarbonisation, we seek to avoid, reduce and only then mitigate any remaining emissions.

We have six levers to help Shell and our customers decarbonise energy in the short, medium and long term:

- Pursuing operational efficiency in our assets;
- Shifting to natural gas;
- Growing our low-carbon power business;
- Providing low-carbon fuels such as biofuels and hydrogen;
- Developing carbon capture and storage; and
- Using natural sinks.

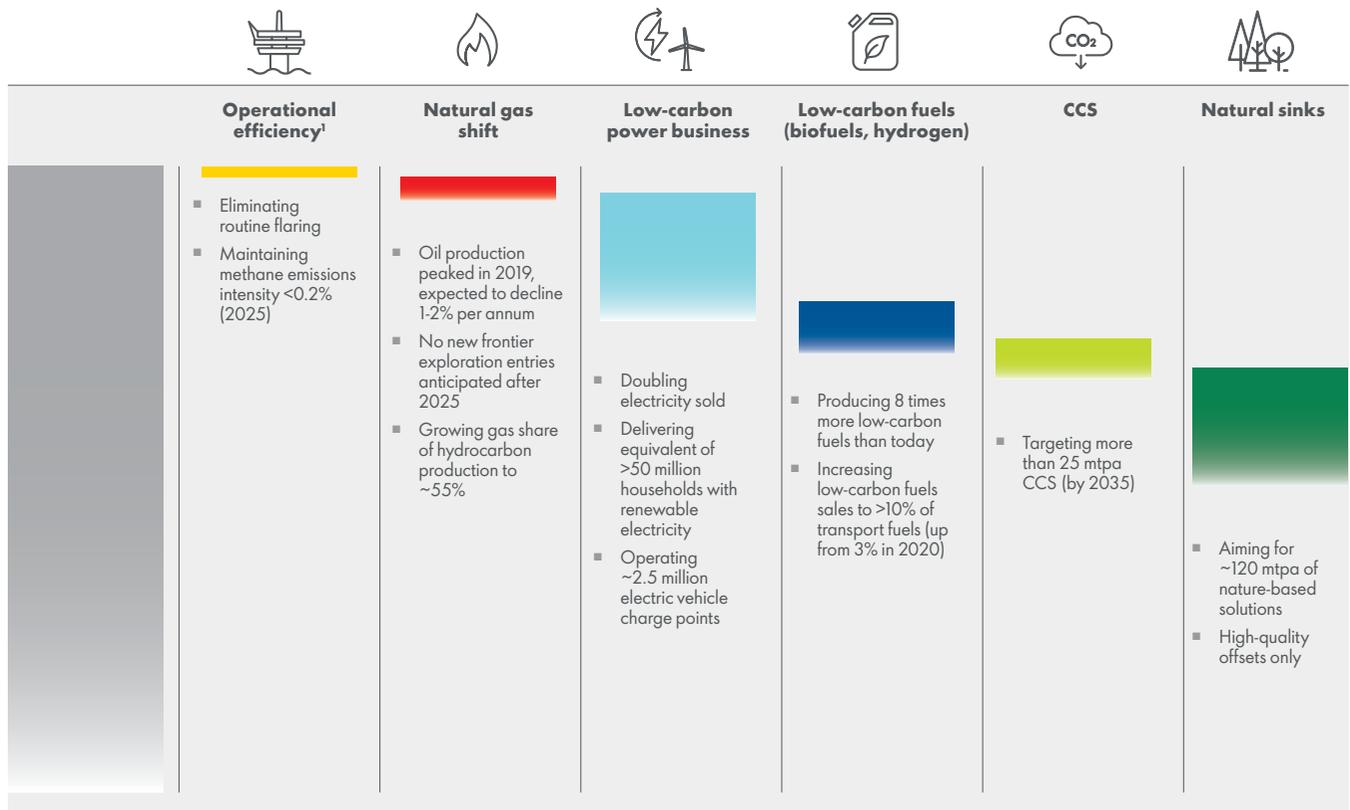
## ENERGY EFFICIENCY IN OUR OPERATIONS

Our production sites are increasingly using lower-carbon energy sources. For example, we are installing eight new cracker furnaces at our Moerdijk petrochemicals complex in the Netherlands, replacing 16 older units. This is expected to reduce the site's energy consumption, and to lower greenhouse gas emissions by around 10% compared with 2019.

In the USA, we are building a 250 MW co-generation plant at our Pennsylvania chemicals facility that will also supply electricity to local homes. The chemicals plant has been designed with an energy-efficient gas cracker that will also use hydrogen as a fuel source.

As we implement our strategy, we are aiming for milestones which are supported by our business plans and planned capital investment.

## EXAMPLES OF ENERGY TRANSITION MILESTONES BY 2030



Milestones for 2030 unless otherwise stated. This chart is illustrative of the potential impact across these levers.

<sup>1</sup> For assets we operate

EV charge points include charge points at Shell forecourts and new locations as well as operated charge points owned by customers and third parties.

[H] <https://www.shell.com/energy-and-innovation/the-energy-future/decarbonising-shiping.html>; <https://www.shell.com/energy-and-innovation/the-energy-future/decarbonising-road-freight.html>



### INVESTING IN NATURE

The protection and restoration of natural ecosystems could play an important role in limiting global warming to below 1.5°C, while bringing additional environmental and social benefits, according to the IPCC [I].

Nature-based solutions, or natural climate solutions, are projects that protect, transform or restore land. In this way, CO<sub>2</sub> emissions from the natural environment are reduced and more CO<sub>2</sub> emissions from the atmosphere are absorbed. These projects can lead to the marketing, trading and sale of carbon credits. Each carbon credit represents the avoidance or removal of 1 tonne of CO<sub>2</sub>.

The market for nature-based solutions and the number and type of projects which are being developed to meet this market demand is growing rapidly. McKinsey Nature Analytics estimates that there is the potential for nature-based projects to store an additional 6.7 gigatonnes of CO<sub>2</sub> every year by 2030. Based on current net-zero commitments from more than 700 of the world's largest companies, there have already been commitments of carbon credits of around 0.2 gigatonnes of CO<sub>2</sub> by 2030 [J].

The Taskforce on Scaling Voluntary Carbon Markets (TSVCM), sponsored by the Institute of International Finance (IIF), estimates that the market for carbon credits could be worth more than \$50 billion in 2030 [K].

#### High-quality credits

Nature-based solutions have a role to play in reducing the impact of the CO<sub>2</sub> emissions from the energy products that we sell.

Shell will use high-quality nature-based solutions, independently verified to determine their carbon impact and their social and biodiversity benefits. In line with our approach of avoid, reduce and only then mitigate, we expect to offer our customers nature-based solutions to offset around 120 million tonnes per annum of our Scope 3 emissions by 2030.

Today, for example, we offer customers carbon-neutral driving using nature-based carbon offsets in seven countries. We also offer carbon-neutral liquefied natural gas cargoes, which use nature-based carbon credits to offset full life-cycle emissions, including methane.

#### Building our portfolio

In 2020, we invested around \$90 million in the future development and purchase of nature-based offsets, and we expect to invest around \$100 million a year.

In 2020, we acquired Select Carbon in Australia, which runs more than 70 carbon farming projects that span an area of around 10 million hectares. We are also working with project developers to invest in and develop new projects based on reforestation, agroforestry and mangroves.

In 2030, we expect our own portfolio of nature-based projects to supply most of the credits for our customers. Our trading business will purchase the rest from project developers that we screen to ensure the credits meet the same independently verified high standards. In 2020, we purchased more than 4 million tonnes of credits on behalf of our customers sourced from projects around the world.

### CAPTURING CARBON

Most climate scientists are clear that using technology to store carbon plays an important role in the transition of the energy system. The IPCC 1.5°C scenarios show that even when the energy system reaches net-zero emissions, there will be residual emissions because some sectors and end users will not be able to eliminate the use of hydrocarbons. Some of these residual emissions will need to be stored.

Today, carbon capture and storage (CCS) facilities around the world can capture and store around 40 million tonnes per annum (mtpa) of CO<sub>2</sub>. Accelerating the pace of CCS deployment requires continued collaboration between governments, industry and investors, among others, to help unlock financing capacity, accelerate technology development and encourage public support. We recognise the scale of the challenge in developing CCS globally as quickly and as widely as needed.

Today, Shell is involved in seven of the 51 large-scale CCS projects globally, listed in 2019 by the Global CCS Institute. These seven projects store around 5 mtpa of CO<sub>2</sub>, or around 12.5% of global CCS capacity. By the end of 2020, for example, our Quest CCS project in Canada (Shell interest 10%) had captured and safely stored more than 5.5 million tonnes of CO<sub>2</sub> since it began operating in 2015.

In Norway, Shell, our project partners and the Norwegian government have taken the final investment decision on the Northern Lights CCS project. This transformative project aims to become the first carbon storage facility with capacity to transport and store CO<sub>2</sub> from industrial facilities in Norway and potentially from across Europe.

In 2020, Shell invested around \$70 million in CCS. This included progressing opportunities and operating costs for CCS assets in which Shell has an interest. We seek to have access to 25 mtpa of CCS capacity by 2035 – equal to 25 CCS facilities the size of our Quest project, or around 20% of the capacity of all CCS projects being studied around the world today.

[I] IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

[J] <https://www.mckinsey.com/-/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Why%20investing%20in%20nature%20is%20key%20to%20climate%20mitigation/Nature-and-net-zero-vF.pdf>

[K] <https://www.iif.com/tsvcm>

## STRUCTURING OUR BUSINESS TO MEET DEMAND

Our business has three pillars: Growth, Transition and Upstream. Within each pillar, we expect the underlying businesses to evolve and transform as demand for our products changes, driven through our sector-based businesses.

**Our Upstream pillar** delivers the cash and returns needed to fund our shareholder distributions and the transformation of our company, and provides vital supplies of oil and natural gas which the world needs today.

**Our Transition pillar** comprises Integrated Gas, and our Chemicals and Products business, and it makes the products needed to enable the energy transition. It produces sustainable cash flow and gives us the asset infrastructure to support our investments in our Growth business.

**Our Growth pillar** includes our service stations, fuels for business customers, power, hydrogen, biofuels, charging for electric vehicles, nature-based solutions, and carbon capture and storage. It focuses on working with our customers to accelerate the transition to net zero and is the foundation for the future businesses in Shell.

### In our Upstream pillar:

We will focus our portfolio on nine core positions that generate more than 80% of Upstream's cash flow from operations. These core positions will attract around 80% of Upstream's capital spending. They are positions where we have superior capabilities, the potential for growth and access to strong integration with our Integrated Gas and Trading activities.

The rest of our positions will be run on a leaner operating model. They will be tasked with either maximising cash generation or becoming core positions. In some cases, such as onshore Egypt and the Philippines, we will simply divest. We will reduce annual spending on exploration from around \$2.2 billion in 2015 to around \$1.5 billion between 2021 and 2025. We have attractive exploration opportunities in the first half of this decade. But after 2025, we do not anticipate entries into new frontier exploration positions.

### In our Transition pillar:

We intend to extend our leadership in LNG volumes and markets, with selective investments in competitive LNG assets to deliver more than 7 million tonnes per annum (mtpa) of new capacity on-stream by the middle of the decade. We will continue to support customers with their own net-zero ambitions, with offers such as carbon-neutral LNG, which uses nature-based carbon credits to offset full life-cycle emissions, including methane. Our petrochemical business will continue to grow and provide products that enhance the efficiency of energy use.

We intend to reduce the number of refineries from 13 sites today to six high-value chemicals and energy parks, and reduce production of traditional fuels by 55% by 2030, from around 100 mtpa to 45 mtpa. We intend to grow volumes from our chemicals portfolio and increase cash generation from Chemicals by \$1-2 billion a year by 2030. We will produce chemicals from recycled waste, and by 2025 aim to process 1 million tonnes a year of plastic waste.

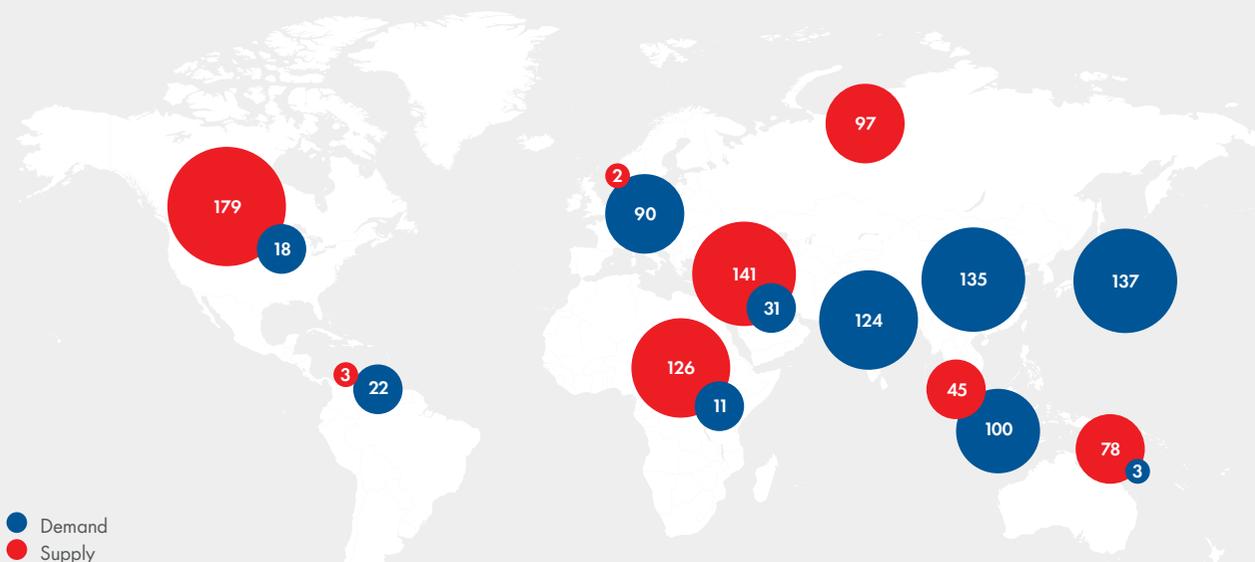
## LNG DEMAND TO GROW AS GAS PROVIDES MORE AND CLEANER ENERGY

### Reduce CO<sub>2</sub> and improve air quality

- Natural gas emits between 45% and 55% less GHG than coal when used to generate electricity and less than one-tenth of the air pollutants
- More than 750 million tonnes of CO<sub>2</sub> savings as a result of coal-to-gas switching over the last decade
- In 2020, for the first time on record, the number of coal-fired power stations decreased

## LNG NEEDED TO CONNECT NATURAL GAS SUPPLY AND DEMAND GROWTH

Estimated LNG trade volume in 2040, million tonnes



Source: Global Energy Monitor, International Energy Agency, Shell interpretation of IHS Markit data

## OUR DECARBONISATION STRATEGY continued

### In our Growth pillar:

Our Marketing business is our single largest customer-facing business. In 2020, Marketing delivered more than \$4.5 billion in net earnings and, by 2025, we expect it to generate more than \$6 billion. We will achieve this by improving the market-leading position of our lubricants business, and by increasing the number of retail sites and daily customers we serve from 46,000 and 30 million respectively today, to 55,000 and 40 million by 2025. We will also achieve this by growing non-fuel sales at our retail sites and sales of electricity.

This growing number of customers, made up of large and small businesses as well as individual consumers, will be looking to decarbonise their energy consumption over the coming decades. We intend to provide them with the options to do this, from low-carbon solutions such as clean electricity, hydrogen and biofuels, to carbon sinks or offsets for any remaining carbon emissions.

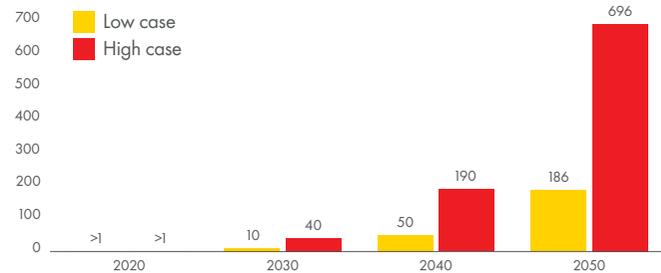
Shell is increasing the number of electric vehicle charging points globally – for homeowners and businesses and for use on our forecourts – from more than 60,000 today to more than 500,000 by 2025 and to 2.5 million by 2030. By comparison, that is around 7% of the total number of public and private charge points expected in Europe alone by 2030, according to research by Bloomberg.

As the need for biofuels grows, in line with customer demand and policies to reduce transport-related emissions, we expect to extend our leading biofuels production and distribution business, which in 2020 sold 9.5 billion litres of biofuels. Our joint venture Raízen, which produces low-carbon biofuels from sugar cane in Brazil, recently announced the acquisition of Biosev. This is set to increase Raízen's bioethanol production capacity by 50%, to 3.75 billion litres a year, around 3% of global production.

We aim for our power business to sell around 560 terawatt hours of electricity a year by 2030, which is twice as much electricity as we sell today, and for the electricity we sell to have lower carbon intensity than

### CLEAN HYDROGEN GLOBAL DEMAND PROJECTIONS

Million tonnes per annum



Source: Bloomberg NEF Hydrogen Economy Outlook (2020), IEA low-carbon hydrogen production data, IEA Sustainable development scenario 2030, Shell analysis

the grid average within the markets where we operate. We are growing our power businesses with a focus on Europe, the USA, Australia and Asia.

### Building clean hydrogen

We intend to build on Shell's leading position in hydrogen by developing integrated hydrogen hubs initially to serve industry and heavy-duty transport. We will begin by producing and supplying hydrogen for our own manufacturing sites, especially refineries. For example, we are developing a hydrogen electrolyser at our refinery in Rheinland, Germany, which produces hydrogen from renewable sources. We will also continue to extend our network of hydrogen retail stations, with an increasing focus on heavy-duty transport.

The clean hydrogen market is still in the early stages and the volumes are still modest [L]. But we see strong potential for growth especially in hard-to-abate sectors of the economy. We aim to achieve a double-digit market share of global clean hydrogen sales by 2030.

### RENEWABLES AND ENERGY SOLUTIONS: INTEGRATED POWER STRATEGY FOCUSED ON REGIONAL LEADERSHIP

#### Europe

- In top three electric vehicle charging operators by volume

#### Energy solutions

- Around 1 million customers of integrated home energy solutions (Shell Energy Retail)
- More than 80,000 operated electric vehicle charge points (primarily through NewMotion)
- Intelligent home battery energy storage (60,000 Sonnen battery customers worldwide)
- Sustained growth of the commercial and industrial portfolio with more than 10,000 customers across key markets

#### Trading and optimisation

- Growing power trading business across Europe
- A leading player in the UK distributed energy market (Limejump)

\* Renewable generation capacity figures are gross.  
Source: Shell

### Renewable assets

- The Netherlands: 160 MW of renewable generation capacity in operation and 1.6 GW in development across solar and wind\*
- Germany: 10 MW hydrogen electrolyser (RefHyne) expected to start production in the summer of 2021
- Ireland: 300 MW floating wind farm (Emerald) in early-stage development, Shell share 51%



Shell is increasing the number of electric vehicle charging points globally for homeowners and businesses.

[L] Shell's definition of clean hydrogen includes hydrogen made from renewable sources (usually referred to as green hydrogen) and hydrogen made from natural gas with carbon capture and storage (usually referred to as blue hydrogen).

## RENEWABLES AND ENERGY SOLUTIONS

a selection of investments, acquisitions and ventures

| KEY  |   |  |   |                        |
|--|---|--|---|------------------------|
|  Energy solutions |  Wind  |  Mobility               |  Trading                 | * Minority investments |
|  Energy access    |  Solar   |  Nature-based solutions |  H <sub>2</sub> Hydrogen |                        |
| YEAR   | BUSINESS FOUNDED  |  |   |                        |
| 2016   | <ul style="list-style-type: none"> <li>Blauwwind*, NL </li> </ul>  |  |   |                        |
| 2017   | <ul style="list-style-type: none"> <li>Acquired NewMotion, NL </li> <li>Connected Freight*, Philippines </li> <li>Shell Energy Retail, UK (acquired as First Utility) </li> <li>Innowatts*, USA </li> <li>SolarNow*, Uganda </li> <li>SteamaCo*, Kenya </li> <li>Sunseap*, Singapore </li> </ul>   |  |   |                        |
|  | <ul style="list-style-type: none"> <li>Acquired MP2 Energy, USA </li> <li>Opened hydrogen stations in the UK and USA </li> </ul>  |  |   |                        |
| 2018   | <ul style="list-style-type: none"> <li>Silicon Ranch*, USA </li> <li>Cleantech Solar*, Asia </li> <li>Opened Moerdijk solar farm, NL </li> <li>Atlantic Shores Offshore Wind*, USA </li> <li>Mayflower Wind Energy*, USA </li> <li>TetraSpar*, Norway </li> <li>Shell Energy Inside, USA </li> </ul>   |  |   |                        |
|  | <ul style="list-style-type: none"> <li>Opened hydrogen stations in California, USA </li> <li>HyET Hydrogen*, NL </li> <li>Husk Power*, India </li> <li>SunFunder*, Kenya </li> <li>Ample*, USA </li> </ul>   |  |   |                        |
| 2019   | <ul style="list-style-type: none"> <li>Acquired Greenlots, USA </li> <li>Ravin.ai*, UK </li> <li>Revel*, USA </li> <li>Aurora*, USA </li> <li>Nordsol*, NL </li> <li>Acquired EOLFI, France </li> <li>CoensHexicon*, South Korea </li> <li>Acquired sonnen, Germany </li> <li>Acquired Hudson Energy UK (rebranded to Shell Energy Retail in 2020) </li> <li>IO3 Energy*, USA </li> <li>Corvus Energy*, Norway </li> </ul> |  |   |                        |
|  | <ul style="list-style-type: none"> <li>Nature-based solutions projects under way in Australia, Malaysia, Netherlands, Spain and UK </li> <li>Orb Energy*, India </li> <li>PowerGen*, Kenya </li> <li>d.light*, Kenya </li> <li>Acquired ERM Power (rebranded to Shell Energy in 2020), Australia </li> <li>Acquired Limejump, UK </li> </ul>  |  |   |                        |
|  | <ul style="list-style-type: none"> <li>ESCO Pacific*, Australia </li> <li>Announced plans to build Rheinland Hydrogen Electrolyser, Germany </li> </ul>   |  |   |                        |
| 2020   | <ul style="list-style-type: none"> <li>Final investment decision to build Gangarri solar farm, Australia </li> <li>Masabi*, UK </li> <li>InstaFreight*, Germany </li> <li>Spiffy*, USA </li> <li>Shell and Eneco awarded tender to build 759 MW Hollandse Kust (noord) offshore wind farm, NL </li> </ul>  |  |   |                        |
|  | <ul style="list-style-type: none"> <li>Select Carbon, Australia </li> <li>Climate Bridge*, China </li> <li>Announced plans to build 20 MW green hydrogen electrolyser and refuelling stations, China </li> <li>ZeroAvia*, USA </li> <li>Palmetto*, USA </li> <li>GreenCom*, Germany </li> </ul>   |  |   |                        |

# CAPITAL ALLOCATION

**Shell's financial strength and access to capital give us the ability to reshape our portfolio as the energy system transforms and demand changes. They also allow us to withstand volatility in oil and gas markets. This strong financial framework is based on sector-leading cash flow, continued capital discipline, capital flexibility and a strong balance sheet.**

## **THE FINANCIAL FRAMEWORK THAT SUPPORTS OUR STRATEGY**

We look to achieve the right balance between shareholder distributions and investing for the future, laying the foundation for both increased distributions and share price appreciation.

While our net debt is above the level of \$65 billion, we plan to invest \$19–22 billion a year across our portfolio. This will sustain our core businesses while funding moderate growth.

Once we have reduced net debt to \$65 billion, we will look to further increase total shareholder distributions. Through progressive dividend and share buybacks, we are targeting total distributions to shareholders of 20–30% of our cash flow from operations. We will also seek to increase capital spending in a disciplined way. With this approach we expect that we will:

- 1) Limit our investments in Upstream. Our oil production peaked in 2019 and we expect that it will gradually decline by 1–2% a year through to 2030.
- 2) Maintain our investments in our Transition businesses. We expect to see the share of gas rise to 55% of our hydrocarbon production in 2030.
- 3) Increase investments in our Growth businesses to build material low-carbon businesses of significant scale by the early 2030s.

As Shell progresses towards being a net-zero emissions energy business our cash flows will increasingly come from our Growth pillar, becoming less exposed to oil and gas prices with a stronger link to broader economic growth. As one of the largest commodity traders in the world, we expect additional opportunities to enhance cash delivery through integration and optimisation.

The characteristics of our Growth pillar mean that levels of capital investment are likely to be a poor proxy for the scale of the transformation of our business. Instead, we believe the best way to measure our progress towards our targets is through the carbon intensity of the energy products we sell, and the cash flows delivered by our business pillars. This is because our Growth pillar is likely to be less capital intensive than our Upstream and Integrated Gas businesses.

## **OUR CARBON FRAMEWORK**

We will take the same approach to managing and reducing our emissions as we have done for managing our financial framework, that is by setting constraints, or budgets.

We will be setting carbon budgets for all our businesses and these will help to drive investment decisions which will in turn drive down our emissions. In this way, we will decouple our business growth from carbon, transforming what we sell and what we produce.

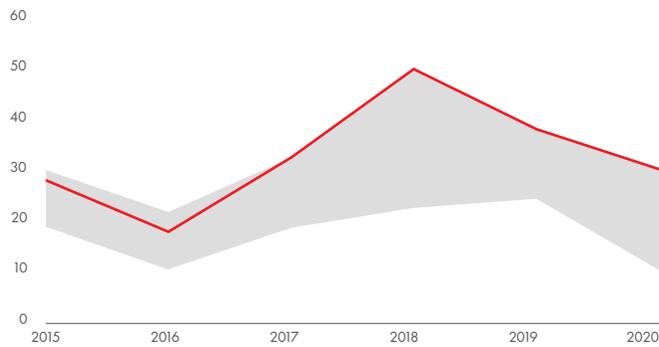
By assessing our investments and resources on the basis of our financial performance, and on the carbon intensity of our revenues, we will decide what changes to make to our business portfolio.

The carbon emissions constraints we place on our businesses will tighten over time, in line with our carbon intensity targets and as demand for low-carbon products increases.

We are setting carbon budgets for all our businesses and these will help to drive investment decisions which will in turn drive down our emissions.

### TRACK RECORD OF SECTOR-LEADING CFFO

\$ billion

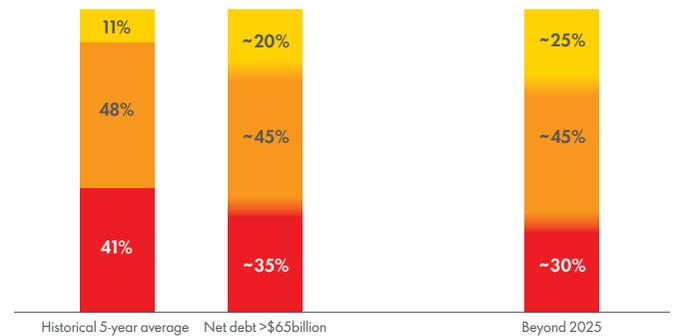


— Shell  
 ■ Peer range

Peer range comprises ExxonMobil, Chevron, BP and Total, CFFO for Shell corrected for interest received (in CFFI) and interest paid (CFFF).

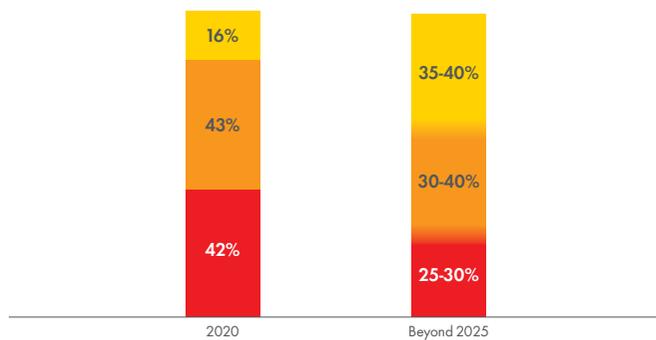
### FUTURE-PROOFING OUR CASH FLOWS

%



■ Growth  
 ■ Transition  
 ■ Upstream

### CASH CAPEX EVOLUTION



■ Growth  
 ■ Transition  
 ■ Upstream



### CAPITAL ALLOCATION THROUGH THE ENERGY TRANSITION

We are shifting capital from our Upstream business to our Transition and Growth businesses as the energy transition accelerates and we sell more low-carbon energy products.

We aim to find the right balance between managing our Upstream assets – which will produce the returns needed to help us fund the transition – and investing in our Transition and Growth businesses. These businesses are essential to identify, build and scale up profitable projects that offer low-carbon energy solutions for our customers. Our investments in our three business pillars are characterised by several factors including:

#### **GROWTH:**

- Compared with our conventional Upstream assets, investments in low- and zero-carbon solutions can require lower amounts of capital.
- The levels of capital investment needed to maintain a renewable energy business are also likely to be lower than in capital-intensive complex engineering projects common in the oil and gas industry, with their ongoing need for asset renewal and resource replenishment.
- We can grow our sales of low-carbon energy without necessarily investing in producing it ourselves by buying it from third parties and selling it to our customers. This model is part of our business today, we sell more than three times the energy we produce ourselves.
- We can enter into different types of financial arrangements that enable renewable generation capacity to be built, without bearing the full capital cost of the project. For example, developing renewable production as part of joint ventures allows us to reduce the capital investment needed, while giving us access to valuable expertise from other partners. It also gives us the opportunity to secure a substantial portion of the energy produced, allowing us to grow customer sales (See box Offshore wind).
- Our investments in our Marketing business will help decarbonise the energy system by increasing the provision of charging for electric vehicles and increasing the use of biofuels and low- and zero-carbon lubricants.

#### **TRANSITION:**

- Our investments in natural gas can help to decarbonise energy use when it replaces energy with a higher carbon intensity such as coal and fuel for shipping.
- Restructuring our refinery business into energy parks will transform our business away from our traditional oil-based energy products.

#### **UPSTREAM:**

- Most of our investments in our Upstream business are in maintaining assets and sustaining the value of the portfolio.
- Our existing Upstream assets are critical to delivering near-term cash flow and to enabling moderate growth.
- Our investments to improve the efficiency of our oil and gas facilities can help reduce our operational emissions.

Image below:  
A sonnen battery system powers a home.



## INVESTING IN OIL AND GAS

A natural decline in production happens in oil and gas reservoirs at a rate of around 5% a year across the oil and gas industry. It takes constant reinvestment to sustain production and extract resources.

Our planned capital investment of \$8 billion in our Upstream business in the near term is well below the investment level required to offset the natural decline in production of our oil and gas reservoirs, and will not sustain current levels of production.

As a result of this planned level of capital investment, we expect a gradual decline of about 1-2% a year in total oil production through to 2030, including divestments.



Powering lives by providing energy to homes.

## OFFSHORE WIND

Shell is part of the Blauwwind Consortium that was awarded the right to develop, construct and operate the Borssele III and IV wind farm off the Dutch coast. Shell entered with a 40% share in 2016 and Shell Energy Europe Limited secured a contract to sell 50% of the power produced. We sold half of our joint venture partnership in 2018 when we brought on board an additional partner. The wind farm is now fully operational and has a total installed capacity of 731.5 MW, equivalent to powering 825,000 Dutch households. We still sell 50% of the power produced.



Shell is part of a consortium that has developed a wind farm off the Dutch coast. We sell 50% of the power produced.

# CLIMATE POLICY ENGAGEMENT

**Robust and sustainable government policies will be critical to help the world achieve the goal of the Paris Agreement and net-zero emissions by 2050. These must include policies that accelerate the move to low-carbon energy in industries that are hard to decarbonise, sector by sector.**

Shell's Powering Progress strategy includes working with governments to support the policies and regulatory frameworks to accelerate the transition to net zero.

We are seeing a growing number of countries aiming for net-zero emissions and enhancing their nationally determined contributions (NDCs). The USA has recently rejoined the Paris Agreement, for example, China has set out its plans to reach net zero by 2060, and the European Union (EU) has committed to climate neutrality, or net-zero emissions, in 2050.

## ENGAGING WITH GOVERNMENTS

Our expertise in providing energy can help to shape effective policy, legislation and regulation, and we engage with governments, regulators and policymakers directly and indirectly, including through industry associations. We are also working with other companies, governments and investors through coalitions to identify the policies needed in sectors such as aviation, shipping and road freight to help change demand and enable faster decarbonisation.

We are members of the Mission Possible Partnership sectoral coalitions for aviation, shipping, road freight and steel. Each of these coalitions works to help accelerate decarbonisation pathways, including through policy engagement. For example, we are a member of the Clean Skies for Tomorrow initiative, which has developed a joint policy proposal for a sustainable aviation fuel mandate in the EU which would require airlines to use an increasing ratio of sustainable aviation fuel.

Shell is also a member of the Jet Zero Council (JZC) in the UK, a partnership between industry and government. JZC aims to deliver zero-emission transatlantic flight within a generation, and to drive new technologies and innovative ways to cut aviation emissions. Shell is also a member of the European Round Table for Industry (ERT) which has called on the EU institutions to introduce sectoral roadmaps to net-zero emissions [M].

## GREATER TRANSPARENCY

We aim to be at the forefront of the drive for greater transparency around political engagement. We set out our approach, including our principles for responsible lobbying, in our statement on corporate political engagement which is published on our website [N].

Our principles for participation in industry associations govern how we manage our relationships with industry associations on climate-related policy. They build on the Shell General Business Principles and the Shell Code of Conduct, and have been incorporated in the Shell Control Framework, which sets the requirements for how all Shell entities operate. The principles aim to ensure our memberships of industry associations do not undermine our support for the Paris Agreement and that they support the development of government policies that could help the world achieve net-zero emissions by 2050.

In 2019, we published our first Industry Associations Climate Review, and were one of the first companies to report this information [O]. The review assessed our climate-related policy alignment with 19 industry associations against our 2019 climate-related policy positions. The following year we published an update to our review.

In 2020, we updated Shell's climate-related policy positions and published them on our website [P]. These positions include support for the goal of the Paris Agreement and for the development of policies to help the world to achieve net-zero emissions by 2050. They also include support for carbon pricing, carbon capture utilisation and storage and nature-based offsets.

In the newly published 2021 Industry Associations Climate Review, we have reviewed 36 associations. We plan to publish our next update in 2022.

We will continue to work with governments, other companies, investors, non-governmental organisations, coalitions and industry associations to help society achieve the goal of the Paris Agreement and net-zero emissions. We will also continue to work towards greater transparency around climate lobbying and reporting.

[M] <https://ert.eu/wp-content/uploads/2021/02/2021-02-25-Statement-on-Sectoral-Approaches.pdf>

[N] [www.shell.com/advocacy](http://www.shell.com/advocacy)

[O] 2019 Industry Associations Climate Review [www.shell.com/advocacy](http://www.shell.com/advocacy)

[P] <https://www.shell.com/sustainability/transparency/advocacy-and-political-activity.html>

# A JUST TRANSITION

**The energy transition will create employment and opportunities for people to learn new skills. It may also adversely affect workers and communities, for example in areas where traditional products, business activities or jobs are phased out.**

The Paris Agreement refers to the importance of a just transition, recognising that governments must take into account the workers affected by the shift to a low-carbon economy, and create “decent work and quality jobs”. The UN Framework Convention on Climate Change, the parent treaty of the Paris Agreement, has defined decent work as “jobs that provide adequate incomes and social protection, safe working conditions, respect for rights at work and effective social dialogues”.

Our Powering Progress strategy seeks to support livelihoods, communities and an inclusive society as we transform our business to meet our target of becoming a net-zero emissions energy business by 2050, in step with society.

One of the strategy’s four main goals is powering lives, which sets out how we support livelihoods and communities. As we transform, we will continue to provide jobs, encourage local businesses to be part of our supply chain, promote entrepreneurship and offer skills training in communities where we operate.

We are working to help find viable ways to provide low-carbon energy that can support successful local economies. To do this we will work with governments, local communities, customers, employees, employee representative bodies, suppliers and industry groups.

We seek to work with contractors and suppliers who contribute to sustainable development and are economically, environmentally and socially responsible.

Our employees and their well-being are critical to the success of our business. During the energy transition, Shell will continue to respect workers’ rights in line with the 1998 Declaration of the Fundamental Principles of Rights at Work published by the UN’s International Labour Organization (ILO). We will continue to comply with ILO occupational health and safety standards and applicable laws and practices.

As portfolio changes affect our assets during the energy transition, we will seek to:

- continue to engage with employees, employee representative bodies and relevant government bodies at a local level, keeping them informed about our plans and listening to any concerns;
- provide wages and benefits that meet or exceed the national legal standards; and
- provide equal opportunity in recruitment, career development, promotion, training and rewards.

## **DEVELOPING SKILLS FOR THE FUTURE**

As our portfolio changes, we will seek to help employees develop skills for the future. This will strengthen their long-term employment prospects and enable them to seize opportunities created by the energy transition.

For example, the Pulau Bukom manufacturing site in Singapore will be affected by organisational changes and job reductions as it becomes one of our energy and chemicals parks. We aim to significantly reduce Bukom’s carbon dioxide emissions as the site produces fewer crude-oil, fuels-based products, instead favouring lower-carbon alternatives that may include biofuels. But over the course of three years, staff numbers will go from the current level of around 1,300 to around 800.





Edvon from Pakistan won the Shell LiveWIRE Top Ten Innovators special COVID-19 award for developing the Corona Fighter Robot.

We have partnered with the Singapore Shell Employees' Union to launch a Joint Capability Council (JCC) to help staff acquire new skills that will enable them to succeed in future roles. The JCC will help develop courses for employees in areas such as digital literacy and data analytics.

The JCC builds upon the UpSkill ShellSG initiative for all staff in Singapore. The UpSkill initiative allows our Singapore staff to access training in a wide range of subjects including digital skills, tech-enabled services, advanced manufacturing, leadership and project management. The initiative was developed in collaboration with local authorities who shared the aim of helping workers acquire skills that will enable them to succeed in the economy of the future.

### SUPPORTING THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals (SDGs) seek to address the world's biggest challenges, including ending poverty, improving health and education, and tackling climate change. Governments are responsible for implementing approaches that meet the SDGs, but success will require unprecedented collaboration and collective action involving businesses and civil society.

As a leading energy company, we will play our part in supporting the SDGs. Energy plays a critical role in enabling economic and social development and improving people's livelihoods. The supply of affordable, reliable and sustainable energy is crucial for addressing global challenges, including those related to poverty and inequality. That is why we are working to provide energy to those who do not have it today.

According to the International Energy Agency, in 2019 there were around 770 million people in the world who lacked access to electricity. Hundreds of millions more are estimated to have an unreliable energy supply. One of our ambitions is that by 2030 we will provide reliable electricity to 100 million people in Africa and Asia who do not yet have it.

To help achieve this, we are developing market-based programmes that provide access to clean and affordable energy for some of the world's most remote and vulnerable people. We are investing in companies that specialise in solar home systems, mini-grids, and other innovations that improve access to energy. As well as managing our existing portfolio, we are also seeking to develop large-scale power projects in key markets and to use our global partnerships to improve access to energy.

### POWERING LIVES THROUGH OUR ACTIVITIES

Managing the impact of our activities on people living near our operations is essential to being a responsible organisation. Many of our operations are located close to communities, and we work with them to understand their priorities and concerns. In doing this we use international standards as our benchmark, including the International Finance Corporation's Environmental and Social Performance Standards – as well as our own rigorous standards.

We employ people in more than 70 countries, providing income and benefits such as health care and pensions. Every year, we spend tens of billions of dollars on goods and services in the communities where we operate. Our activities generate revenues for governments through the taxes and royalties we pay and the sales taxes we collect on their behalf. This helps fund health care, education, transport and other essential services.

We strengthen local economies and employment opportunities through enterprise development programmes such as Shell LiveWIRE. The overall goal of these programmes is to enable communities to participate in and benefit from the stimulation of social and economic development. In 2020, 19,319 people participated in our programmes, which also supported 1,017 businesses. This helped create 1,805 jobs. In 2020, 99 businesses supported by Shell LiveWIRE entered our supply chain.



# CLIMATE GOVERNANCE

**Climate change and risks resulting from greenhouse gas (GHG) emissions are a significant risk factor for Shell. They are managed in accordance with other significant risks through the Board and the Executive Committee.**

The Board committees play an important role in assisting the Board with regard to governance and oversight of management of climate change risks and opportunities, as described in the Annual Report. The Safety, Environment and Sustainability Committee (SESCO) assists the Board in reviewing the practices and the performance of the Shell Group of companies, primarily with respect to safety, environment including climate change, and sustainability.

When reviewing these areas and deciding how to advise the Board, SESCO takes into account the Shell General Business Principles, Code of Conduct, and HSSE & SP Control Framework. SESCO's duties include reviewing Shell's progress towards meeting our climate targets and the energy transition. SESCO also advises the Remuneration Committee (REMCO) on metrics relating to sustainable development and energy transition.

## **INCENTIVES AND REMUNERATION**

The Remuneration Committee is responsible for determining the Directors' Remuneration Policy, in alignment with our business strategy.

Starting in 2021, we are increasing the weight associated with GHG emissions management in the annual scorecard, which helps determine the annual bonus levels for all our employees, including members of the Executive Committee. The GHG emissions intensity metric and its weight (10%) will remain unaltered, but we will add a new metric that measures the execution of GHG-abatement projects with a weight of 5%.

## **Performance Share Plan and Long-term Incentive Plan [Q]**

For 2021 awards made under the Performance Share Plan (PSP), the weighting of the energy transition condition has doubled from 5% to 10%. For 2021, the weighting of the energy transition condition in the Long-term Incentive Plan (LTIP) will also double from 10% to 20%. The target range is a 6-8% reduction in net carbon intensity by 2023 against the 2016 baseline NCF of 79 grams of carbon dioxide (CO<sub>2</sub>) equivalent per megajoule.

The other targets linked to our strategic ambitions will also evolve, with the metric connected to commercialising advanced biofuel technology broadening to a measure of growing new cleaner energy product offerings. The targets for the leading energy transition measures are commercially sensitive and will be disclosed retrospectively. The energy transition condition was included again in the 2020 LTIP awards for Executive Directors and Senior Executives and was also incorporated into the Performance Share Plan awards made to around 16,500 employees globally.



Members of the SESCO committee discuss safety and assurance with Shell senior managers during a meeting in The Hague.

[Q] Executive Directors and Executive Committee members participate in the LTIP. Around 150 Senior Executives participate in the same plan. The measures and metrics for that plan also apply to 50% of the Performance Share Plan (PSP) awarded to around 16,500 employees.

# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

**This publication and the description of our energy transition strategy are part of our continuing work to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).**

We assess our portfolio decisions, including investments and divestments, against the risks and opportunities associated with climate change and the energy transition. These include for example, policy actions such as higher regulatory costs linked to carbon emissions and demand changes which lower demand for oil and gas.

## **MANAGING CLIMATE-RELATED RISKS AND OPPORTUNITIES**

Our approach to assessing and managing the risks and opportunities associated with climate change includes considering different time horizons. The time horizons and their relevance to risks, opportunities and business planning are as follows:

- **Short term (up to three years):** we develop detailed financial projections and use them to manage performance and expectations on a three-year cycle.
- **Medium term (generally three to 10 years):** most of our expected production and earnings in this period come from our existing assets.
- **Long term (generally beyond 10 years):** for this period, it is expected that the current Shell portfolio will change and evolve with the energy transition. Decision-making and risk identification on the thematic structure of the future portfolio are guided by the pace of society's progress and the aim of being in step with society as it moves towards the goals of the Paris Agreement.

The overall climate change risk consists of four components, based on the nature of our exposure and the options for our mitigation responses. The four components are regulatory risks, commercial risks, physical risks and societal risks. We provide more details about how we manage these in our Annual Report.

## **SCENARIOS**

Our portfolio and strategy have been assessed against a wide range of outlooks. These include the potential impacts of various possible energy transition pathways, and changes in societal expectations around climate change. Our latest set of Shell scenarios [R] was one of the many variables used in guiding our updated strategy which we announced in February 2021.

## **SENSITIVITY TO OIL PRICES**

We estimate that a \$10 per barrel change in oil prices would have an impact of roughly \$6 billion per year on our cash flow from operations. Of this, \$4 billion would come from Upstream and \$2 billion from our Integrated Gas business. Cash flows from our Growth pillar and Chemicals and Products businesses have limited exposure to commodity prices and so are not included in this calculation. This is an indicative estimate and not a prediction.

Based on this assumption, if the oil price sustainably increased by around \$15 per barrel, as it did in January and February 2021, that would be expected to create an additional \$9 billion in medium-term cash flow per year from operations from our Upstream and Integrated Gas businesses. Similarly, a \$15 fall in the oil price would be expected to result in a \$9 billion reduction in cash flow from operations per year in the medium term.

[R] <https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/the-energy-transformation-scenarios>

### **SENSITIVITY TO GOVERNMENT-LED CO<sub>2</sub> PRICES**

Shell views carbon pricing as a key policy tool for meeting the temperature goal of the Paris Agreement as it helps to increase demand for low-carbon energy and creates incentives for investment in low-carbon technologies and infrastructure.

Shell's annual carbon cost exposure is expected to increase over the next decade because of evolving carbon regulations. This expected increase is based on forecasts of Shell's equity share of emissions from operated and non-operated assets, and real-terms carbon cost estimates which range from \$5 to \$110 per tonne of GHG emissions in 2030. This exposure also takes into account the estimated impact of free allowances as relevant to assets based on their location. The regulatory carbon cost estimate is refreshed on an annual basis as part of the development of our business plan.

### **RISK OF STRANDED ASSETS**

Every year we test our portfolio under different scenarios, including prolonged low oil prices. In addition, we rank the break-even prices of our assets in the Upstream business to assess their resilience against low oil and gas prices. At December 31, 2020, we estimate that around 75% of our current proved oil and gas reserves will be produced by 2030 and only around 3% after 2040. We also estimate that around 70% of our proved plus probable oil and gas reserves, known as 2P, will be produced by 2030, and only 5% after 2040.

### **EVOLVING REGULATORY DISCLOSURE REQUIREMENTS**

Disclosure requirements related to climate-related risks and opportunities are evolving and may result in more stringent disclosure mandates. Several regulatory bodies, including in the EU, the UK and the USA, are exploring frameworks and guidance for increased disclosure and creating uniform criteria for how economic activities score on environmental sustainability. Shell continues to monitor regulatory developments in this area, including progress on the EU Taxonomy and the adoption of the EU Delegated Acts for the technical screening criteria and disclosure methodology. We will develop responses as appropriate.

### **INCREASING TRANSPARENCY**

We are implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in our reporting. We are also engaging with others including the investor group Climate Action 100+ and the Science Based Targets initiative as they develop new reporting, accounting and target-setting frameworks for the oil and gas industry. The Science Based Targets initiative is a partnership between CDP, the United Nations Global Compact, the World Resources Institute and the World Wide Fund for Nature.

The structure of this report outlining our energy transition strategy is based on our continued engagement with Climate Action 100+ and on the net-zero disclosure standard developed by that group for the oil and gas industry.



# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) continued

The table below shows where to find Shell's disclosures that respond to the recommendations by the TCFD in our 2020 reports, publications and websites.

| TCFD RECOMMENDATION   | DISCLOSURE   |
|---|--|
| <b>GOVERNANCE:</b><br>Disclose the organisation's governance around climate-related risks and opportunities.  |  |
| a) Describe the Board's oversight of climate-related risks and opportunities.   | <b>Annual Report:</b> (pages 96/97) "Our governance of climate change"; (pages 143/144) "Governance - Safety, Environment and Sustainability Committee", and (pages 186/187) "Risk management and controls"  |
| b) Describe management's role in assessing and managing climate-related risks and opportunities.  | <b>Annual Report:</b> (page 96/97) "Our governance of climate change"  |
| <b>STRATEGY:</b><br>Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material. |  |
| a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.  | <b>Annual Report:</b> (pages 18-21) "Strategy and outlook", "Powering Progress"<br><b>Annual Report:</b> (page 98) "Climate-related risks and opportunities"<br><b>CDP 2020 Climate Change submission:</b> sections C2.2/2.3/2.4 Risks and Opportunities   |
| b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.   | <b>Annual Report:</b> (pages 98/99) "Impact of climate-related risks and opportunities on strategy, planning and business"<br><b>Annual Report:</b> (pages 94/95) introduction of "Climate change and energy transition", "Shell's absolute emissions and carbon intensity targets", "How we plan to deliver", and "Transparency and collaboration"<br><b>Annual Report:</b> (page 221) "Climate change and energy transition"<br><b>CDP 2020 Climate Change submission:</b> section C3 Business Strategy  |
| c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.  | <b>Annual Report:</b> (pages 98/99) "Impact of climate-related risks and opportunities on strategy, planning and business"<br><b>Annual Report:</b> (page 99) "Our climate target"<br><b>Corporate webpage:</b> How are Shell scenarios used?  |
| <b>RISK MANAGEMENT:</b><br>Disclose how the organisation identifies, assesses, and manages climate-related risks.   |  |
| a) Describe the organisation's processes for identifying and assessing climate-related risks.   | <b>Annual Report:</b> (page 97) "Climate change risk management process"<br><b>Annual Report:</b> (page 101) "Impact of physical risks and adaptation measures"<br><b>Sustainability Report:</b> (page 17) "About this report"   |
| b) Describe the organisation's processes for managing climate-related risks.  | <b>Annual Report:</b> (page 96/97) "Our governance of climate change", "Reorganisation in line with updated strategy"<br><b>Annual Report:</b> (page 98) "Climate change risk management at project level"<br><b>Annual Report:</b> (pages 101-105) "Our portfolio and climate change", "Natural gas", "Methane emissions", "Methane initiatives and collaborations", "Renewables and energy solutions", "Power", "Low-carbon fuels", "Carbon capture and storage", "Nature-based solutions"<br><b>Sustainability Report:</b> (pages 36-60) "Achieving net-zero emissions" |
| c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.  | <b>Annual Report:</b> (pages 186/187) "Risk management and controls"<br><b>Sustainability Report:</b> (page 7/8) "Our approach to sustainability"  |
| <b>METRICS AND TARGETS:</b><br>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.                                  |  |
| a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.   | <b>Sustainability Report:</b> (page 98-103) "Greenhouse gas and energy data"<br><b>Annual Report:</b> (page 100) "Our net carbon intensity targets"; (page 164/165) "Annual Report on Remuneration"<br><b>Sustainability Report:</b> (page 13/14) "Executive remuneration"   |
| b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.   | <b>Corporate webpage:</b> Performance data on Scope 1, 2, and 3<br><b>Annual Report:</b> (page 29) "Risk Factors"  |
| c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.   | <b>Annual Report:</b> (page 99) "Shell's absolute emissions and carbon intensity targets", (page 105-107) "Our performance"<br><b>Annual Report:</b> (page 45) "Performance indicators: safety and environment"<br><b>Sustainability Report:</b> (page 10/11) "Performance highlights"; (page 36-60) "Achieving net-zero emissions"; (page 95/96) "Our Powering Progress targets"<br><b>Annual Report:</b> (page 156) "Evolving remuneration in line with strategy"<br><b>Corporate webpage:</b> Our climate target: frequently asked questions                            |

# OUR STRATEGY TO ACCELERATE THE TRANSITION TO A NET-ZERO ENERGY BUSINESS

**OUR GOAL:** Net zero by 2050, in step with society, aligned with Paris

## OUR CLIMATE TARGETS:

**ALL ENERGY SOLD SCOPES 1, 2 & 3**

**REDUCING NET CARBON INTENSITY**

**ABSOLUTE EMISSIONS REDUCTION FROM 1.7 GTPA TO NET ZERO**

## ALIGNING OUR BUSINESS WITH PARIS:

### CHANGING HOW WE WORK



#### WHAT WE OFFER OUR CUSTOMERS

- Low- and zero-carbon products and solutions to avoid, reduce and mitigate emissions from energy use
- Introducing sector-based businesses accountable for driving decarbonisation



#### HOW WE OPERATE

- Reducing Scope 1 & 2 emissions to net zero by 2050
- Operational efficiency: methane intensity target and eliminating routine flaring



#### HOW WE INVEST

- Limit investment in Upstream, maintain investment in Transition, increase investment in Growth
- Build material low-carbon businesses of significant scale by the early 2030s



#### HOW WE MAKE DECISIONS

- Carbon budgets to steer business decisions
- Carbon targets tied to staff and executive incentive structures
- The Board and Executive Committee have accountability for energy transition strategy

### & IN STEP WITH SOCIETY



#### CUSTOMERS AND PARTNERS ACROSS SECTORS

- Partner with customers to identify and pilot decarbonisation solutions
- Participate in sectoral coalitions to accelerate decarbonisation pathways



#### INDUSTRY PEERS

- Working with Science Based Target initiative, Climate Action 100+ and Transition Pathways Initiative on industry standards
- Transition Principles developed with other energy companies



#### GOVERNMENTS & POLICYMAKERS

- Responsible lobbying
- Disclose climate-related policy positions
- Industry Associations Climate Review



#### INVESTORS

- Support consistency in disclosures including TCFD and WEF standards
- Transparency through Annual Report, Sustainability Report and advisory vote on energy transition strategy and progress

**POWERING LIVES**

**RESPECTING NATURE**

**GENERATING SHAREHOLDER VALUE**

## DISCLAIMER

### CAUTIONARY NOTE

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this report “Shell”, “Shell Group” and “Group” are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to Royal Dutch Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this report refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as “joint ventures” and “joint operations”, respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

This report contains certain following forward-looking Non-GAAP measures such as adjusted earnings. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of the company, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Royal Dutch Shell plc’s consolidated financial statements.

As used in this report, “Accountable” is intended to mean: required or expected to justify actions or decisions. The Accountable person does not necessarily implement the action or decision (implementation is usually carried out by the person who is Responsible) but must organise the implementation and verify that the action has been carried out as required. This includes obtaining requisite assurance from Shell companies that the framework is operating effectively. “Responsible” is intended to mean: required or expected to implement actions or decisions. Each Shell company and Shell-operated venture is responsible for its operational performance and compliance with the Shell General Business Principles, Code of Conduct, Statement on Risk Management and Risk Manual, and Standards and Manuals. This includes responsibility for the operationalisation and implementation of Shell Group strategies and policies.

This report contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future

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