The Shell name can be traced back to seashells imported from the Far East during the late 19th Century.

OUR PERFORMANCE DATA

Each year, we measure our ESG performance and report on the safety of our operations, our impact on the environment and our contribution to communities.

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ABOUT OUR DATA

We began reporting voluntarily on our environmental, safety and social performance with the first Shell Report in 1997. We support transparency and share information and data in this report and on www.shell.com.

There are inherent limitations to the accuracy of environmental, safety and social performance data. We recognise that our data will be affected by these limitations, so we continue to improve data integrity by strengthening our internal controls.

We provide all non-financial data in this report on a 100% basis for companies and joint ventures where we are the operator unless otherwise stated, in line with industry practice. We believe that this boundary best reflects regulatory requirements, as well as internal policies, for the management of potential health, safety, environmental and social impacts. We refer to the number of people employed or contracted on a full-time equivalent basis.

Operations acquired or divested during 2021 are included only for the period in which we operated these assets. Other data are collected from external sources, employee surveys and other internal sources as indicated. Some data in the social performance data table come from an internal survey completed by the senior Shell representative in each country. The accuracy of environmental and social data may be lower than that of data obtained through our financial systems.

We only include data in this report for 2021 that were confirmed by the end of March 2022. If incidents are reclassified or confirmed, or if significant data changes occur after preparation of this report, they will be updated in the following year's publication.

ASSURANCE

We have clear standards and reporting requirements for our health, safety, security, environment and social performance (HSSE & SP) data.

Shell companies are required to consider and adopt these standards, which define management roles and responsibilities, the scope of data at facilities and how data are calculated and collected. These standards are part of our HSSE & SP Control Framework.

To ensure we provide accurate information, our assurance process for HSSE & SP data is also a key element of the HSSE & SP Control Framework. Some examples of the assurance mechanisms in this process are:

- self-assessments at the facility level;
- internal audits at all levels of Shell;
- quarterly reviews and assessments of the data at all levels;
- an annual series of meetings between leaders at Group level and senior business managers to discuss outcomes and reporting parameters; and
- formal sign-off by Shell's senior country leaders.

The Carbon Reporting Committee (CRC), which was formed in 2021, is tasked with ensuring that greenhouse gas (GHG) emissions measures, both absolute emissions and carbon intensity, and associated metrics, comply with all regulatory and legal requirements.

The Report Review Panel of independent experts helps ensure our reporting is balanced, relevant and responsive to stakeholders' interests.

LRQA Limited has provided limited assurance of our net carbon intensity (measured and reported using the Net Carbon Footprint methodology), Scope 1 and Scope 2 greenhouse gas (GHG) emissions data under operational control for 2021 and Scope 3 greenhouse gas emissions from energy products included in our net carbon intensity. Limited assurance means nothing has come to the auditor's attention that would indicate that the greenhouse gas data and information as presented in the Greenhouse Gas Assertion were not materially correct. The most recent assurance statements are available at www.shell.com/ghg.

Conversions into US and Canadian dollars are based on the average exchange rates for 2021.

More in this report Our Powering Progress targets | Our standards and policies | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

OUR STANDARDS AND POLICIES

SELECTED COMMITMENTS, POLICIES AND FRAMEWORKS

We have a number of codes, policies and assurance processes that define how we aim to operate in socially and environmentally responsible ways. These include:

- Shell General Business Principles
- Shell Code of Conduct
- Ethics and Compliance Manual
- Code of Ethics for Executive Directors and Senior Financial Officers
- Shell Supplier Principles
- Health, Safety, Security, Environment & Social Performance Commitment and Policy
- Health, Safety, Security, Environment & Social Performance Control Framework
- Health, Safety, Security, Environment & Social Performance assurance
- Human rights approach
- Voluntary Principles on Security and Human Rights
- Shell's ambition to be a net-zero emissions energy business
- Environmental framework
- Biodiversity commitments
- Purchasing statement: Sustainable sourcing of bio-components (PDF)
- Corporate political engagement (PDF)
- Shell's principles for producing tight/shale oil and gas

We also support a number of external voluntary codes.

REPORTING STANDARDS AND FRAMEWORKS

Our reporting is informed by a number of standards such as the IPIECA Sustainability Reporting Guidance and the Global Reporting Initiative (GRI). In addition, we map our disclosures against the Sustainability Accounting Standards Board's Oil and Gas Exploration and Production Standard, the World Economic Forum's Stakeholder Capitalism Metrics (core) and are a founding member of and a signatory to the United Nations Global Compact. In our Annual Report, we set out our climate-related financial disclosures consistent with all of the Task Force on Climate-related Financial Disclosures (TCFD) Recommendations and Recommended Disclosures.

- Global Reporting Initiative
- Task Force on Climate-related Financial Disclosures
- Sustainability Accounting Standards Board
- CDP
- IPIECA
- United Nations Global Compact
- United Nations Sustainable Development Goals

More in this report Our Powering Progress targets | Our standards and policies | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

OUR POWERING PROGRESS TARGETS

In February 2021, Shell launched Powering Progress, which sets out our strategy to accelerate the transition of our business to net-zero emissions, in step with society, purposefully and profitably. It is designed to integrate sustainability with our business strategy, in support of our purpose – to power progress together by providing more and cleaner energy solutions. Targets and commitments under Powering Progress include:

ACHIEVING NET-ZERO EMISSIONS

Working with our customers and across sectors to accelerate the transition to net-zero emissions.

- Our climate target is to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the goal of the UN Paris Agreement on climate change.
- We have set targets to reduce the carbon intensity (Net Carbon Footprint) of the energy products we sell. This includes short-term targets of 3-4% by 2022, 6-8% by 2023, and 9-12% by 2024 (compared with 2016). It also includes medium- and long-term targets of 20% by 2030, 45% by 2035, and 100% by 2050 (compared with 2016), in step with society.
- In October 2021, we announced an absolute emissions reduction target of 50% by 2030, compared with 2016 levels on a net basis. This new target covers all Scope 1 and 2 emissions under Shell's operational control and complements our existing carbon-intensity targets.
- We have linked the pay of more than 16,500 staff to our target to reduce the carbon intensity of our energy products by 6-8% by 2023, compared with 2016.
- We believe our annual oil production peaked in 2019, and we expect our total oil production to decline by 1-2% a year until 2030.
- In 2022, we aim to invest $3 billion in our Renewables and Energy Solutions business. We aim to increase our power sales to 560 terawatts a year by 2030.
- Our aim is to use nature-based solutions to mitigate emissions of around 120 million tonnes of CO_2 per year by 2030.
- We seek to have access to an additional 25 million tonnes a year of carbon capture and storage (CCS) capacity by 2035 – equal to 25 CCS facilities the size of our Quest site in Canada.
- We have committed to bringing forward the target to eliminate routine gas flaring from our Upstream operated assets from 2030 to 2025. This is an acceleration of our previously stated obligation to the World Bank's Zero Routine Flaring by 2030 initiative.
- By 2025, we expect to have kept the methane emissions intensity of Shell-operated assets to below 0.2%.

RESPECTING NATURE

Protecting the environment, reducing waste and making a positive contribution to biodiversity.

Biodiversity

- Our ambition is to have a positive impact on biodiversity.
- Our new projects in areas rich in biodiversity – critical habitats – will have a net positive impact on biodiversity, starting implementation in 2021.
- Our nature-based solutions projects, which protect, transform or restore land, will have a net positive impact on biodiversity, starting implementation in 2021.
- We will replant forests, achieving net-zero deforestation from new activities, while maintaining biodiversity and conservation value, starting implementation in 2022.

Water

- Our ambition is to conserve fresh water by reducing consumption and increasing reuse and recycling.
- We will reduce the amount of fresh water consumed in our facilities, starting by reducing fresh-water consumption by 15% by 2025 compared with 2018 levels in areas where there is high pressure on fresh-water resources.
- We will assess options for further reduction goals by the end of 2022.

Circular economy and waste

- Our ambition is to use resources and materials efficiently and to increase reuse and recycling.
- We are aiming for zero waste by reducing waste generated and increasing reuse and recycling in our businesses and supply chains. We will set goals for waste reduction, reuse, and recycling by the end of 2022.
- We will work with our suppliers and contractors to help end plastic waste in the environment:
  - By 2030, we will increase the amount of recycled plastic in our packaging to 30% and ensure that the packaging we use for our products is reusable or recyclable.
  - We will increase the amount of recycled materials used to make our products, starting with plastics. Our ambition is to use one million tonnes of plastic waste a year in our global chemicals plants by 2025.

Air quality

- We are helping to improve air quality by reducing emissions from our operations and providing cleaner ways to power transport and industry.

Collaboration and reporting

We are strengthening external partnerships and improving transparency on performance.

- Supply chain: We will include requirements in our purchasing policies to reflect our environmental framework, and take the energy efficiency, material efficiency and sustainability of products into consideration in our purchases.
- External partnerships: We will ensure external partnerships inform key areas of development and delivery of our ambitions.
- External reporting: We will transparently report performance in our annual Sustainability Report.

POWERING LIVES

Powering lives through our products and activities, and by supporting an inclusive society.

- Our ambition, by 2030, is to provide reliable electricity to 100 million people in emerging markets who do not yet have it.
- We aim to increase racial and ethnic representation across our workforce so that we better reflect the communities in which we work and live.
- Shell is working towards achieving 35% representation of women in our senior leadership by 2025 and 40% by 2030.
- By 2030, we will make our global network of service stations more inclusive and accessible to customers with physical disabilities.
- At Shell, we seek to provide a safe, caring and inclusive environment for LGBT+ and PWD (people with disabilities) staff so that they can be themselves and reach their full potential.

More in this report Sustainability at Shell | Climate change and the energy transition | Letter from the CEO

More on Shell websites Powering Progress – transitioning to net-zero emissions

SAFETY PERFORMANCE DATA

Personal Safety [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Fatalities [B]	Number	**8**	0	7	2	2	SHS-3	EM-EP-320a.1	403-9
Employees	Number	**0**	0	3	0	0	SHS-3	EM-EP-320a.1	403-9
Contractors	Number	**8**	0	4	2	2	SHS-3	EM-EP-320a.1	403-9
Fatal accident rate	Number per 100 million hours	**1.7**	0.0	1.4	0.4	0.4	SHS-3	EM-EP-320a.1	403-9
Employees	Number per 100 million hours	**0.0**	0.0	1.6	0.0	0.0	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per 100 million hours	**2.9**	0.0	1.2	0.6	0.6	SHS-3	EM-EP-320a.1	403-9
Serious Injury and Fatality (SIF) [C] [D]	Number	**32**	23	35	–	–	-	-	-
Employees	Number	**5**	5	9	–	–	-	-	-
Contractors	Number	**27**	18	26	–	–	-	-	-
Serious Injury and Fatality Frequency (SIF-F)	Number per 100 million hours	**6.9**	6.0	7.5	–	–	-	-	-
Employees	Number per 100 million hours	**2.7**	2.7	4.9	–	–	-	-	-
Contractors	Number per 100 million hours	**9.8**	6.8	7.8	–	–	-	-	-
Total recordable case frequency (TRCF)	Number per million hours	**0.9**	0.7	0.9	0.9	0.8	SHS-3	EM-EP-320a.1	403-9
Employees	Number per million hours	**0.5**	0.4	0.6	0.7	0.6	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per million hours	**1.1**	0.9	1.1	1.0	0.9	SHS-3	EM-EP-320a.1	403-9
Lost time injury frequency (LTIF)	Number per million hours	**0.3**	0.2	0.3	0.3	0.2	SHS-3	EM-EP-320a.1	403-9
Employees	Number per million hours	**0.2**	0.2	0.3	0.2	0.2	SHS-3	EM-EP-320a.1	403-9
Contractors	Number per million hours	**0.4**	0.3	0.3	0.3	0.2	SHS-3	EM-EP-320a.1	403-9

[A] In line with industry standards, we distinguish three contract modes. Mode 1: contractor/supplier performs work under Shell's HSSE Management System (HSSE MS); Mode 2: contractor/supplier performs work under its own HSSE MS, which is materially equivalent to Shell's HSSE MS; Mode 3: contractor/supplier performs work under its own HSSE MS. Also in line with industry standards, we report on safety performance only for contract modes 1 and 2.

[B] Includes fatal occupational injuries and illnesses except for those related to COVID-19. There were 2 COVID-19-related occupational illnesses in 2020 that resulted in death (0 employees, 2 contractors) and one COVID-19-related fatality in 2021 (0 employees, 1 contractor).

[C] Defined as a serious work-related injury or illness, including those that resulted in Fatality or a Life Altering Event. Life Altering Event is defined as a long-term or permanent injury/ illness with significant impact to daily activities. Examples of SIF include, but are not limited to, permanent total disability, amputation of a body part (full or partial), reduced bodily mobility (full or partial), 3rd degree burns, impaired vision, hearing, sense of taste or smell.

[D] Data prior to 2019 are not available. The number of SIF cases for 2019 and 2020 reflects the best estimate. Combined workforce SIF frequency for 2019-2020 was adjusted to account for some uncertainty in the number of SIF cases.

Road Transport Safety [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Road transport safety performance							SHS-4	-	-
Severe motor vehicle incident frequency rate [B]	Number of severe motor vehicle incidents per 100 million kilometres driven	**1.7**	2.1	3.5	3.1	2.5	SHS-4	-	-
Number of road-transport-related fatalities (employees and contractors)	Number	**0**	0	2	0	1	SHS-4	-	-

[A] In line with industry standards, we distinguish three contract modes. Mode 1: contractor/supplier performs work under Shell's HSSE Management System (HSSE MS); Mode 2: contractor/supplier performs work under its own HSSE MS, which is materially equivalent to Shell's HSSE MS; Mode 3: contractor/supplier performs work under its own HSSE MS. Also in line with industry standards, we report on safety performance only for contract modes 1 and 2.

[B] Severe motor vehicle incident is defined as a motor vehicle incident resulting in a fatality, serious injury or a rollover of a vehicle.

Process Safety

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Operational process safety events [A] [B]	Number	**102**	103	130	121	166	SHS-6	EM-EP-540a.1	-
Tier 1	Number	**38**	34	41	35	49	SHS-6	EM-EP-540a.1	-
Upstream	Number	**7**	10	7	6	14	SHS-6	EM-EP-540a.1	-
Integrated Gas, Renewables and Energy Solutions	Number	**2**	3	1	0	2	SHS-6	EM-EP-540a.1	-
Downstream	Number	**29**	20	32	28	33	SHS-6	EM-EP-540a.1	-
Other	Number	**0**	1	1	1	0	SHS-6	EM-EP-540a.1	-
Tier 2	Number	**64**	69	89	86	117	SHS-6	EM-EP-540a.1	-
Upstream	Number	**13**	14	22	23	32	SHS-6	EM-EP-540a.1	-
Integrated Gas, Renewables and Energy Solutions	Number	**4**	3	7	6	5	SHS-6	EM-EP-540a.1	-
Downstream	Number	**45**	49	59	54	70	SHS-6	EM-EP-540a.1	-
Other	Number	**2**	3	1	3	10	SHS-6	EM-EP-540a.1	-

[A] Process safety events classified according to guidance from the IOGP and API.

[B] In 2021, there were seven Tier 1 sabotage-related events (not included in above data). The classification of sabotage-related process safety events is made on the best-endeavours basis.

Health

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total recordable occupational illness frequency (TROIF) (employees only) [A]	Number per million hours	**0.4**	0.2	0.5	0.4	0.3	SHS-3	EM-EP-320a.1	403-10

[A] Does not include COVID-19-related occupational illnesses. There were 86 COVID-19-related employee occupational illnesses in 2021.

Security [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Using armed security	% of countries	**14**	14	20	21	14	SHS-7	-	-
Using armed company security	% of countries	**3**	1	1	3	1	SHS-7	-	-
Using armed contractor security	% of countries	**8**	8	11	10	3	SHS-7	-	-

[A] Data obtained from an internal survey completed by the senior Shell representative in each country.

More in this report Our Powering Progress targets | Greenhouse gas and energy data | Letter from the CEO
More on Shell websites Our strategy: Powering Progress | Our approach | Transport safety | Community road safety

GREENHOUSE GAS AND ENERGY DATA

Net carbon intensity (NCI)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
NET CARBON INTENSITY [A] [D]									
Net carbon intensity	gCO_2e/MJ	**77**	75	78	79	79	-	-	-
Estimated total energy delivered by Shell	trillion (10^12) MJ	**17.89**	18.40	21.05	22.00	21.44	-	-	-
Share of energy delivered per energy product type [B] [E]									
Oil products and GTL	%	**45**	47	56	55	54	-	-	-
Gas	%	**25**	21	17	21	23	-	-	-
LNG	%	**18**	19	18	16	15	-	-	-
Biofuels	%	**1**	1	1	1	1	-	-	-
Power	%	**12**	12	9	7	7	-	-	-
Total estimated greenhouse gas emissions covered by the net carbon intensity calculation [C]	million tonnes CO_2e	**1,375**	1,384	1,646	1,731	1,688	-	-	-
Carbon intensity of energy products type [F] [G]									
Oil products and GTL	gCO_2e/MJ	**91**	89	89	88	89	-	-	-
Gas	gCO_2e/MJ	**66**	67	66	67	67	-	-	-
LNG	gCO_2e/MJ	**70**	70	71	71	71	-	-	-
Biofuels	gCO_2e/MJ	**41**	38	39	37	39	-	-	-
Power	gCO_2e/MJ	**66**	48	57	62	60	-	-	-

[A] The NCI calculation uses Shell's energy product sales volume data, as disclosed in the Annual Report and Sustainability Report. This excludes certain contracts held for trading purposes and reported net rather than gross. Business-specific methodologies to net volumes have been applied in oil products and pipeline gas and power. Paper trades that do not result in physical product delivery are excluded. Retail sales volumes from markets where Shell operates under trademark licensing agreements are also excluded from the scope of Shell's carbon intensity metric.

[B] Percentage of delivered energy may not add up to 100% because of rounding.

[C] Total CO_2e emissions estimated using Shell's Net Carbon Footprint value and the estimate of total delivered energy. Note that this estimated value is calculated from the portfolio average intensity value, which is determined in Shell's Net Carbon Footprint calculation. It is only intended to give an indication of the scope of the emissions included within Shell's Net Carbon Footprint; it does not represent an inventory of emissions. Carbon offsets for 2019, 2020 and 2021 were included in the total estimated GHG emissions covered by the Net Carbon Footprint calculation.

[D] Acquisitions and divestments are included in the actual performance tracking with the target and reference year unchanged. Note that acquisition and divestments could have a material impact on meeting the targets.

[E] Lower heating values are used for the energy content of the different products and a fossil-equivalence approach is used to account for electrical energy, so that it is assessed on the same basis as our other energy products.

[F] In 2021, emissions included in carbon intensity of power have been calculated using the market-based method.

[G] The carbon intensity of biofuels reflects the global average for biofuels sold by Shell for 2021.

Sales of gas and power produced by third parties

	Unit	2021	2020	2019 [A]	2018	2017	IPIECA	SASB	GRI
Gas	tBtu	**3,630**	3,009	2,720	3,246	3,276	-	-	-
Power	TWh	**247**	252	207	179	165	-	-	-

In certain cases, prior to 2019, it was not possible to disaggregate sales of Shell and third-party gas volumes. To avoid double-counting these sales volumes were not included in the above figures.

[A] From 2019, gas and power sales volumes are reported based on a revised methodology. Sales volumes reported exclude those related to pure trading activities.

Scope 1 GHG emissions (operational control) [A] [B] [C] [D]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Direct GHG emissions (Scope 1)	million tonnes CO_2e	**60**	63	70	71	73	CCE-4	EM-EP-110a.1	305-1
Carbon dioxide (CO_2)	million tonnes	**58**	61	67	69	70	CCE-4	EM-EP-110a.1	305-1
Methane (CH_4)	thousand tonnes	**55**	67	91	92	123	CCE-4	EM-EP-110a.1	305-1
Nitrous oxide (N_2O)	thousand tonnes	**1**	1	1	1	1	CCE-4	EM-EP-110a.1	305-1
Hydrofluorocarbons (HFCs)	tonnes	**25**	30	29	31	22	CCE-4	EM-EP-110a.1	305-1
Sulphur hexafluoride (SF_6)	tonnes	**0.01**	0.01	0.01	0.03	0.01	CCE-4	EM-EP-110a.1	305-1
Perfluorocarbons (PFC)	tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.1	305-1
Nitrogen trifluoride (NF_3)	tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.1	305-1
Scope 1 emissions by business									
Upstream	million tonnes CO_2e	**11.7**	12.8	12.9	14.8	19.6	CCE-4	EM-EP-110a.1	305-1
Integrated Gas	million tonnes CO_2e	**15.5**	14.1	16.3	13.0	12.0	CCE-4	EM-EP-110a.1	305-1
Downstream	million tonnes CO_2e	**32.6**	35.8	40.2	42.7	41.1	CCE-4	EM-EP-110a.1	305-1
Refining [E]	million tonnes CO_2e	**20.1**	23.4	28.0	29.1	27.8	CCE-4	EM-EP-110a.1	305-1
Chemicals	million tonnes CO_2e	**11.0**	10.8	10.5	11.6	11.4	CCE-4	EM-EP-110a.1	305-1
Other Downstream [F]	million tonnes CO_2e	**1.4**	1.6	1.8	2.1	2.0	CCE-4	EM-EP-110a.1	305-1
Other [G]	million tonnes CO_2e	**0.2**	0.2	0.2	0.8	0.2	CCE-4	EM-EP-110a.1	305-1
Scope 1 emissions by country									
USA	million tonnes CO_2e	**13**	16	19	20	18	CCE-4	EM-EP-110a.1	305-1
Middle East	million tonnes CO_2e	**9**	9	9	10	11	CCE-4	EM-EP-110a.1	305-1
Netherlands	million tonnes CO_2e	**7**	7	7	7	7	CCE-4	EM-EP-110a.1	305-1
Singapore	million tonnes CO_2e	**5**	6	6	7	7	CCE-4	EM-EP-110a.1	305-1
Australia	million tonnes CO_2e	**5**	4	7	4	3	CCE-4	EM-EP-110a.1	305-1
Canada	million tonnes CO_2e	**5**	5	6	6	6	CCE-4	EM-EP-110a.1	305-1
Nigeria	million tonnes CO_2e	**5**	5	4	4	5	CCE-4	EM-EP-110a.1	305-1
Germany	million tonnes CO_2e	**3**	3	3	4	4	CCE-4	EM-EP-110a.1	305-1
Malaysia	million tonnes CO_2e	**2**	3	2	3	3	CCE-4	EM-EP-110a.1	305-1
United Kingdom	million tonnes CO_2e	**2**	2	2	2	3	CCE-4	EM-EP-110a.1	305-1
International waters	million tonnes CO_2e	**1**	1	2	2	1	CCE-4	EM-EP-110a.1	305-1
Rest of the world	million tonnes CO_2e	**2**	3	3	4	5	CCE-4	EM-EP-110a.1	305-1

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Scope 1 emissions by source									
CO_2 emissions	million tonnes	**58**	61	67	69	70	CCE-4	EM-EP-110a.2	305-1
Combustion	million tonnes	**47**	50	53	54	53	CCE-4	EM-EP-110a.2	305-1
Flaring	million tonnes	**5**	4	7	6	9	CCE-4	EM-EP-110a.2	305-1
Venting and process	million tonnes	**6**	6	8	9	8	CCE-4	EM-EP-110a.2	305-1
Fugitives	million tonnes	**0**	0	0	0	0	CCE-4	EM-EP-110a.2	305-1
CH_4 emissions	thousand tonnes	**55**	67	91	92	123	CCE-4	EM-EP-110a.2	305-1
Combustion	thousand tonnes	**7**	11	13	13	12	CCE-4	EM-EP-110a.2	305-1
Flaring	thousand tonnes	**19**	15	19	18	27	CCE-4	EM-EP-110a.2	305-1
Venting and process	thousand tonnes	**22**	29	44	45	62	CCE-4	EM-EP-110a.2	305-1
Fugitives	thousand tonnes	**7**	12	15	16	23	CCE-4	EM-EP-110a.2	305-1
Other greenhouse gases	million tonnes CO_2e	**0.2**	0.3	0.3	0.3	0.3	CCE-4	EM-EP-110a.2	305-1
Methane (CH_4) emissions									
Methane emissions in CO_2 equivalent [H]	million tonnes CO_2e	**1.4**	1.7	2.3	2.3	3.1	CCE-4	EM-EP-110a.1	305-1
Methane emissions intensity - assets with marketed gas	%	**0.06**	0.06	0.08	0.08	–	CCE-4	EM-EP-110a.1	305-1
Methane emissions intensity - assets without marketed gas	%	**0.01**	0.01	0.01	0.01	–	CCE-4	EM-EP-110a.1	305-1
Upstream flaring [I]									
GHG emissions from flaring	million tonnes CO_2e	**4.5**	3.8	5.9	5.2	8.2	CCE-4	EM-EP-110a.2	305-1
Total hydrocarbons flared	million tonnes	**1.3**	1.1	1.8	1.5	2.5	CCE-4	EM-EP-110a.2	305-1
Nigeria	million tonnes	**0.8**	0.6	0.7	0.6	0.8	CCE-4	EM-EP-110a.2	305-1
Rest of the world	million tonnes	**0.4**	0.5	1.2	1.0	1.7	CCE-4	EM-EP-110a.2	305-1
Total hydrocarbons flared - routine	million tonnes	**0.2**	0.3	0.5	0.6	1.2	-	-	-
Total hydrocarbons flared - non-routine	million tonnes	**1.0**	0.8	1.4	0.9	1.3	-	-	-
Upstream Flaring Intensity [J]	%	**0.8**	0.6	0.9	0.8	1.1	-	-	-
GHG emissions from exported energy [K]	million tonnes CO_2e	**3**	3	3	3	3	CCE-4	EM-EP-110a.2	305-1

[A] Greenhouse gas emissions (GHG) comprise carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride. The data are calculated using locally regulated methods where they exist. Where there is no locally regulated method, the data are calculated using the 2009 API Compendium, which is the recognised industry standard under the GHG Protocol Corporate Accounting and Reporting Standard. There are inherent limitations to the accuracy of such data. Oil and gas industry guidelines (IPIECA/API/IOGP) indicate that several sources of uncertainty can contribute to the overall uncertainty of a corporate emissions inventory. We have estimated the overall uncertainty for our direct GHG emissions to be around 4% for 2021.

[B] GHG emissions were calculated using global warming potential (GWP) factors from the IPCC's Fourth Assessment Report. For comparison, our Scope 1 emissions would have been 60 million tonnes in 2021 if we were to use GWPs from the IPCC's Fifth Assessment Report.

[C] We have updated some of our historical figures following a review of the data.

[D] GHG emissions in this table do not include carbon credits.

[E] Includes Scotford Upgrader and Quest Carbon Capture and Storage.

[F] Includes emissions from other Downstream assets and activities (e.g. shipping, lubricants, trading & supply). Includes oil sands mining until its divestment on May 31, 2017.

[G] Includes emissions from assets and activities reported by Projects & Technology business and Global Functions.

[H] Methane emissions were converted to CO_2 equivalents using GWP from the IPCC's Fourth Assessment Report. For comparison, our methane emissions would have been 1.5 million tonnes in CO_2 equivalents in 2021 if we were to use GWPs from the IPCC's Fifth Assessment Report.

[I] Includes Upstream and Integrated Gas businesses.

[J] Calculated as total hydrocarbons flared divided by sum of total oil and gas wellhead production, LNG and GTL production x 100%.

[K] GHG emissions related to energy production (in the form of electricity, heat or steam) that was exported to another facility or public grid. This is a subset of our Scope 1 GHG emissions.

Scope 2 GHG emissions (operational control) [A] [B] [C]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Scope 2 emissions - market-based method	million tonnes CO_2e	**8**	8	10	11	12	CCE-4	-	305-2
Scope 2 emissions - location-based method	million tonnes CO_2e	**9**	10	11	11	11	CCE-4	-	305-2
Scope 2 emissions by business (market-based method)									
Upstream	million tonnes CO_2e	**0.6**	0.6	1.1	1.4	1.4	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.4**	1.5	1.6	2.4	2.4	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**5.6**	6.0	6.9	6.8	7.5	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.1	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions by country (market-based method)									
USA	million tonnes CO_2e	**2.6**	3.0	3.1	3.2	3.1	CCE-4	-	305-2
Netherlands	million tonnes CO_2e	**1.5**	1.4	1.7	1.8	1.9	CCE-4	-	305-2
Australia	million tonnes CO_2e	**1.3**	1.4	1.6	2.4	2.3	CCE-4	-	305-2
Canada	million tonnes CO_2e	**1.2**	1.3	2.3	2.0	2.7	CCE-4	-	305-2
Singapore	million tonnes CO_2e	**0.5**	0.5	0.5	0.5	0.6	CCE-4	-	305-2
Germany	million tonnes CO_2e	**0.2**	0.3	0.3	0.4	0.7	CCE-4	-	305-2
Rest of the world	million tonnes CO_2e	**0.2**	0.2	0.3	0.4	0.3	CCE-4	-	305-2
Scope 2 emissions by business (location-based method)									
Upstream	million tonnes CO_2e	**0.6**	0.6	1.1	1.2	1.4	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**2.6**	2.7	2.7	2.4	2.3	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**5.5**	6.1	7.1	6.8	7.4	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.2	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions by country (location-based method)									
USA	million tonnes CO_2e	**2.6**	3.1	3.2	3.4	3.1	CCE-4	-	305-2
Australia	million tonnes CO_2e	**2.5**	2.6	2.6	2.4	2.3	CCE-4	-	305-2
Netherlands	million tonnes CO_2e	**1.4**	1.3	1.6	1.7	1.9	CCE-4	-	305-2
Canada	million tonnes CO_2e	**1.2**	1.4	2.3	2.0	2.7	CCE-4	-	305-2
Singapore	million tonnes CO_2e	**0.5**	0.5	0.5	0.5	0.6	CCE-4	-	305-2
Germany	million tonnes CO_2e	**0.2**	0.3	0.4	0.3	0.4	CCE-4	-	305-2
Rest of the world	million tonnes CO_2e	**0.3**	0.4	0.4	0.4	0.3	CCE-4	-	305-2

[A] Split by business or country may not add up to total due to rounding.
[B] We have updated some of our historical figures following a review of the data.
[C] We estimated the uncertainty of our 2021 Scope 2 GHG emissions to be around 6% (both market- and location-based methods).

GHG intensities (operational control)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Upstream and Integrated Gas GHG intensity [A]	tonne CO_2e/tonne production	**0.172**	0.159	0.168	0.158	0.166	CCE-4	-	305-4
Upstream and Integrated Gas GHG intensity [B]	kg CO_2e/boe	**22**	21	22	21	22	CCE-4	-	305-4
Refinery GHG intensity [C]	tonne CO_2e/ UEDC™	**1.05**	1.05	1.06	1.05	1.14	CCE-4	-	305-4
Chemical GHG intensity [D]	tonne CO_2e/tonne production	**0.95**	0.98	1.04	0.96	0.95	CCE-4	-	305-4

[A] In tonnes of Scope 1 and Scope 2 GHG emissions per tonne of oil and gas available for sale, liquefied natural gas and gas-to-liquids production in Integrated Gas and Upstream. 2021 figure does not include Prelude Floating Liquified Natural Gas (FLNG).

[B] In kilograms of Scope 1 and Scope 2 GHG emissions per boe of oil and gas available for sale, liquefied natural gas and gas-to-liquids production in Integrated Gas and Upstream. 2021 figure does not include Prelude Floating Liquified Natural Gas (FLNG).

[C] UEDC™ (Utilised Equivalent Distillation Capacity) is a proprietary metric of Solomon Associates. It is a complexity-weighted normalisation parameter that reflects the operating cost intensity of a refinery based on size and configuration of its particular mix of process and non-process facilities.

[D] High-value chemicals include olefin products (ethylene and propylene) plus the contained butadiene, benzene, acetylene, and high-purity hydrogen production.

Scope 1 and 2 GHG emissions (equity boundary) [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Direct GHG emissions (Scope 1)	million tonnes CO_2e	**91**	**98**	**105**	**102**	**97**	CCE-4	EM-EP-110a.1	305-1
Upstream	million tonnes CO_2e	**18.5**	20.1	21.7	22.2	25.4	CCE-4	EM-EP-110a.1	305-1
Integrated Gas	million tonnes CO_2e	**24.5**	24.2	25.9	25.2	24.1	CCE-4	EM-EP-110a.1	305-1
Downstream	million tonnes CO_2e	**47.6**	53.2	57.3	53.8	47.1	CCE-4	EM-EP-110a.1	305-1
Other	million tonnes CO_2e	**0.2**	0.2	0.2	0.8	0.3	CCE-4	EM-EP-110a.1	305-1
Scope 2 emissions (market-based method)	million tonnes CO_2e	**9**	**9**	**11**	**11**	**13**	CCE-4	-	305-2
Upstream	million tonnes CO_2e	**0.7**	0.7	1.2	1.3	1.3	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.1**	1.0	1.1	1.8	2.0	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**6.7**	7.1	8.0	7.7	9.2	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.1	0.2	0.2	0.2	CCE-4	-	305-2
Scope 2 emissions (location-based method)	million tonnes CO_2e	**10**	**10**	**12**	**11**	**13**	-	-	-
Upstream	million tonnes CO_2e	**0.7**	0.8	1.2	1.2	1.3	CCE-4	-	305-2
Integrated Gas	million tonnes CO_2e	**1.8**	1.7	1.8	1.8	2.0	CCE-4	-	305-2
Downstream	million tonnes CO_2e	**7.0**	7.5	8.3	7.6	9.5	CCE-4	-	305-2
Other	million tonnes CO_2e	**0.1**	0.2	0.2	0.3	0.2	CCE-4	-	305-2

[A] Split by business may not add up to total due to rounding.

Scope 3 GHG emissions [A] [B]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Purchased goods and services (Category 1)									
Third-party products [C]	million tonnes CO_2e	**147**	147	178	190	186	CCE-4	-	305-3
Fuel and energy-related activities (not included in Scope 1 or Scope 2) (Category 3)									
Third-party power [D]	million tonnes CO_2e	**136**	103	102	96	87	CCE-4	-	305-3
Downstream Transportation and Distribution (Category 9)									
Sold own energy products [E]	million tonnes CO_2e	**6**	–	–	–	–	–	–	305-3
Use of sold products (Category 11)									
Use of sold products [F]	million tonnes CO_2e	**1,010**	1,054	1,271	1,351	1,318	CCE-4	-	305-3
Own production [G]	million tonnes CO_2e	**380**	452	564	594	582	CCE-4	-	305-3
Third-party products [H]	million tonnes CO_2e	**630**	602	708	757	736	CCE-4	-	305-3

[A] The values in this table reflect estimated Scope 3 emissions included in our net carbon intensity. This excludes certain contracts held for trading purposes and reported net rather than gross. Business-specific methodologies to net volumes have been applied in oil products and pipeline gas and power. Paper trades that do not result in physical product delivery are excluded. Retail sales volumes from markets where Shell operates under trademark licensing agreements are also excluded from the scope of Shell's carbon intensity metric.
[B] Estimated emissions from other Scope 3 categories are published on www.shell.com/ghg. 2021 data will be available in June 2022.
[C] This category includes estimated well-to-tank emissions from purchased third-party refined oil products, natural gas, LNG, crude oil and biofuels.
[D] This category includes estimated well-to-wire emissions from generation of purchased power included in our net carbon intensity.
[E] Estimated emissions from transportation and distribution of sold own oil products, LNG, GTL, natural gas, and biofuels.
[F] This category includes estimated emissions from sales volumes of oil products, natural gas, LNG, GTL and biofuels.
[G] This category includes estimated emissions from our refinery production, natural gas, LNG and GTL products.
[H] Estimated as the difference between own production and total sold products.

Other greenhouse gas data (operational control)

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Carbon capture and storage and CO_2 transfer out									
CO_2 captured and stored	million tonnes	**1.05**	0.94	1.13	1.07	1.14	CCE-3	EM-EP-530a.1	305-5
CO_2 transferred out [A]	million tonnes	**0.33**	0.30	0.43	0.46	0.45	CCE-3	EM-EP-530a.1	305-5
Biogenic CO_2									
Biogenic CO_2 [B]	thousand tonnes	**3.60**	0.27	0.00	0.00	9.70	-	-	-

[A] CO_2 captured and transferred to another organisation (for example, sold or given for free) as product or feedstock. It is not included in our Scope 1 emissions.
[B] Direct biogenic CO_2. It is not included in our Scope 1 emissions.

Carbon credits

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total carbon credits retired									
Included in net carbon intensity	million tonnes	**5.1**	3.9	2.2	0.0	0.0	-	EM-EP-530a.1	305-5
Other carbon credits	million tonnes	**1.3**	0.4	0.5	n/c	n/c	-	EM-EP-530a.1	305-5

n/c = not collected

Energy use (operational control) [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total energy use	million MWh	**223**	**241**	**264**	**268**	**269**	CCE-6	-	302-1
Own energy generated	million MWh	**202**	219	236	240	241	CCE-6	-	302-1
Imported electricity	million MWh	**20**	22	27	26	26	CCE-6	-	302-1
Imported steam and heat	million MWh	**14**	14	17	15	17	CCE-6	-	302-1
Exported electricity	million MWh	**11**	12	10	10	10	CCE-6	-	302-1
Exported steam and heat	million MWh	**2**	2	6	3	5	CCE-6	-	302-1
Consumption of energy from renewable sources									
Renewable sources - onsite energy generation consumed	million MWh	**0.004**	0.005	n/c	n/c	n/c	CCE-6	-	302-1
Renewable sources - purchased electricity	million MWh	**2.1**	1.8	1.5	0.03	0.03	CCE-6	-	302-1
Renewable sources - purchased steam	million MWh	**0.00**	0.00	n/c	n/c	n/c	CCE-6	-	302-1
Renewable sources - electricity exported to grid	million MWh	**0.5**	0.4	0.4	n/c	n/c	CCE-6	-	302-1
Energy intensity									
Upstream excl. oil sands, LNG and GTL	GJ/tonne production	**1.14**	1.15	1.07	1.06	1.05	CCE-6	-	302-1
Refineries: Refinery Energy Index [B]	Index	**96.9**	96.1	94.2	94.3	94.8	CCE-6	-	302-1
Chemical plants: chemicals energy intensity	GJ/tonne production	**18.1**	18.7	19.4	18.3	17.6	CCE-6	-	302-1

n/c = not collected

[A] We have updated some of our historical figures following a review of the data.

[B] Data are indexed to 2002, based on Solomon Associates Energy Intensity Index methodology.

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Air emissions [A]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Acid gases and VOCs									
Sulphur oxides (SOx)	Thousand tonnes	**32**	36	65	74	81	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**4**	4	15	19	24	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**2**	3	4	4	2	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**26**	29	47	51	55	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**0**	0	0	0	0	ENV-5	EM-EP-120a.1	305-7
Nitrogen oxides (NOx)	Thousand tonnes	**105**	118	108	111	107	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**55**	60	40	41	44	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**14**	12	13	10	9	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**36**	46	55	58	53	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**1**	0	1	2	0	ENV-5	EM-EP-120a.1	305-7
Volatile organic compounds (VOCs)	Thousand tonnes	**45**	47	55	59	95	ENV-5	EM-EP-120a.1	305-7
Upstream	Thousand tonnes	**17**	17	17	25	42	ENV-5	EM-EP-120a.1	305-7
Integrated Gas	Thousand tonnes	**8**	8	15	6	7	ENV-5	EM-EP-120a.1	305-7
Downstream	Thousand tonnes	**21**	22	23	29	46	ENV-5	EM-EP-120a.1	305-7
Other	Thousand tonnes	**0**	0	0	0	0	ENV-5	EM-EP-120a.1	305-7
Ozone-depleting emissions									
CFCs/halons/trichloroethane	Tonnes	**0.0**	0.0	0.0	0.0	0.0	ENV-5	-	305-6
Hydrochlorofluorocarbons (HCFCs)	Tonnes	**2**	6	8	9	7	ENV-5	-	305-6

[A] Split by business may not add up to total due to rounding.

Spills of more than 100 kg to environment

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Spills [A]									
Sabotage spills – number [B] [C]	Number	**106**	122	156	109	62	ENV-6	EM-EP-160a.2	306-3
Sabotage spills – total volume [B]	Thousand tonnes	**3.3**	1.5	2.3	1.8	1.4	ENV-6	EM-EP-160a.2	306-3
Sabotage spills - recovered volume	Thousand tonnes	**3.0**	1.0	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Operational spills – number [G]	Number	**41**	70	68	93	102	ENV-6	EM-EP-160a.2	306-3
Nigeria [D] [E] [G]	Number	**9**	12	8	15	10	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Number	**32**	58	60	78	92	ENV-6	EM-EP-160a.2	306-3
Operational spills - total volume	Thousand tonnes	**0.05**	0.4	0.2	0.9	0.4	ENV-6	EM-EP-160a.2	306-3
Nigeria [D]	Thousand tonnes	**0.03**	0.03	0.03	0.4	0.1	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Thousand tonnes	**0.02**	0.4	0.2	0.5	0.3	ENV-6	EM-EP-160a.2	306-3
Operational spills - recovered volume	Thousand tonnes	**0.03**	0.1	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Nigeria [D]	Thousand tonnes	**0.02**	0.01	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Rest of the world	Thousand tonnes	**0.01**	0.1	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3
Hurricane spills – number [F]	Number	**2**	0	0	0	4	ENV-6	EM-EP-160a.2	306-3
Hurricane spills – total volume [F]	Thousand tonnes	**0.03**	0	0	0	0.3	ENV-6	EM-EP-160a.2	306-3
Hurricane spills - recovered volume	Thousand tonnes	**0.01**	0	n/c	n/c	n/c	ENV-6	EM-EP-160a.2	306-3

n/c - not collected

[A] All spill volumes and numbers are for hydrocarbon spills of more than 100 kilograms to environment (land or water). We have updated some of our historical figures following a review of the data.

[B] All sabotage- and theft-related spills in 2017-2021 have occurred in Nigeria.

[C] We have restated the number of sabotage spills from 107 (as reported in the Annual Report) to 106 in 2021 following a review of data to exclude a spill from OML 17, as the spill occurred after the divestment.

[D] Nigeria includes SPDC onshore operations and SNEPCo offshore operations.

[E] Nigeria includes SPDC onshore operations (nine operational spills in 2021) and SNEPCo offshore operations (zero operational spills in 2021).

[F] This category reflects the spills caused by exceptional natural events, such as hurricanes and earthquakes. 2017 data reflects the impact of Hurricane Harvey. 2021 data reflects the impact of Hurricane Ida.

[G] We have updated the number of operational spills from 10 to 9 (as reported in the Annual Report) in 2021 following a review of data which indicates that a spill previously thought to be operational, was instead residual impact from a previous incident.

Water use and discharge

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Water use and discharge [A]									
Fresh water withdrawn	Million cubic metres	**166**	171	192	199	204	ENV-1	EM-EP-140a.1	303-3
Fresh water consumed	Million cubic metres	**122**	127	145	147	154	ENV-1	EM-EP-140a.1	303-5
Fresh water consumed in high water stress areas [B]	Million cubic metres	**22**	22	25	25				
Fresh water returned [C]	Million cubic metres	**44**	45	46	53	51	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by business									
Upstream	Million cubic metres	**9**	6	8	11	11	ENV-1	EM-EP-140a.1	303-3
Integrated Gas	Million cubic metres	**4**	3	4	4	6	ENV-1	EM-EP-140a.1	303-3
Downstream	Million cubic metres	**151**	159	177	182	185	ENV-1	EM-EP-140a.1	303-3
Other	Million cubic metres	**2**	3	3	3	2	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by country									
USA	Million cubic metres	**84**	92	108	109	98	ENV-1	EM-EP-140a.1	303-3
Canada	Million cubic metres	**21**	21	23	24	37	ENV-1	EM-EP-140a.1	303-3
Singapore	Million cubic metres	**20**	19	22	22	23	ENV-1	EM-EP-140a.1	303-3
Netherlands	Million cubic metres	**16**	16	17	16	16	ENV-1	EM-EP-140a.1	303-3
Germany	Million cubic metres	**13**	13	12	14	14	ENV-1	EM-EP-140a.1	303-3
Rest of the world	Million cubic metres	**12**	10	11	15	16	ENV-1	EM-EP-140a.1	303-3
Fresh water withdrawn by source									
Surface	Million cubic metres	**91**	94	98	102	100	ENV-1	EM-EP-140a.1	303-3
Ground	Million cubic metres	**18**	18	18	21	24	ENV-1	EM-EP-140a.1	303-3
Public utilities [D]	Million cubic metres	**57**	60	76	77	79	ENV-1	EM-EP-140a.1	303-3
Other [E]	Million cubic metres	**0**	0	0	0	2	ENV-1	EM-EP-140a.1	303-3
Produced water disposed	Million cubic metres	**81**	**88**	**92**	**96**	**100**	ENV-1	EM-EP-140a.2	**-**
Produced water reinjected	Million cubic metres	**17**	21	21	22	26	ENV-1	EM-EP-140a.2	-
Produced water discharged	Million cubic metres	**47**	51	51	49	54	ENV-1	EM-EP-140a.2	-
Produced water exported for disposal or reuse	Million cubic metres	**16**	16	19	25	20	ENV-1	EM-EP-140a.2	-
Oil in effluents to surface environment	Thousand tonnes	**1.0**	**1.4**	**1.3**	**1.4**	**1.2**	ENV-2	EM-EP-140a.2	**-**
Oil in produced water	Thousand tonnes	**0.7**	0.9	0.9	0.9	0.9	ENV-2	EM-EP-140a.2	-

[A] Fresh water figures do not include once-through cooling water. Breakdown may not add up to total due to rounding.

[B] At the end of 2021, four of our major facilities were located in areas where there is a high level of water stress based on analysis using water stress tools, including the World Resources Institute's Aqueduct Water Risk Atlas and a local assessment. The facilities are: Pearl gas-to-liquids (GTL) plant in Qatar, Shell Energy and Chemicals Park and the Jurong Island chemical plant in Singapore and the Tabangao import terminal in the Philippines.

[C] Defined as fresh water returned back to a freshwater source.

[D] Includes imported steam.

[E] Includes harvested rainwater and surface run-off collected for usage.

Waste management [A] [B]

	Unit	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Waste									
Total waste disposed	Thousand tonnes	**1,993**	2,049	2,113	1,999	2,020	ENV-7	-	306-3
Hazardous waste disposed	Thousand tonnes	**1,025**	558	698	592	638	ENV-7	-	306-3
Upstream	Thousand tonnes	**345**	122	90	36	93	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**9**	26	52	15	29	ENV-7	-	306-3
Downstream	Thousand tonnes	**650**	403	552	537	509	ENV-7	-	306-3
Other	Thousand tonnes	**20**	7	4	4	7	ENV-7	-	306-3
Non-hazardous waste disposed	Thousand tonnes	**969**	1,491	1,414	1,407	1,382	ENV-7	-	306-3
Upstream	Thousand tonnes	**193**	214	252	278	346	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**96**	18	23	17	31	ENV-7	-	306-3
Downstream	Thousand tonnes	**607**	1,235	1,116	1,095	992	ENV-7	-	306-3
Other	Thousand tonnes	**73**	24	24	17	13	ENV-7	-	306-3
Waste beneficially reused, recycled or recovered [C]	Thousand tonnes	**399**	448	441	419	404	ENV-7	-	306-4
Upstream	Thousand tonnes	**81**	97	58	57	76	ENV-7	-	306-3
Integrated Gas	Thousand tonnes	**36**	15	25	12	15	ENV-7	-	306-3
Downstream	Thousand tonnes	**276**	332	354	328	311	ENV-7	-	306-3
Other	Thousand tonnes	**7**	4	4	3	2	ENV-7	-	306-3

[A] Split by business may not add up to total due to rounding.
[B] We have updated some of our historical figures following a review of the data.
[C] Not included in total waste disposed.

More in this report Our Powering Progress targets | Greenhouse gas and energy data | Letter from the CEO
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SOCIAL PERFORMANCE DATA

To ensure that the data is read and interpreted in context, the data below should be read in conjunction with the relevant narratives in our Sustainability Reports, Annual Reports, Diversity Pay Gap reports, Shell.com and any other sources referenced. New data was added to this page on November 2, 2022.

Our people

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Employees (thousand) [A]	**82**	87	87	82	86	-	-	2-7
Our people by geographical area [A]								
Africa	**4**	4	4	–	–	-	-	2-7
Asia	**30**	31	31	–	–	-	-	2-7
Europe	**26**	27	27	–	–	-	-	2-7
North America	**18**	20	21	–	–	-	-	2-7
Oceania	**2**	3	2	–	–	-	-	2-7
South America	**1**	2	2	–	–	–	-	2-7
[i] **Staff forums and grievance procedures**								
% countries with staff access to staff forum, grievance procedure or other support system	**100**	100	100	100	100	SOC-12	EM-EP-210a.3	103-2
Integrity								
Code of Conduct violations [B]	**181**	216	263	370	261	GOV-1	EM-EP-540a.2	102-17

[A] Diversity data obtained from our human resources system. Most metrics exclude the employees in certain Upstream, Renewables and Energy Solutions and Downstream companies that maintain their own HR systems except for the Employees, Our people by geographical area, Employees overall (% women) and Employees overall (% men) metrics.

[B] Code of Conduct violations represent the number of reported incidents in the Shell Global Helpline (excluding queries or customer service queries) that have been investigated and closed during the relevant period and where the allegation was found to be (at least partially) true.

[i] Data obtained from an internal survey completed by the senior Shell representative in each country.

Training

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Training days for employees and joint-venture partners (thousand) [A]	**271**	234	373	315	425	SOC-7	-	404-1
Respect in the Workplace training completion rate % [B]	**97.7**	–	–	–	–	-	-	-

[A] Training days metric excludes the employees in certain Upstream, Renewables and Energy Solutions and Downstream companies that maintain their own HR systems.

[B] Mandatory training must be taken annually for three years by all employees and contractors with access to our HR system, Workday. Completion rate refers to 100% of nominated learners minus the % of nominated learners that did not complete their training within the designated period as at 31 December.

Diversity, equity and inclusion [A]

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Gender								
Board of Directors (% women)	**50**	38	42	45	36	SOC-5	-	405-1
Board of Directors (% men)	**50**	62	58	55	64	SOC-5	-	405-1
Executive Committee (% women)	**25.0**	12.5	12.5	12.5	12.5	SOC-5	-	405-1
Executive Committee (% men)	**75.0**	87.5	87.5	87.5	87.5	SOC-5	-	405-1
In senior executive leadership positions (% women) [B] (Ambition: 30%, then gender equality)	**27.3**	–	–	–	–	SOC-5	-	405-1
In senior executive leadership positions (% men)	**72.7**	–	–	–	–	SOC-5	-	405-1
In senior leadership positions (% women) [C] (Ambition: 35% by 2025; 40% by 2030)	**29.5**	27.8	26.4	24.0	22.2	SOC-5	-	405-1
In senior leadership positions (% men)	**70.5**	72.2	73.6	76.0	77.8	SOC-5	-	405-1
In management positions (% women)	**27.2**	25.5	24.5	23.7	22.3	SOC-5	-	405-1
In management positions (% men)	**72.8**	74.5	75.5	76.3	77.7	SOC-5	-	405-1
In professional positions (% women)	**34.3**	33.1	30.8	29.9	29.1	SOC-5	-	405-1
In professional positions (% men)	**65.7**	66.9	69.2	70.1	70.9	SOC-5	-	405-1
Employees overall (% women) [A]	**33**	32	31	31	32	SOC-5	-	405-1
Employees overall (% men) [A]	**67**	68	69	69	68	SOC-5	-	405-1
Graduate hires (% women) (Ambition: 50% every year)	**47.1 [D]**	49	48	46	49	SOC-5	-	401-1; 405-1
Graduate hires (% men)	**38.7 [D]**	50	52	54	50	SOC-5	-	401-1; 405-1
Experienced hires (% women)	**34.2 [E]**	31	32	–	–	SOC-5	-	401-1; 405-1
Experienced hires (% men)	**62.4 [E]**	67	67	–	–	SOC-5	-	401-1; 405-1
Promotions (% women promoted of total promotions)	**43.7**	38.6	39.8	–	–	SOC-5	-	-
Promotions (% men promoted of total promotions)	**56.3**	61.4	60.2	–	–	SOC-5	-	-
Turnover (% turnover of women of total turnover)	**31.3**	31.1	34.5	–	–	SOC-6	-	401-1
Turnover (% turnover of men of total turnover)	**68.7**	68.9	65.5	–	–	SOC-6	-	401-1
Race/ethnicity [F]								
Board of Directors (no of ethnic minority and % of board) (Ambition: Maintain or exceed Parker Review recommendation of one director by 2021, then two directors)	**1 (8%)**	–	–	–	–	-	-	405-1
Employees (US only) [G]								
Asian %	**13**	–	–	–	–	SOC-5	-	405-1
Black or African American %	**8.4**	–	–	–	–	SOC-5	-	405-1
Hispanic Latino %	**11.8**	–	–	–	–	SOC-5	-	405-1
White %	**65**	–	–	–	–	SOC-5	-	405-1
Other racial and ethnic groups % [H]	**1.8**	–	–	–	–	SOC-5	-	405-1

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
In senior leadership positions (US only) [C]						SOC-5	-	405-1
Asian %	**10.5**	–	–	–	–	SOC-5	-	405-1
Black or African American %	**7.9**	–	–	–	–	SOC-5	-	405-1
Hispanic Latino %	**7.5**	–	–	–	–	SOC-5	-	405-1
White %	**73.2**	–	–	–	–	SOC-5	-	405-1
Other racial and ethnic groups % [H]	**0.8**	–	–	–	–	SOC-5	-	405-1
Employees (UK only) % of those who self-identified [I][J]								
Asian %	**13.1**	–	–	–	–	SOC-5	-	405-1
Black %	**3.4**	–	–	–	–	SOC-5	-	405-1
Mixed %	**2.4**	–	–	–	–	SOC-5	-	405-1
White %	**78.5**	–	–	–	–	SOC-5	-	405-1
Other ethnic minority background %	**2.6**	–	–	–	–	SOC-5	-	405-1
In senior leadership positions (UK only) % of those who self-identified [C][K]								
Asian %	**10.8**	–	–	–	–	SOC-5	-	405-1
Black %	**1.1**	–	–	–	–	SOC-5	-	405-1
Mixed %	**1.7**	–	–	–	–	SOC-5	-	405-1
White %	**83.5**	–	–	–	–	SOC-5	-	405-1
Other ethnic minority background %	**2.8**	–	–	–	–	SOC-5	-	405-1
LGBT+								
Global Workplace Pride benchmark - Measures LGBTIQ+ inclusion practices of internationally active employers	**Advocate [L]**	Advocate [L]	Advocate [L]	–	–	-	-	-
Human Rights Commission Corporate Equality Index - Rating workplaces on equality and inclusion for LGBTQ+ employees (US) (% out of 100)	**100**	100	100	100	100	-	-	-
Disability inclusion and enABLEment								
Workplace Accessibility (no of locations)	**86**	83	83	–	–	–	-	–
Age group (employees)								
Under 30 years old %	**13**	14	14	–	–	SOC-5	-	405-1
Between 30-50 years old %	**65**	64	71	–	–	SOC-5	-	405-1
Above 50 years old %	**22**	22	15	–	–	SOC-5	-	405-1

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Average pay gap - gender and ethnicity								
Average gender pay gap (UK) [M]	**17.8**	18	18.7	–	–	SOC-5	-	405-2
Average ethnicity pay gap (UK) [N]	**21.9**	8.5	–	–	–	SOC-5	-	-
Employee sentiment - diversity, equity and inclusion (DE&I) indicator [O]								
Shell People Survey DE&I Index (out of 100 points) / compared to top-quartile benchmark for the relevant year	**80 / 84**	–	–	–	–	-	-	-

[A] Diversity data obtained from our human resources system. Most metrics exclude the employees in certain Upstream, Renewables and Energy Solutions and Downstream companies that maintain their own HR systems except for the Employees, Our people by geographical area, Employees overall (% women) and Employees overall (% men) metrics.

[B] The total number of senior executive leadership positions may change from year to year, and our focus is on representation as a % of this total group. Senior executive leadership positions include the Executive Committee.

[C] The total number of senior leadership positions may change from year to year, and our focus is on representation as a % of this total group. Senior leadership positions include senior executive leadership positions and the Executive Committee.

[D] 14.2% of graduate hires did not provide data or chose not to declare in 2021.

[E] 3.4% of experienced hires did not provide data or chose not to declare in 2021.

[F] In addition to Board representation, we have included race and ethnicity data for the USA and UK in line with our Powering Lives commitments.

[G] Employees in the US at Compensation Grade 10 and above.

[H] "Other racial and ethnic groups" includes the following: American Indian or Alaskan Native; Native Hawaiian or other Pacific Islander; two or more races.

[I] Employees in the UK at Compensation Grade 10 and above.

[J] As ethnic declaration is voluntary, ethnicity declaration rate is not 100% and all calculations are based on a declaration rate of 81% in the UK as of December 2021. The 19% of our workforce who have not provided data or have chosen not to declare their ethnicity were not included in our calculations.

[K] As ethnic declaration is voluntary, ethnicity declaration rate is not 100% and all calculations are based on a declaration rate of 67% for employees in senior leadership positions in the UK as of December 2021. The 33% of our senior leadership workforce who have not provided data or have chosen not to declare their ethnicity were not included in our calculations.

[L] "Advocate" organisations are defined by Workplace Pride as breaking new ground for LGBTIQ+ inclusion in their activities around the world and setting the tone for change beyond the workplace in society at large.

[M] The difference in average pay of all men and all women for "Shell in the UK" as that term is defined in the Shell UK 2021 Diversity Pay Gap (which includes Shell Energy Retail Limited), excluding bonuses, using methodology consistent with the UK's Advisory, Conciliation and Arbitration Service managing gender pay reporting guidance updated in February 2019, with the data snapshot taken on 5 April 2021. This is different to equal pay which means paying men and women the same salary for performing equivalent work. Shell in the UK has had equal pay for many years, and we conduct regular pay equity analysis to monitor this on an ongoing basis. Please read the Shell UK 2021 Diversity Pay Gap for full context.

[N] The difference in average pay between "BAME" and "non-BAME" employees expressed as a percentage of average "non-BAME" pay for "Shell in the UK" as those terms are defined in the Shell UK 2021 Diversity Pay Gap (which includes Shell Energy Retail Limited), excluding bonuses using the same methodology as our UK gender pay gap reporting. Please read the Shell UK 2021 Diversity Pay Gap for full context.

[O] Response rate for Shell People Survey was 83% in 2021; 86% in 2020; 85% in 2019. New diversity, equity and inclusion questions were introduced in 2021, so there is no historical comparison.

Human rights

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
[i] **Child labour (% countries with procedures in place)**								
Own operations	**100**	100	100	100	100	SOC-4	EM-EP-210a.3.	408-1
Contractors and suppliers	**100**	100	100	100	100	SOC-4	EM-EP-210a.3.	408-1
[i] **Forced labour (% countries with procedures in place)**								
Own operations	**100**	100	100	100	100	SOC-2	EM-EP-210a.3	409-1
Contractors and suppliers	**100**	100	100	100	100	SOC-2	EM-EP-210a.3	409-1

[i] Data obtained from an internal survey completed by the senior Shell representative in each country.

[$] Contracting and procurement

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Estimated expenditure on goods and services in lower-income countries ($ billion) [A] [B]	**4.2**	4.5	5.7	4.1	4.9	SOC-14	-	204-1

[A] Estimated expenditure in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2019).

[B] This figure only includes the amount spent on goods and services by Shell Group companies.

Social investment [A]

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
[$] Estimated voluntary social investment (equity share) ($ million)	**94**	156	116	113	111	SOC-13	-	203-1
[$] Estimated social investment spend (equity share) in lower-income countries ($ million) [B]	**72**	87	84	102	107	SOC-13	-	203-1

[A] Social investment spending varies from year to year depending on business climate, locations and types of activities under way. This is voluntary social investment and does not include social investments made through contractual agreements with host governments, voluntary work by Shell employees or donations of equipment.

[B] Estimated voluntary social investment spending in countries where gross domestic product amounts to less than $15,000 a year per person (source: UNDP Human Development Index 2019).

[$] Social investment and contracting and procurement data collected via our financial system.

Tax and other payments to governments

	2021	2020	2019	2018	2017	IPIECA	SASB	GRI
Total taxes paid and collected ($ billion)	**58.7**	47.3	61.3	64.1	59.1	GOV-4	-	201-1
Corporate income taxes	**6.0**	3.4	7.8	10.1	6.3	GOV-4	-	201-1
Royalties	**6.6**	3.5	5.9	5.8	3.7	GOV-4	-	201-1
Excise duties, sales taxes and similar levies	**46.1**	40.4	47.6	48.2	49.1	GOV-4	-	201-1
Total other payments to governments ($ billion)	**12.8**	8.2	12.5	17.9	14.1	GOV-4	-	201-1
Production entitlements	**10.5**	7	10.3	14.3	13.6	GOV-4	-	201-1
Bonuses	**0.15**	0.02	0.3	0.9	0.1	GOV-4	-	201-1
Fees	**2.1**	1.2	1.9	2.7	0.3	GOV-4	-	201-1

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