Glossary

Abbreviations

ADR  American depositary receipt.
ADS  American depositary share. 1 ADS = 6 ordinary shares.
Barrel [bbl]  159 litres, 42 US gallons.
bcf/d  Billion cubic feet per day.
bcfe  Billion cubic feet equivalent.
b/d  Barrels per day.
boe/d  Barrels of oil equivalent per day.
FPSO  Floating production, storage and offloading.
GAAP  Generally accepted accounting practice.
Gas  Natural gas.
gCO₂e/MJ  Grams of carbon dioxide equivalent per megajoule of energy.
GHG  Greenhouse gas.
GRI  Global Reporting Initiative.
GtCO₂  Gigatonnes of carbon dioxide.
GWh  Gigawatt hour.
HSSE  Health, safety, security and environment.
IFRS  International Financial Reporting Standards.
KPIs  Key performance indicators.
LNG  Liquefied natural gas.
LPG  Liquefied petroleum gas.
mb/d  Thousand barrels per day.
mboe/d  Thousand barrels of oil equivalent per day.
mmb/d or Mb/d  Million barrels per day.
mmboe/d  Million barrels of oil equivalent per day.
mmBtu  Million British thermal units.
mmcf/d  Million cubic feet per day.
mmt or Mte  Million tonnes.
MmteCO₂  Million tonnes of CO₂ equivalent.
MW  Megawatt.
NGLs  Natural gas liquids.
PSA  Production-sharing agreement.
PTA  Purified terephthalic acid.
RC  Replacement cost.
SEC  The United States Securities and Exchange Commission.

Definitions

Unless the context indicates otherwise, the definitions for the following glossary terms are given below.
Non-GAAP measures are sometimes referred to as alternative performance measures.

CA100+ resolution glossary

CA100+ resolution
The CA100+ resolution means the special resolution requisitioned by Climate Action 100+ and passed at BP’s 2019 Annual General Meeting, the text of which is set out below.

Special resolution: Climate Action 100+ shareholder resolution on climate change disclosures.
That in order to promote the long term success of the company, given the recognised risks and opportunities associated with climate change, we as shareholders direct the company to include in its strategic report and/or other corporate reports, as appropriate, for the year ending 2019 onwards, a description of its strategy which the board considers, in good faith, to be consistent with the goals of Articles 2.1(a)(1) and 4.1(2) of the Paris Agreement(3) (the ‘Paris goals’), as well as:

1) Capital expenditure: how the company evaluates the consistency of each new material capex investment, including in the exploration, acquisition or development of oil and gas resources and reserves and other energy sources and technologies, with (a) the Paris goals and separately (b) a range of other outcomes relevant to its strategy.

2) Metrics and targets: the company’s principal metrics and relevant targets or goals over the short, medium and/or long-term, consistent with the Paris goals, together with disclosure of:
   a. The anticipated levels of investment in (i) oil and gas resources and reserves; and (ii) other energy sources and technologies.
   b. The company’s targets to promote reductions in its operational greenhouse gas emissions, to be reviewed in line with changing protocols and other relevant factors.
   c. The estimated carbon intensity of the company’s energy products and progress on carbon intensity over time.
   d. Any linkage between the above targets and executive remuneration.

3) Progress reporting: an annual review of progress against (1) and (2) above.
Such disclosure and reporting to include the criteria and summaries of the methodology and core assumptions used, and to omit commercially confidential or competitively sensitive information and be prepared at reasonable cost; and provided that nothing in this resolution shall limit the company’s powers to set and vary its strategy, or associated targets or metrics, or to take any action which
it believes in good faith, would best promote the long-term success of the company.

The Paris goals

(1) Article 2.1(a) of the Paris Agreement states the goal of ‘Holding the increase in the global average temperature to well below 2°C a bove pre-industrial levels and pursuing efforts to limit the temperat ure increase to 1.5°C above pre-industrial levels, recognizing that t his would significantly reduce the risks and impacts of climate change’. 

(2) Article 4.1 of the Paris Agreement: In order to achieve the long-term temperature goal set out in Article 2, parties aim to reach glo bal peaking of greenhouse gas emissions as soon as possible, rec ognizing that peaking will take longer for developing country partie s, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gasses in the second half of this century, on the basis of equity, a nd in the context of sustainable development and efforts to eradic ate poverty.


New material capex investment

For the purposes of the 2019 evaluation discussed on pages 19-22, ‘new material capex investment’ means a decision taken by the resource commitment meeting (RCM) in 2019 to incur inorganic or organic investments greater than $250 million that relate to a new project or asset, extending an existing project or asset, or acquiring or increasing a share in a project, asset or entity.

There were eight investments that met the above criteria in 2019.

Material capex evaluation: Paris-consistency quantitative tests.

For the purposes of evaluating material capex investments for consistency with the Paris goals, two quantitative tests were applied, see page 22.

1. Operational carbon intensity (CI)

The annual average operational GHG emissions (TeCO₂e/unit), divided by the relevant unit of output:

- per thousand barrels of oil equivalent in Upstream
- per utilized equivalent distillation capacity in refining
- per thousand tonnes in petrochemicals.

2. Profitability index (PI)

Operating cash flow divided by investment required (both on a present value basis).

‘Investment required’ means economic resources including capital investment, decommissioning expenditure and the value of any credit support to third parties (e.g. partner carry).

Average emissions intensity of marketed energy products

The weighted average GHG emissions per unit of energy delivered grams CO₂e/MJ estimated in respect of marketing sales of energy products. GHG emissions are estimated on a lifecycle basis covering production, distribution and use of the relevant products, assuming full stoichiometric combustion to CO₂.

Net zero aims and ambition glossary

Net zero

References to global net zero in the phrase, ‘to help the world get to net zero’, means achieving ‘...a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases...on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty’, as set out in Article 4 (1) of the Paris Agreement.

References to net zero for BP in the context of our ambition and Aims 1 and 2 as set out on page 7 (such as ‘be a net zero company by 2050 or sooner’), means achieving a balance between [a] the relevant Scope 1 and 2 emissions (for our Aim 1), or Scope 3 emissions (for our Aim 2), and [b] the aggregate of applicable deductions from qualifying activities such as sinks under our methodology at the applicable time.

Emissions from the carbon in our Upstream oil and gas production

Estimated CO₂ emissions from the combustion of upstream production of crude oil, natural gas and natural gas liquids (NGLs) on a BP equity-share basis based on BP’s net share of production, excluding BP’s share of Rosneft production and assuming that all produced volumes undergo full stoichiometric combustion to CO₂.

Adjusted 2015 baseline

In accordance with our zero net growth methodology, the starting direct and indirect GHG emissions baseline (end of 2015) is adjusted at the end of each reporting year for any qualifying changes (being changes due to [a] acquisitions, divestments, outsourcing or insourcing where the total for the year is greater than 5% the total direct and indirect GHG emissions in the previous year or (b) methodology or protocol changes).

Adjusted effective tax rate (ETR)

Non-GAAP measure. The adjusted ETR is calculated by dividing taxation on an underlying replacement cost (RC) basis excluding the impact of reductions in the rate of the UK North Sea supplementary charge (in 2016 and 2015) by underlying RC profit or loss before tax. Taxation on an underlying RC basis is taxation on a RC basis for the period adjusted for taxation on non-operating items and fair value accounting effects. Information on underlying RC profit or loss is provided below. BP believes it is helpful to disclose the adjusted ETR because this measure may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP’s operational performance on a comparable basis, period on period. The nearest equivalent measure on an IFRS basis is the ETR on profit or loss for the period. A reconciliation to GAAP information is provided on page 344.

Associate

An entity over which the group has significant influence and that is neither a subsidiary nor a joint arrangement of the group. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

Brent

A trading classification for North Sea crude oil that serves as a major benchmark price for purchases of oil worldwide.

Capital expenditure

Total cash capital expenditure as stated in the group cash flow statement.

Consolidation adjustment – UPII

Unrealized profit in inventory arising on inter-segment transactions.

Commodity trading contracts

BP’s Upstream and Downstream segments both participate in regional and global commodity trading markets in order to manage, transact and hedge the crude oil, refined products and natural gas that the group either produces or consumes in its manufacturing operations. These physical trading activities, together with associated incremental trading opportunities, are discussed in Upstream on page 50 and in Downstream on page 56. The range of contracts the group enters into in its commodity trading operations is described below. Using these contracts, in combination with rights to access storage and transportation capacity, allows the group to access advantageous pricing differences between locations, time periods and arbitrage between markets.
Exchange-traded commodity derivatives
Contracts that are typically in the form of futures and options traded on a recognized exchange, such as Nymex and ICE. Such contracts are traded in standard specifications for the main marker crude oils, such as Brent and West Texas Intermediate; the main product grades, such as gasoline and gasoil; and for natural gas and power. Gains and losses, otherwise referred to as variation margin, are generally settled on a daily basis with the relevant exchange. These contracts are used for the trading and risk management of crude oil, refined products, and natural gas and power. Realized and unrealized gains and losses on exchange-traded commodity derivatives are included in sales and other operating revenues for accounting purposes.

Over-the-counter contracts
Contracts that are typically in the form of forwards, swaps and options. Some of these contracts are traded bilaterally between counterparties or through brokers, others may be cleared by a central clearing counterparty. These contracts can be used both for trading and risk management activities. Realized and unrealized gains and losses on over-the-counter (OTC) contracts are included in sales and other operating revenues for accounting purposes. Many grades of crude oil bought and sold use standard contracts including US domestic light sweet crude oil, commonly referred to as West Texas Intermediate, and a standard North Sea crude blend – Brent, Forties, Oseberg and Ekofisk (BFOE). Forward contracts are used in connection with the purchase of crude oil supplies for refineries, products for marketing and sales of the group’s oil production and refined products. The contracts typically contain standard delivery and settlement terms. These transactions call for physical delivery of oil with consequent operational and price risk. However, various means exist and are used from time to time, to settle obligations under the contracts in cash rather than through physical delivery. Because the physically settled transactions are delivered by cargo, the BFOE contract additionally specifies a standard volume and tolerance.

Gas and power OTC markets are highly developed in North America and the UK, where commodities can be bought and sold for delivery in future periods. These contracts are negotiated between two parties to purchase and sell gas and power at a specified price, with delivery and settlement at a future date. Typically, the contracts specify delivery terms for the underlying commodity. Some of these transactions are not settled physically as they can be achieved by transacting offsetting sale or purchase contracts for the same location and delivery period that is offset during the scheduling of delivery or dispatch. The contracts contain standard terms such as delivery point, pricing mechanism, settlement terms and specification of the commodity. Typically, volume, price and term (e.g. daily, monthly and balance of month) are the main variable contract terms.

Swaps are often contractual obligations to exchange cash flows between two parties. A typical swap transaction usually references a floating price and a fixed price with the net difference of the cash flows being settled. Options give the holder the right, but not the obligation, to buy or sell crude, oil products, natural gas or power at a specified price on or before a specific future date. Amounts under these derivative financial instruments are settled at expiry. Typically, netting agreements are used to limit credit exposure and support liquidity.

Spot and term contracts
Spot contracts are contracts to purchase or sell a commodity at the market price prevailing on or around the delivery date when title to the inventory is taken. Term contracts are contracts to purchase or sell a commodity at regular intervals over an agreed term. Though spot and term contracts may have a standard form, there is an offsetting mechanism in place. These transactions result in physical delivery with operational and price risk. Spot and term contracts typically relate to purchases of crude for a refinery, products for marketing, or third-party natural gas, or sales of the group’s oil production, oil products or gas production to third parties. For accounting purposes, spot and term sales are included in sales and other operating revenues when title passes. Similarly, spot and term purchases are included in purchases for accounting purposes.

Divestment proceeds
Disposal proceeds as per the group cash flow statement.

Dividend yield
Sum of the four quarterly dividends announced in respect of the year as a percentage of the year-end share price on the respective exchange.

Effective tax rate (ETR) on replacement cost (RC) profit or loss
Non-GAAP measure. The ETR on RC profit or loss is calculated by dividing taxation on a RC basis by RC profit or loss before tax. Information on RC profit or loss is provided below. BP believes it is helpful to disclose the ETR on RC profit or loss because this measure excludes the impact of price changes on the replacement of inventories and allows for more meaningful comparisons between reporting periods. The nearest equivalent measure on an IFRS basis is the ETR on profit or loss for the period. A reconciliation to GAAP information is provided on page 344.

Fair value accounting effects
Non-GAAP adjustments to IFRS profit or loss. We use derivative instruments to manage the economic exposure relating to inventories above normal operating requirements of crude oil, natural gas and petroleum products. Under IFRS, these inventories are recorded at historical cost. The related derivative instruments, however, are required to be recorded at fair value with gains and losses recognized in the income statement. This is because hedge accounting is either not permitted or not followed, principally due to the impracticality of effectiveness-testing requirements. Therefore, measurement differences in relation to recognition of gains and losses occur. Gains and losses on these inventories are not recognized until the commodity is sold in a subsequent accounting period. Gains and losses on the related derivative commodity contracts are recognized in the income statement, from the time the derivative commodity contract is entered into, on a fair value basis using forward prices consistent with the contract maturity.

BP enters into physical commodity contracts to meet certain business requirements, such as the purchase of crude for a refinery or the sale of BP’s gas production. Under IFRS these physical contracts are treated as derivatives and are required to be fair valued when they are managed as part of a larger portfolio of similar transactions. Gains and losses arising are recognized in the income statement from the time the derivative commodity contract is entered into.

IFRS require that inventory held for trading is recorded at its fair value using period-end spot prices, whereas any related derivative commodity instruments are required to be recorded at values based on forward prices consistent with the contract maturity. Depending on market conditions, these forward prices can be either higher or lower than spot prices, resulting in measurement differences.

BP enters into contracts for pipelines and other transportation, storage capacity, oil and gas processing and liquefied natural gas (LNG) that, under IFRS, are recorded on an accruals basis. These contracts are risk-managed using a variety of derivative instruments that are fair valued under IFRS. This results in measurement differences in relation to recognition of gains and losses.

The way that BP manages the economic exposures described above, and measures performance internally, differs from the way these activities are measured under IFRS. BP calculates this difference for consolidated entities by comparing the IFRS result with management’s internal measure of performance. Under management’s internal measure of performance the inventory, transportation and capacity contracts in question are valued based on fair value using relevant forward prices prevailing at the end of the period. The fair values of derivative instruments used to risk manage certain oil, gas and other contracts, are deferred to match with the underlying exposure and the commodity contracts for business requirements are accounted for on an accruals basis. We believe that disclosing management’s estimate of this difference provides useful information for investors because it enables investors to see the economic effect of these activities as a whole.

In addition, from 2018 fair value accounting effects include changes in the fair value of the near-term portions of LNG contracts that fall within BP’s risk management framework. LNG contracts are not considered derivatives, because there is insufficient market liquidity, and they are therefore accrual accounted under IFRS. However, oil
and natural gas derivative financial instruments (used to risk manage the near-term portions of the LNG contracts) are fair valued under IFRS. The fair value accounting effect reduces timing differences between recognition of the derivative financial instruments used to risk manage the LNG contracts and the recognition of the LNG contracts themselves, which therefore gives a better representation of performance in each period. Comparative information has not been restated on the basis that the effect was not material.

**Finance debt ratio**
Finance debt ratio is defined as the ratio of finance debt to the total of finance debt plus total equity.

**Free cash flow**
Operating cash flow less net cash used in investing activities and lease liability payments included in financing activities, as presented in the group cash flow statement.

**Gearing and net debt**
Non-GAAP measures. Net debt is calculated as finance debt, as shown in the balance sheet, plus the fair value of associated derivative financial instruments that are used to hedge foreign currency exchange and interest rate risks relating to finance debt, for which hedge accounting is applied, less cash and cash equivalents. Gearing is defined as the ratio of net debt to the total of net debt plus total equity. BP believes these measures provide useful information to investors. Net debt enables investors to see the economic effect of finance debt, related hedges and cash and cash equivalents in total. Gearing enables investors to see how significant net debt is relative to total equity. The derivatives are reported on the balance sheet within the headings ‘Derivative financial instruments’. See Financial statements – Note 27 for information on finance debt, which is the nearest equivalent measure to net debt on an IFRS basis.

We are unable to present reconciliations of forward-looking information for gearing to finance debt ratio, because without unreasonable efforts, we are unable to forecast accurately certain adjusting items required to present a meaningful comparable GAAP forward-looking financial measure. These items include fair value asset (liability) of hedges related to finance debt and cash and cash equivalents, that are difficult to predict in advance in order to include in a GAAP estimate.

**Henry Hub**
A distribution hub on the natural gas pipeline system in Erath, Louisiana, that lends its name to the pricing point for natural gas futures contracts traded on the New York Mercantile Exchange and the over-the-counter swaps traded on Intercontinental Exchange.

**Hydrocarbons**
Liquids and natural gas. Natural gas is converted to oil equivalent at 5.8 billion cubic feet = 1 million barrels.

**Inorganic capital expenditure**
A subset of capital expenditure and is a non-GAAP measure. Inorganic capital expenditure comprises consideration in business combinations and certain other significant investments made by the group. It is reported on a cash basis. BP believes that this measure provides useful information as it allows investors to understand how BP’s management invests funds in projects which expand the group’s activities through acquisition. Further information and a reconciliation to GAAP information is provided on page 299.

**Inventory holding gains and losses**
The difference between the cost of sales calculated using the replacement cost of inventory and the cost of sales calculated on the first-in-first-out (FIFO) method after adjusting for any changes in provisions where the net realizable value of the inventory is lower than its cost. Under the FIFO method, which we use for IFRS reporting, the cost of inventory charged to the income statement is based on its historical cost of purchase or manufacture, rather than its replacement cost. In volatile energy markets, this can have a significant distorting effect on reported income. The amounts disclosed represent the difference between the charge to the income statement for inventory on a FIFO basis (after adjusting for any related movements in net realizable value provisions) and the charge that would have arisen based on the replacement cost of inventory. For this purpose, the replacement cost of inventory is calculated using data from each operation’s production and manufacturing system, either on a monthly basis, or separately for each transaction where the system allows this approach. The amounts disclosed are not separately reflected in the financial statements as a gain or loss. No adjustment is made in respect of the cost of inventories held as part of a trading position and certain other temporary inventory positions. See Replacement cost (RC) profit or loss definition below.

**Joint arrangement**
An arrangement in which two or more parties have joint control.

**Joint control**
Contractually agreed sharing of control over an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

**Joint operation**
A joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

**Joint venture**
A joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

**Liquids**
Comprises crude oil, condensate and natural gas liquids. For the Upstream segment, it also includes bitumen.

**LNG train**
An LNG train is a processing facility used to liquefy and purify natural gas in the formation of LNG.

**Major projects**
Have a BP net investment of at least $250 million, or are considered to be of strategic importance to BP or of a high degree of complexity.

**Net debt including leases**
Non-GAAP measure. Net debt including leases is calculated as net debt plus lease liabilities, less the net amount of partner receivables and payables relating to leases entered into on behalf of joint operations. BP believes this measure provides useful information to investors as it enables investors to understand the impact of the group’s lease portfolio on net debt. See Financial statements – Note 27 for information on finance debt, which is the nearest equivalent measure to net debt on an IFRS basis.

**Net generating capacity**
The sum of the rated capacities of the assets/turbines that have entered into commercial operation, including BP’s share of equity-accounted entities. The gross data is the equivalent capacity on a gross-joint venture basis, which includes 100% of the capacity of equity-accounted entities where BP has partial ownership.
**Non-operating items**

Charges and credits are included in the financial statements that BP discloses separately because it considers such disclosures to be meaningful and relevant to investors. They are items that management considers not to be part of underlying business operations and are disclosed in order to enable investors better to understand and evaluate the group’s reported financial performance. Non-operating items within equity-accounted earnings are reported net of incremental income tax reported by the equity-accounted entity. An analysis of non-operating items by segment and type is shown on page 300.

**Operating cash flow**

Net cash provided by (used in) operating activities as stated in the group cash flow statement. When used in the context of a segment rather than the group, the terms refer to the segment’s share thereof.

**Operating cash flow excluding Gulf of Mexico oil spill payments**

Non-GAAP measure. It is calculated by excluding post-tax operating cash flows relating to the Gulf of Mexico oil spill from net cash provided by operating activities as reported in the group cash flow statement. BP believes net cash provided by operating activities excluding amounts related to the Gulf of Mexico oil spill is a useful measure as it allows for more meaningful comparisons between reporting periods. The nearest equivalent measure on an IFRS basis is net cash provided by operating activities.

**Organic free cash flow**

is operating cash flow excluding Gulf of Mexico oil spill payments less organic capital expenditure.

**Operating cash margin**

Operating cash margin is operating cash flow divided by the applicable number of barrels of oil equivalent produced, at $52/bbl flat oil prices. Expected operating cash margins are calculated over the period 2016-2025.

**Operating management system (OMS)**

BP’s OMS helps us manage risks in our operating activities by setting out BP’s principles for good operating practice. It brings together BP requirements on health, safety, security, the environment, social responsibility and operational reliability, as well as related issues, such as maintenance, contractor relations and organizational learning, into a common management system.

**Organic capital expenditure**

A subset of capital expenditure and is a non-GAAP measure. Organic capital expenditure comprises capital expenditure less inorganic capital expenditure. BP believes that this measure provides useful information as it allows investors to understand how BP’s management invests funds in developing and maintaining the group’s assets. An analysis of organic capital expenditure by segment and region, and a reconciliation to GAAP information is provided on page 299.

We are unable to present reconciliations of forward-looking information for organic capital expenditure to total cash capital expenditure, because without unreasonable efforts, we are unable to forecast accurately the adjusting item, inorganic capital expenditure, that is difficult to predict in advance in order to derive the nearest GAAP estimate.

**Organic sources of cash and organic uses of cash**

Non-GAAP measure. Organic sources of cash is the sum of operating cash flow, excluding Gulf of Mexico oil spill payments, and proceeds of loan repayments. Organic uses of cash is the sum of organic capital expenditure, dividends and share buybacks. The nearest equivalent measure on an IFRS basis for organic sources of cash is net cash provided by operating activities and the nearest equivalent measures on an IFRS basis for organic uses of cash are total cash capital expenditure, dividends paid to BP shareholders and net issue (repurchase) of shares.

**Production-sharing agreement / contract (PSA / PSC)**

An arrangement through which an oil and gas company bears the risks and costs of exploration, development and production. In return, if exploration is successful, the oil company receives entitlement to variable physical volumes of hydrocarbons, representing recovery of the costs incurred and a stipulated share of the production remaining after such cost recovery.

**Readily marketable inventory (RMI)**

RMI is inventory held and price risk-managed by our integrated supply and trading function (IST) which could be sold to generate funds if required. It comprises oil and oil products for which liquid markets are available and excludes inventory which is required to meet operational requirements and other inventory which is not price risk-managed. RMI is reported at fair value. Inventory held by the Downstream fuels business for the purpose of sales and marketing, and all inventories relating to the lubricants and petrochemicals businesses, are not included in RMI. BP believes that disclosing the amounts of RMI and paid-up RMI is useful to investors as it enables them to better understand and evaluate the group’s inventories and liquidity position by enabling them to see the level of discretionary inventory held by IST and to see builds or releases of liquid trading inventory.

Paid-up RMI excludes RMI which has not yet been paid for. For inventory that is held in storage, a first-in first-out (FIFO) approach is used to determine whether inventory has been paid for or not. Unpaid RMI is RMI which has not yet been paid for by BP. RMI at fair value, Paid-up RMI and Unpaid RMI are non-GAAP measures. A reconciliation of total inventory as reported on the group balance sheet to paid-up RMI is provided on page 346.

**Realizations**

Realizations are the result of dividing revenue generated from hydrocarbon sales, excluding revenue generated from purchases made for resale and royalty volumes, by revenue generating hydrocarbon production volumes. Revenue generating hydrocarbon production reflects the BP share of production as adjusted for any production which does not generate revenue. Adjustments may include losses due to shrinkage, amounts consumed during processing, and contractual or regulatory host committed volumes such as royalties. For the Upstream segment, realizations include transfers between businesses.

**Refining availability**

Represents Solomon Associates’ operational availability for BP-operated refineries, which is defined as the percentage of the year that a unit is available for processing after subtracting the annualized time lost due to turnaround activity and all planned mechanical, process and regulatory downtime.

**Refining marker margin (RMM)**

The average of regional indicator margins weighted for BP’s crude refining capacity in each region. Each regional marker margin is based on product yields and a marker crude oil deemed appropriate for the region. The regional indicator margins may not be representative of the margins achieved by BP in any period because of BP’s particular refinery configurations and crude and product slate.

**Refining net cash margin per barrel**

Refining net cash margin is defined by Solomon Associates as the net margin achieved after subtracting cash operating expenses and adding any refinery revenue from other sources. Net cash margin is expressed in US dollars per barrel of net refinery input.

**Refinery utilization**

Refinery utilization is calculated as annual throughput (thousands of barrels per day) divided by crude distillation capacity.

**Replacement cost (RC) profit or loss**

Reflects the replacement cost of inventories sold in the period and is arrived at by excluding inventory holding gains and losses from profit or loss. RC profit or loss is the measure of profit or loss that is required to be disclosed for each operating segment under IFRS. RC profit or loss for the group is a non-GAAP measure. Management believes this measure is useful to illustrate to investors the fact that crude oil and product prices can vary significantly from period to period and that the impact on our reported result under IFRS can be significant. Inventory holding gains and losses vary from period to period due to changes in prices as well as changes in underlying inventory levels. In order for investors to understand the operating performance of the group excluding the impact of price changes on the replacement of inventories, and to make comparisons of operating performance between reporting periods, BP’s management
believes it is helpful to disclose this measure. The nearest equivalent measure on an IFRS basis is profit or loss attributable to BP shareholders. See Financial statements – Note 5. A reconciliation to GAAP information is provided on page 298.

**RC profit or loss per share**

Non-GAAP measure. Earnings per share is defined in Financial statements – Note 11. RC profit or loss per share is calculated using the same denominator. The numerator used is RC profit or loss attributable to BP shareholders rather than profit or loss attributable to BP shareholders. BP believes it is helpful to disclose the RC profit or loss per share because this measure excludes the impact of price changes on the replacement of inventories and allows for more meaningful comparisons between reporting periods. The nearest equivalent measure on an IFRS basis is basic earnings per share based on profit or loss for the period attributable to BP shareholders. A reconciliation to GAAP information is provided on page 344.

**Reserves replacement ratio**

The extent to which the year’s production has been replaced by proved reserves added to our reserve base. The ratio is expressed in oil-equivalent terms and includes changes resulting from discoveries, improved recovery and extensions and revisions to previous estimates, but excludes changes resulting from acquisitions and disposals.

**Return on average capital employed**

Non-GAAP measure. Return on average capital employed (ROACE) is underlying replacement cost profit, after adding back non-controlling interest and interest expense net of tax (for 2015, 2016 and 2017 interest expense was net of notional tax at an assumed 35%). Divided by average capital employed (total equity plus finance debt), excluding cash and cash equivalents and goodwill. Interest expense is finance costs excluding lease interest and the unwinding of the discount on provisions and other payables before tax. BP believes it is helpful to disclose the ROACE because this measure gives an indication of the company’s capital efficiency. The nearest GAAP measures of the numerator and denominator are profit or loss for the period attributable to BP shareholders and average capital employed respectively. The reconciliation of the numerator and denominator is provided on page 345.

We are unable to present forward-looking information of the nearest GAAP measures of the numerator and denominator for ROACE, because without unreasonable efforts, we are unable to forecast accurately certain adjusting items required to present a meaningful comparable GAAP forward-looking financial measure. These items include inventory holding gains or losses and interest net of tax, that are difficult to predict in advance in order to include in a GAAP estimate.

**Subsidiary**

An entity that is controlled by the BP group. Control of an investee exists when an investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

**Tier 1 and tier 2 process safety events**

Tier 1 events are losses of primary containment from a process of greatest consequence – causing harm to a member of the workforce, damage to equipment from a fire or explosion, a community impact or exceeding defined quantities. Tier 2 events are those of lesser consequence. These represent reported incidents occurring within BP’s operational HSSE reporting boundary. That boundary includes BP’s own operated facilities and certain other locations or situations.

**Tight oil and gas**

Natural oil and gas reservoirs locked in hard sandstone rocks with low permeability, making the underground formation extremely tight.

**UK National Balancing Point**

A virtual trading location for sale, purchase and exchange of UK natural gas. It is the pricing and delivery point for the Intercontinental Exchange natural gas futures contract.

**Unconventionals**

Resources found in geographic accumulations over a large area, that usually present additional challenges to development such as low permeability or high viscosity. Examples include shale gas and oil, coalbed methane, gas hydrates and natural bitumen deposits. These typically require specialized extraction technology such as hydraulic fracturing or steam injection.

**Underlying effective tax rate (ETR)**

Non-GAAP measure. The underlying ETR is calculated by dividing taxation on an underlying replacement cost (RC) basis by underlying RC profit or loss before tax. Taxation on an underlying RC basis is taxation on a RC basis for the period adjusted for taxation on non-operating items and fair value accounting effects. Information on underlying RC profit or loss is provided below. BP believes it is helpful to disclose the underlying ETR because this measure may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP’s operational performance on a comparable basis, period on period. The nearest equivalent measure on an IFRS basis is the ETR on profit or loss for the period. A reconciliation to GAAP information is provided on page 344.

We are unable to present reconciliations of forward-looking information for underlying ETR to ETR on profit or loss for the period, because without unreasonable efforts, we are unable to forecast accurately certain adjusting items required to present a meaningful comparable GAAP forward-looking financial measure. These items include the taxation on inventory holding gains and losses, non-operating items and fair value accounting effects, that are difficult to predict in advance in order to include in a GAAP estimate.

**Underlying production**

Production after adjusting for acquisitions and divestments and entitlement impacts in our production-sharing agreements (PSAs). 2019 underlying production, when compared with 2018, is production after adjusting for BPX Energy, other acquisitions and divestments, and entitlement impacts in our PSAs.

**Underlying RC profit or loss**

Non-GAAP measure. RC profit or loss after adjusting for non-operating items and fair value accounting effects. See page 300 and 344 for additional information on the non-operating items and fair value accounting effects that are used to arrive at underlying RC profit or loss in order to enable a full understanding of the events and their financial impact. BP believes that underlying RC profit or loss is a useful measure for investors because it is a measure closely tracked by management to evaluate BP’s operating performance and to make financial, strategic and operating decisions and because it may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP’s operational performance on a comparable basis, year on year, by adjusting for the effects of these non-operating items and fair value accounting effects.

The nearest equivalent measure on an IFRS basis for the group is profit or loss for the year attributable to BP shareholders. The nearest equivalent measure on an IFRS basis for segments is RC profit or loss before interest and taxation. Underlying profit in the group chief executive’s letter on page 4 refers to full year underlying RC profit for the group. A reconciliation to GAAP information is provided on page 298.

**Underlying replacement cost (RC) profit or loss per share**

Non-GAAP measure. Earnings per share is defined Financial statements – Note 11. Underlying RC profit or loss per share is calculated using the same denominator. The numerator used is underlying RC profit or loss attributable to BP shareholders rather than profit or loss attributable to BP shareholders. BP believes it is helpful to disclose the underlying RC profit or loss per share because this measure may help investors to understand and evaluate, in the same manner as management, the underlying trends in BP’s operational performance on a comparable basis, period on period. The nearest equivalent measure on an IFRS basis is basic earnings per share based on profit or loss for the period attributable to BP shareholders. A reconciliation to GAAP information is provided on page 344.
**Upstream plant reliability**
BP-operated Upstream plant reliability is calculated taking 100% less the ratio of total unplanned plant deferrals divided by installed production capacity. Unplanned plant deferrals are associated with the topside plant and where applicable the subsea equipment (excluding wells and reservoir). Unplanned plant deferrals include breakdowns, which does not include Gulf of Mexico weather related downtime.

**Upstream unit production cost**
Upstream unit production cost is calculated as production cost divided by units of production. Production cost does not include ad valorem and severance taxes. Units of production are barrels for liquids and thousands of cubic feet for gas. Amounts disclosed are for BP subsidiaries only and do not include BP's share of equity-accounted entities.

**Wellwork**
Activities undertaken on previously completed wells with the primary objective to restore or increase production.

**West Texas Intermediate (WTI)**
A light sweet crude oil, priced at Cushing, Oklahoma, which serves as a benchmark price for purchases of oil in the US.

**Working capital**
Movements in inventories and other current and non-current assets and liabilities as stated in the group cash flow statement.

**Trade marks**
Trade marks of the BP group appear throughout this report. They include: Aral, ARCO, BP, BP Infinia, BPme, BPme Rewards, Castrol

Trade marks:
Butamax – a registered trade mark of Butamax Advance Biofuels LLC.
M&S Simply Food – a registered trade mark of Marks & Spencer plc.
REWE to Go – a registered trade mark of REWE.