On behalf of: Applicant
Paul W M Benson
First
Exhibit PWMB1
8 February 2023

Claim No……

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INSOLVENCY AND COMPANIES LIST (Ch. D)
DERIVATIVE CLAIM
B E T W E E N:

CLIENTEARTH
(on behalf of SHELL PLC)

Applicant

and

(1) SHELL PLC
(2)-(12) THE DIRECTORS OF SHELL PLC
(as named in Part 1 of the Schedule to the Particulars of Claim)

Proposed Respondents

FIRST WITNESS STATEMENT OF PAUL WILLIAM MARK BENSON

I, **PAUL WILLIAM MARK BENSON**, of ClientEarth, 34 Drayton Park, London N5 1PB state as follows:

1. I am a solicitor of the Senior Courts of England and Wales. I am employed as a Senior Lawyer by the Applicant ("**ClientEarth**"). I am duly authorised by ClientEarth to make this witness statement on its behalf.

2. I make this witness statement in support of ClientEarth's applications made under Civil Procedure Rules ("**CPR**") Part 23:

    a. for an order under section 261 of the Companies Act 2006 (the "**Act**") granting permission for its derivative claim on behalf of the First Respondent ("**Shell**", or

"**the company**") to proceed; and

b. for an order under CPR 19.9E requiring Shell to indemnify ClientEarth against liability for its own costs and any adverse costs incurred in the Application and in the derivative claim.

3. This witness statement is provided pursuant to CPR 19.9A(2)(b). I have read the first Witness Statement of William Alexander Hooker ("**Hooker 1**") upon which ClientEarth also relies.

4. The facts and matters set out in this statement are within my own knowledge unless otherwise stated, and I believe them to be true. Where I refer to information supplied by others, the source of the information is identified. Facts and matters derived from other sources are true to the best of my knowledge and belief.

5. As this Application will initially be considered on a without notice basis, I am aware of my obligation to provide full and frank disclosure and to fairly present matters to the Court and I believe that I have met that obligation.

6. There is now produced and shown to me a paginated bundle of true copy, core supporting documents marked "**PWMB1**" to which I refer in this statement by page numbers in square brackets. I also refer to documents included in Exhibit WAH1 to the First Witness Statement of William Alexander Hooker ("**Hooker 1**"). In order to avoid exhibiting voluminous supporting materials which would result in the bundle being unwieldy to use, where supplementary supporting documents are available on the internet, I have provided a hyperlink in the footnote. I have also included a list of webpages at the end of this statement at Schedule 1, which includes all publicly available source material relied on in this statement. References to case law and commentary in the form "**[Authorities Bundle / tab / page number]**" are references to the bundle of authorities filed with this Application.

7. Nothing in this witness statement should be taken as amounting to a waiver of privilege.

The purpose of this statement

8. The purpose of this statement is to set out the evidentiary material on which ClientEarth seeks permission to pursue its derivative claim. The basis on which ClientEarth intends to pursue the claim is as follows:

a. ClientEarth's central allegation is that by adopting and pursuing an inadequate energy transition strategy, Shell's directors ("**the Board**") are mismanaging the material and foreseeable risks that climate change presents to the company, in breach of their legal duties to the company.

b. In preparation of this claim, ClientEarth has worked with a range of consultants and advisors across a range of disciplines, including energy transition risk and analytics, and oil and gas industry expertise.

c. ClientEarth has considered whether it is appropriate to seek to rely on expert evidence at the 'initial sift' stage (i.e. the consideration which the Court is required to give the Application pursuant to section 261(2) of the Companies Act 2006). ClientEarth has concluded that, without having obtained permission from the Court to do so under CPR 35.1, and before understanding the Board's position on expert evidence, this would be inappropriate. However, assuming that the Application passes the 'initial sift' stage, the parties may potentially need to seek further directions from the Court in this regard in relation to whether such expert evidence is necessary, on what issues and in relation to timing. The facts and matters set out in this statement are derived from the process of consultation referred to in paragraph 8(b) above, together with independent fact gathering carried out by me, my team and ClientEarth's external lawyers at Pallas Partners LLP.

d. ClientEarth understands from pre-action correspondence that the Board disputes the claim and will: (a) resist the application for permission; and (b) defend the claim if permission is granted **[WAH1 / 130 - 152]**.

e. It is likely that the Board will contend that ClientEarth is only bringing these proceedings to further its environmental agenda. While ClientEarth is a charity with certain environmental objectives in the public interest, this does not detract from the fact that the claim has been brought in good faith. ClientEarth is a current shareholder of Shell (see Hooker 1 at paragraph 5) and genuinely believes this claim to be in the long-term best interests of the company, its shareholders and employees.

9. My role at ClientEarth focuses on law and policy relating to climate change. I have previously specialised in emissions-related litigation and generally worked in and around environmental regulation and disputes for over 10 years. I do not have expertise in climate science, macro-economics, oil and gas price forecasting, accounting, carbon

pricing, carbon markets or related fields, and no part of this statement purports to articulate any expert opinion. Rather, it seeks to set out the statements of fact which underpin ClientEarth's claim, and the assertions which ClientEarth make as part of its claim.

10. The factual matters I set out below are not intended to be controversial. In citing research that I consider to reflect the consensus, I have chosen materials that I understand to be widely accepted and endorsed by governments worldwide and/or financial markets. Where I am aware that a differing, reasonable view exists on a material issue, I have noted this.

11. In particular, I rely on material published by:

    a. The Intergovernmental Panel on Climate Change ("**IPCC**"), an intergovernmental body created by the United Nations Environment Programme and the World Meteorological Organization to provide governments at all levels with scientific information that they can use to develop climate policies;[1]

    b. The International Energy Agency ("**IEA**"), an intergovernmental organization made up of 31 member countries, which undertakes in-depth analyses to make policy recommendations concerning the global energy sector that enhance the reliability, affordability and sustainability of energy;[2]

    c. The UN High Level Expert Group ("**HLEG**") on the Net Zero Commitments of Non-State Entities, which was set up in 2022 to develop stronger and clearer standards for net-zero emissions pledges;[3]

    d. The UN Principles for Responsible Investment ("**PRI**"), a UN-supported international network of financial institutions seeking to implement the organisation's six core principles concerning the integration of good practice around environmental, social and governance issues;[4]

[1] IPCC, "About the IPCC", available here. A list of webpages to which reference is made in the footnotes is set out as Schedule 1 to this Witness Statement.

[2] IEA, "About", available here.

[3] **[PWMB1/5 - 46]**, UN HLEG, "Integrity Matters: Net zero commitments by business, financial institutions, cities and regions", available here.

[4] UN PRI, "About the PRI", available here.

e. The International Organisation for Standardisation ("**ISO**"), an international organisation, comprised of 167 national standards bodies, that brings together experts to develop voluntary and consensus-based international standards;[5]

f. The International Institute for Sustainable Development ("**IISD**"), an independent think tank, seeking to accelerate solutions for a stable climate, sustainable resources, and fair economies;[6]

g. The Science Based Targets initiative ("**SBTi**"), set up to define and promote best practice in emissions reduction and net-zero targets, in line with climate science;[7]

h. The Assessing the low-Carbon Transition ("**ACT"**) Initiative, which "*enables benchmarking against advanced, science-based metrics. ACT provides a forward-looking, integrated framework that supports companies to align their climate transition strategies with low-carbon pathways*". ACT has developed various sector-specific methodologies, including for the oil and gas sector[8] (and that methodology is also used by the World Benchmarking Alliance);[9]

i. The Transition Pathway Initiative ("**TPI**"), a global, asset-owner led initiative which performs assessments "*using best-available data and publicly available company information*" to evaluate how companies' planned future carbon performance compares to international targets and national pledges made as part of the Paris Agreement;[10]

j. The Climate Action 100+ (the "**CA100+"**), an institutional investor-led initiative, which, by way of its Net Zero Company Benchmark (the "**CA100+ Benchmark**"), assesses the performance of the world's most emissions intensive companies against criteria concerning emissions reduction, governance and disclosure. It uses key indicators to assess corporate alignment with the temperature goal of the Paris Agreement, using data and methodology from the TPI and, in respect of capital

[5] ISO, "About us", available here.

[6] IISD, "Mission and Goals", available here.

[7] SBTi, "About us", available here.

[8] ACT, "Assess your strategy", available here.

[9] **[PWMB1/47 - 51]**, World Benchmarking Alliance, "Oil and Gas Benchmark: Methodology", available here.

[10] TPI, "The TPI Tool", available here; TPI, "TPI State of Transition Report 2021", available here.

alignment, Carbon Tracker.[11]

k. Carbon Tracker, an independent financial think tank that carries out in-depth analysis on the impact of the energy transition on capital markets and potential investment in high-cost, carbon-intensive fossil fuels;[12] and

l. Global Climate Insights ("**GCI**"), an independent research organisation that provides investors with company-level climate transition analysis to support them in finding long-term value in a zero emissions economy.[13]

12. In this statement I also explain elements of the Board's strategy and approach, which is largely found in Shell's Energy Transition Strategy 2021,[14] alongside other disclosures the Board has made to the company's shareholders (e.g. in its Annual Reports). These documents are voluminous, and it is not proportionate to attempt to discuss every aspect of the Board's approach at this preliminary stage in the litigation. I focus below only on those aspects which are currently relevant to ClientEarth's case.

13. The structure of the balance of this witness statement is as follows:

a. Section A explains a number of basic concepts in climate change science and economics, and in particular the fact that climate change and the global energy transition present financial risks to companies.

b. Section B explains the way in which these risks apply to Shell.

c. Section C sets out the Board's management of those risks, and the basis on which ClientEarth alleges that this management is fundamentally unreasonable, by reference to independent third-party research and assessments.

d. Section D summarises the support that ClientEarth has received for this claim from fellow shareholders who together hold over 12 million shares in Shell. It also explains the position in respect of shareholder resolutions which have been filed with the company on related matters.

e. Section E addresses certain specific matters of full and frank disclosure.

[11] CA100+, "About Climate Action 100+", available here.

[12] Carbon Tracker, "About Us", available here.

[13] Global Climate Insights, "How we work", available here.

[14] **[PWMB1/52 - 87]**, Shell, "Energy Transition Strategy", available here.

Section A: Fundamental Concepts

(1) Climate Change

14. The term "**climate change**" means a "*change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods*."[15] The primary cause of climate change is greenhouse gas ("**GHG**") emissions from human activities (known as 'anthropogenic' GHG emissions).[16]

15. Climate change causes and has already caused increases in land and ocean temperature, extreme weather (including for example heatwaves, and increasing the frequency, intensity and/or amount of heavy precipitation events), sea level rise and changes to all natural systems on Earth.[17] Without mitigation measures to reduce GHG emissions, climate change and its impacts will worsen over time, with irreversible adverse impacts on ecosystems and people.[18]

16. To date, anthropogenic GHG emissions have caused the Earth's global mean surface temperature to rise by approximately 1.1°C above pre-industrial levels.[19] There is worldwide scientific consensus that limiting the increase in the global average temperature to 1.5°C above pre-industrial levels would significantly reduce the risks and impacts of climate change. This consensus is recorded in the Paris Agreement on Climate Change, which requires states to "*[hold] the increase in the global average temperature to well below 2°C above pre-industrial levels and [pursue] efforts to limit the temperature increase to 1.5°C above pre-industrial levels*".[20]

17. Since the Paris Agreement was adopted in 2015, a broad consensus has emerged among the contracting parties to the Paris Agreement,[21] and the business and investor

[15] United Nations Framework Convention on Climate Change ("**UNFCCC**"), Article 1.

[16] Intergovernmental Panel on Climate Change, "Special Report: Global warming of 1.5C", page v, available here.

[17] Intergovernmental Panel on Climate Change, "Special Report: Global warming of 1.5C", pages 31 and 35.

[18] The scientific consensus concerning the anticipated impacts from climate change are set out in detail in the IPCC's "Climate Change 2022: Impacts, Adaptation and Vulnerability" report, available here.

[19] IPCC, "Climate change widespread, rapid, and intensifying", available here.

[20] **[Authorities Bundle / 14 / page 172 - 198]**., Paris Agreement, Article 2, available here.

[21] See, for example, the Glasgow Climate Pact agreed at the 2021 Conference of the Parties, available here. **[Authorities Bundle / 15 / page 199 - 206]**.

community,[22] that 1.5°C is the appropriate temperature reference point under the Paris Agreement (the "**Global Temperature Objective**" or "**GTO**"). The Board of Shell has acknowledged this consensus as follows:

"*societal demand for urgent action has increased, especially since the IPCC Special Report of 2018 on 1.5°C effectively made the aspirational goal of the Paris Agreement to limit the rise in global average temperature this century to 1.5 degrees Celsius the default target*".[23]

(2) Climate Change as a Material Financial Risk

18. Climate change has long since evolved from being understood as only an ethical or environmental issue. There is consensus in financial markets that climate change presents material financial risks to companies, and to the entire global economy.[24] These risks are commonly categorised as physical risks, transition risks and litigation risks (further described at paragraph 7 of the Particulars of Claim) (together, **"climate risk**"). Climate risk is already materialising[25] and will compound going forward.

19. Over the last few years, there have been numerous examples of all three categories of climate risk materialising, with catastrophic flooding and wildfires across the world attributable to climate change,[26] a fast-moving policy and market landscape (see paragraphs 54-65 below), and successful climate litigation against companies[27] (and Governments, thereby further accelerating the pace of policy movements which affect companies).[28]

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[22] For example, see UN Race to Zero, "Starting Line and Leadership Practices 3.0" (2022), available here; IIGCC, "Net Zero Standard for Oil and Gas" (2021), available here; CA100+, "Climate Action 100+ Net Zero Company Benchmark" (2022), available here,; and SBTi, "Climate ambition: SBTi raises the bar to 1.5°C" (2021), available here.

[23] **[PWMB1/145]**, Shell, "2021 Annual Report", page 23, available here.

[24] See, for example: **[PWMB1/479 - 565]**, Bank of England Prudential Regulation Authority, 'The impact of climate change on the UK insurance sector' Sept 2015, available here; European Systemic Risk Board, "Too late, too sudden: Transition to a low-carbon economy and systemic risk", available here; Taskforce on Climate-related Financial Disclosures, "Recommendations of the Taskforce on Climate-related Financial Disclosures", available here; and Network for Greening the Financial System, "First comprehensive report « A call for action »", available here.

[25] Losses from climate-related weather events alone are estimated to have cost the global economy USD 3.54 trillion between 1999-2018: see GermanWatch, "Global Climate Risk Index 2020" (4 December 2019), accessible here.

[26] The Guardian, "The climate disaster is here" (14 October 2021), accessible here.

[27] For example, the decision in *Milieudefensie et al. v. Royal Dutch Shell plc* (ECLI:NL:RBDHA:2021:5337) discussed below **[Authorities Bundle / 16 / page 207 - 253]**.

[28] For example: *Neubauer et al v Federal Republic of Germany* (Case Nos. 1 BvR 2656/18, 1 BvR 288/20, 1 BvR 96/20, 1 BvR 78/20, Federal Constitutional Court of Germany) **[Authorities Bundle / 17 / page 254 - 331**; and for the subsequent policy movement see e.g., The Guardian, "Germany to bring forward climate goals after constitutional ruling" (6 May 2021), accessible here.

20. A number of systemic risks, including economic and financial stability risks arising from climate risk, will affect companies across the board.[29]

21. The fossil fuel sector is particularly exposed to climate risk, for the following reasons:

    a. Its physical assets (in terms of its facilities and other infrastructure) are heavily exposed to the physical impacts of climate change.[30] This is the case, for example, in respect of power stations or refineries located in coastal areas, and for offshore drilling platforms exposed to both extreme weather and rising sea levels. The industry frequently operates in remote 'high temperature' or sub-zero temperature locations, many of which are exposed to risks of cyclones and flooding.[31] Climate change also exacerbates water supply related risks, in what is a highly water intensive sector;[32] and may impact supply chains (by disrupting shipping and land transport).[33]

    b. In terms of economic transition risk, the fossil fuel sector is expected to be subject to increased regulation and increased associated costs,[34] which combines with the continuing market shift to cleaner (and increasingly cheaper) alternative sources of energy.[35] Demand for fossil fuels is expected to reduce (see paragraphs 30-31 and 46-53). The sector is exposed to 'stranded asset' risk (see paragraphs 66-73), given the long operating life of the sector's infrastructure which typically requires high levels of capital expenditure.[36]

    c. The sector is also exposed to climate-related litigation, e.g. the attribution of the

[29] For example, the Bank of England has spoken of the *"breadth and magnitude"* of climate risk to the whole economy: see, e.g., Bank of England Prudential Regulation Authority, "Transition in thinking: The impact of climate change on the UK banking sector" (September 2018), accessible here.

[30] See, for example, the IEA's "World Energy Outlook 2021", at pages 266-269, available here; S&P Global Market Intelligence, "Utilities face greatest threat as climate risks intensify" (20 September 2021) available here; and Verisk Maplecroft, "40% of oil and gas reserves threatened by climate change" (16 December 2021), available here.

[31] Investor Group on Climate Change, "Assessing climate change risks and opportunities for investors: Oil and gas sector", available here.

[32] Ibid.

[33] European Commission, "Impacts of climate change on transport - A focus on airports, seaports and inland waterways", available here.

[34] For example: IHS Markit, "Understanding policy and regulatory responses on the upstream petroleum industry greenhouse gas emissions", (8 September 2021), available here.

[35] For example: International Energy Agency, "Renewable electricity growth is accelerating faster than ever worldwide, supporting the emergence of the new global energy economy", (1 December 2021), available here.

[36] See, e.g., Lloyds "Stranded Assets", (February 2017), accessible here.

impacts of climate change to a company's activities.[37]

22. Systemic or macro-economic risk due to climate change may also negatively affect the economic conditions in which companies operate.[38]

23. There is a consensus in the energy industry and in financial markets that major oil companies are particularly exposed to climate risk, and indeed climate change has been described as an existential risk for the oil and gas industry. By way of example:

    a. The IEA has stated that "*Oil and gas companies are facing a critical challenge as the world increasingly shifts towards clean energy transitions.*"[39]

    b. A 2020 article for the World Economic Forum entitled '*Why the oil industry has less time to decarbonize than it might think*' describes the energy transition as an "*existential risk*" for the oil and gas sector's major players.[40]

    c. The Organisation for Economic Cooperation and Development ("**OECD**") released a 2021 report exploring "*key elements that could factor into market pricing of climate transition risks and opportunities*". The OECD focused its assessment on three "*sectors that could be most affected*" by the low-carbon transition, the first of which was the oil and gas sector.[41]

    d. The Cambridge Institute for Sustainable Leadership has found that the energy, oil and gas sector is one of the most heavily exposed sectors to climate-related shocks.[42]

24. The need to address climate change also presents companies with commercial opportunities. In particular, companies that continue to pursue carbon-intensive, business-as-usual strategies not only expose themselves to risk, they may also miss out

[37] For example, see *Luciano Lliuya v RWE AG* (Case No. 2 O 285/15 Essen Regional Court) **[Authorities Bundle / 19 / page 372 – 376].**

[38] European Central Bank, "System-wide amplification of climate risk", available here.

[39] IEA, "Oil and gas industry needs to step up climate efforts now", available here.

[40] World Economic Forum, "Why the oil industry has less time to decarbonize than it might think", available here.

[41] OECD, "Financial Markets and Climate Transition", page 14, available here.

[42] Cambridge Institute for Sustainable Leadership, "Unhedgeable risk: How climate change sentiment impacts investment", available here.

on the significant opportunities presented by the transition to a low-carbon economy.[43]

(3) Modelling the Global Energy Transition

25. Fossil fuels account for the majority of global GHG emissions.[44] There is scientific consensus that, in order to achieve the GTO, there must therefore be a global 'energy transition' – that is, a rapid and accelerating reduction in the production and use of fossil fuels. For example, the IPCC has stated that:

    a. "*Meeting the ambitions of the Paris Agreement will require phasing out fossil fuels from energy systems, which is technically possible and is estimated to be relatively low in cost*";[45]

    b. "[t]*he achievement of long-term temperature goals in line with the Paris Agreement requires the rapid penetration of renewable energy and a timely phasing out of fossil fuels, especially coal, from the global energy system […] Net zero emissions imply that fossil fuel use is minimised and replaced by renewables and other low-carbon primary forms of energy*,"[46]

26. The following are core concepts in relation to the global energy transition:

    a. 'Modelling' is used to understand and illustrate different ways in which the global energy transition may unfold, and in particular the way in which energy supply and demand will change under different scenarios.

    b. A 'scenario' is "*[a] plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces (e.g. rate of technological change, prices) and relationships*".[47]

    c. I refer in this statement also to 'emissions pathways'. These are "*[m]odelled*

[43] This combination of risk and opportunity has been explained by the Task Force on Climate-related Financial Disclosures: see "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures" (June 2017), at pages 5 – 8, accessible here.

[44] "*Of the total anthropogenic CO2 emissions, the combustion of fossil fuels was responsible for about 64% ± 15%, growing to an 86% ± 14% contribution over the past 10 years",* IPCC, AR6 WGI, "Technical Summary" (9 August 2021), box TS.5, at page 80, accessible here. As of 2015: *"*[t]*he fossil fuel industry and its products accounted for 91% of global industrial GHGs in 2015, and about 70% of all anthropogenic GHG emissions",* Carbon Disclosures Project, "The Carbon Majors Database: CDP Carbon Major Report 2017" (July 2017), at page 7, accessible here.

[45] IPCC, AR6 WGIII, "Full Report" (28 February 2022), section 17, at page 17-64, accessible here.

[46] IPCC, AR6 WGIII, "Full Report" (28 February 2022), section 17, at page 17-23.

[47] IPCC, "Glossary - Global Warming of 1.5C", available here.

trajectories of global anthropogenic emissions over the 21st century".[48] So, for example, a model built based on a 1.5°C scenario would show an emissions pathway demonstrating how emissions decline each year over a particular period of time (e.g. between 2023 and 2050), where net cumulative GHG emissions over this time period align with a 1.5°C carbon budget.

d. The 'remaining carbon budget' is the "*[e]stimated cumulative net global anthropogenic CO2 emissions from [the start of the current year, now 2023] to the time that anthropogenic CO2 emissions reach net zero that would result, at some probability, in limiting global warming to a given level, accounting for the impact of other anthropogenic emissions.*"[49]

e. 'Net zero emissions' are achieved when "*anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period*".[50] For companies, the UN Global Compact has described net zero as "*achieving a state in which the activities within its value chain result in no net impact on the climate from greenhouse gas emissions.*"[51] According to the IPCC's assessment of 53 climate models seeking to limit temperature rise to 1.5°C with low or no 'overshoot' of the remaining carbon budget, the scientific consensus is that global emissions must reach net zero around 2050.[52]

f. 'Temperature overshoot' is "*[t]he temporary exceedance of a specified level of global warming, such as 1.5°C. Overshoot implies a peak followed by a decline in global warming, achieved through anthropogenic removal of CO_2 exceeding remaining CO_2 emissions globally.*"[53] In other words, temperature overshoot implies that the carbon budget for the targeted temperature rise has been temporarily exceeded (although the greater the degree of overshoot, the greater the risk of the

[48] Ibid.

[49] Ibid.

[50] Ibid.

[51] UN Global Compact, "Race to Zero", available here.

[52] IPCC, "Special Report: Global Warming of 1.5C: Summary for Policy Makers", page 12, available here.

[53] IPCC, "Glossary - Global Warming of 1.5 ºC", available here.

temperature target being missed through feedback loops in the climate system).[54]

27. Certain scenarios are commonly referred to and widely used by the academic and business communities, and I shall refer to them later in this statement. These include:

    a. scenarios assessed (but not developed) by the IPCC that are considered consistent with 1.5°C of warming ("**IPCC 1.5°C scenarios**").[55] The IPCC categorises these scenarios into: (i) scenarios with "*no overshoot*" of the 1.5°C carbon budget; (ii) scenarios with "*low overshoot*"; and (iii) scenarios with "*high overshoot*".[56] The scenarios have varying degrees of feasibility,[57] defined by the IPCC as "*[t]he degree to which climate goals and response options are considered possible and/or desirable*."[58] Some of the IPCC 1.5°C scenarios are considered not feasible; and

    b. the International Energy Agency's Net Zero Emissions by 2050 Scenario ("**NZE 2050**"), Sustainable Development Scenario ("**SDS**"), Announced Policies Scenario ("**APS**"), and Stated Policies Scenario ("**STEPS**").[59]

28. In climate science, a distinction is sometimes drawn between 'normative' scenarios (what ought to happen in order to achieve a particular target), and 'exploratory' scenarios (what will happen if certain policies and conditions continue). The IPCC 1.5°C scenarios, the NZE 2050 and SDS are normative scenarios, while APS and STEPS are exploratory scenarios.

29. As to the IEA scenarios:

    a. NZE 2050 is "*[a] scenario which sets out a pathway for the global energy sector to achieve net zero CO2 emissions by 2050*",[60] and has been designed to limit temperature rise to 1.5°C by 2100 (with a 50% probability of achieving that goal).

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[54] "*Pathways that overshoot 1.5°C run a greater risk of passing through 'tipping points', thresholds beyond which certain impacts can no longer be avoided even if temperatures are brought back down later on*." See IPCC, "Special Report: Global Warming of 1.5C: Chapter 3", page 283, available here.

[55] IPCC, "Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development", pages 99 and 100, available here.

[56] IPCC, "Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development", pages 99-100.

[57] See IPCC, AR6 WGIII, '*Summary for policymakers*' (4 April 2022), section E, at page 48, accessible here; and IPCC "Glossary - Global Warming of 1.5C", available here

[58] And "*Feasibility depends on geophysical, ecological, technological, economic, social and institutional conditions for change. Conditions underpinning feasibility are dynamic, spatially variable, and may vary between different groups*."

[59] IEA, "Understanding WEO Scenarios", available here.

[60] IEA, "Understanding GEC Model scenarios", available here.

The objective of the scenario is *"[t]o show what is needed across the main sectors by various actors, and by when, for the world to achieve net zero energy related and industrial process CO2 emissions by 2050 while meeting other energy-related sustainable development goals such as universal energy access."*[61]

b. SDS is an older IEA scenario[62] where the objective was to achieve a "*well below 2°C*" temperature outcome, while simultaneously meeting all energy-related UN Sustainable Development Goals.[63] In practice, SDS was modelled to be consistent with limiting global temperature rise to 1.65°C with a 50% probability.

c. APS is a "*scenario which assumes that all climate commitments made by governments around the world, including Nationally Determined Contributions (NDCs) and longer-term net zero targets* […] *will be met in full and on time.*"[64] By 2100, temperature rise under APS is currently expected to reach 1.7°C.[65]

d. STEPS is a "*scenario which reflects current policy settings based on a sector-by-sector and country by country assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.*"[66] By 2100, temperature rise under STEPS is expected to reach 2.5°C.[67]

30. It is important to appreciate the scale of the energy transition that will be required in order to transition from STEPS (often described as 'business as usual') to NZE 2050 (reaching net zero by 2050). As illustrated by the following diagram, the NZE 2050 scenario sees fossil fuel demand peaking in the early 2020s (i.e. now), with non-fossil fuel supply overtaking fossil fuel supply in the early-mid 2030s:

[61] Ibid.

[62] i.e. a scenario which featured in the 2017-2021 WEOs, but which has not been included or updated in the 2022 WEO.

[63] IEA, "World Energy Outlook 2021", page 327, available here.

[64] IEA, "Understanding GEC Model scenarios", available here.

[65] IEA, "2022 World Energy Outlook", page 21, available here.

[66] IEA, "Understanding GEC Model scenarios", available here.

[67] IEA, "2022 World Energy Outlook", page 21.

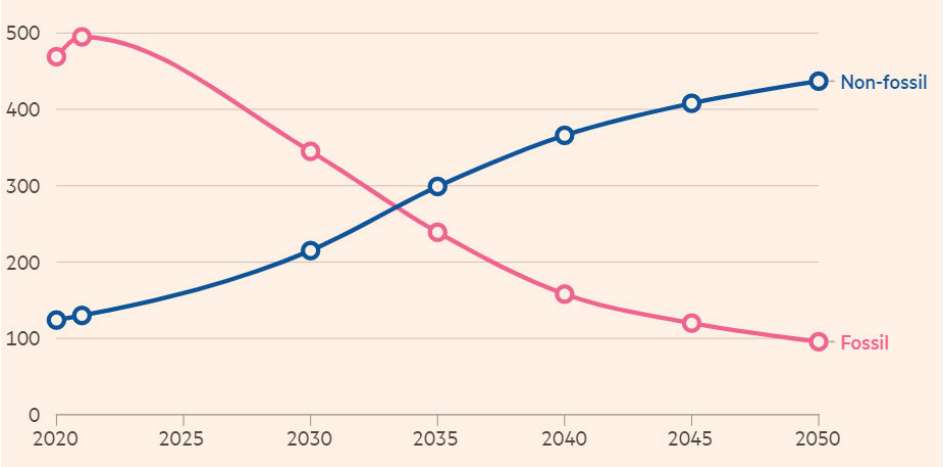

Figure 1 - The trajectory of fossil fuel and non-fossil fuel supply under NZE 2050 (in exajoules) (2022)[68]

31. The STEPS scenario, even as of today, still sees total demand for fossil fuel falling, but at a much slower pace than under NZE 2050:

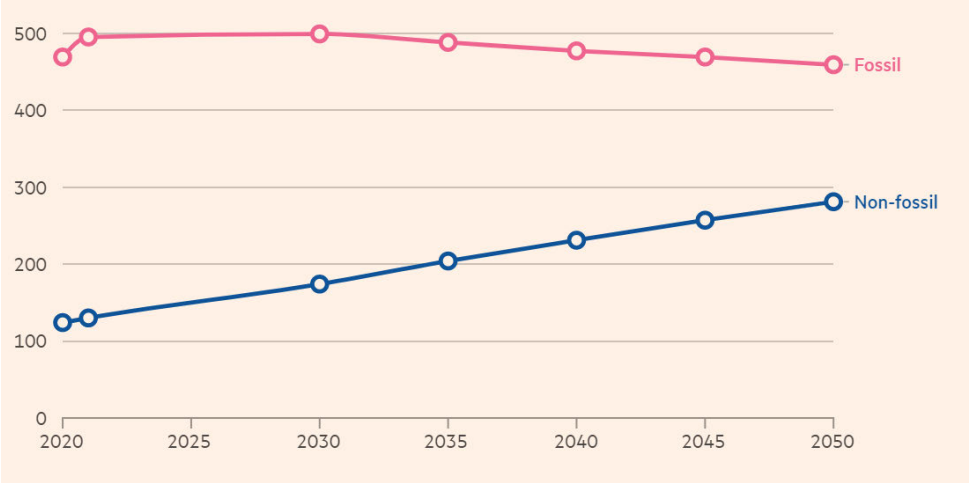

Figure 2 - The trajectory of fossil fuel and non-fossil fuel supply under STEPS (in exajoules) (2022)[69]

(4) <u>Corporate emission reduction targets</u>

32. Many companies with high GHG emissions have put in place targets to reduce those emissions. I set out Shell's targets at paragraphs 79-85. In setting those targets, the Board has recognised the need to comply with the GTO.

[68] Financial Times, "IEA forecasts fossil fuel demand will peak this decade", available here.

[69] Ibid.

33. It is necessary to explain three core concepts in respect of these targets. These are:

a. The division of emissions from different parts of a company's business into three 'Scopes' (paragraphs 34-35 below);

b. The difference between absolute emissions reduction targets and carbon intensity reduction targets (paragraphs 36-41 below); and

c. The concept of 'alignment' between a company's targets and the GTO, and the way in which this is assessed (paragraphs 42-43 below).

Scopes 1-3

34. It is widely-accepted practice to divide a company's GHG emissions into three 'Scopes', according to the methodology established by the Greenhouse Gas Protocol:[70]

a. "**Scope 1**" emissions are direct emissions from owned or controlled sources. For example, in an oil and gas company this would include all of the emissions associated with the production of oil and gas.

b. "**Scope 2**" emissions are indirect emissions from the generation of purchased energy. For example, for an oil and gas company this could include electricity used to power production or refining facilities. Scopes 1 and 2 emissions are commonly referred to as 'operational emissions'.

c. "**Scope 3**" emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.[71] The vast majority of an oil and gas company's emissions will be Scope 3 emissions, which arise when those products are used (i.e. combusted) to produce energy. This generally takes place after the company has sold oil and gas to its customers, which means that their customers' Scope 1 emissions are the company's Scope 3 emissions.

35. International standards on corporate transition plans generally require a company's

[70] See GHG Protocol, "FAQ", available here. The GHG established a global and standardized framework to measure and manage greenhouse gas emissions.

[71] Here, "upstream" emissions refers generally to those resulting from the production of goods or services, while "downstream" emissions refers to those resulting from the use or disposal of products or services. See GHG Protocol, "Technical Guidance for Calculating Scope 3 emissions", pages 6 – 10, available here.

targets to include Scope 3 emissions.[72]

Absolute emissions vs. carbon intensity

36. There are broadly two types of climate-related targets that companies have adopted:

    a. Absolute emission reduction targets, which aim to reduce a company's total GHG emissions; and

    b. Carbon intensity reduction targets, which aim to reduce the amount of carbon dioxide equivalent ("CO2e") emitted for each unit of energy produced or sold.

37. Absolute emissions are the cause of climate change. Carbon intensity can be seen as a proxy for a company's product mix – the higher the proportion of lower-carbon products being sold, the lower the company's carbon intensity, and vice versa.

38. Intensity metrics can be useful for the market because they demonstrate the way in which a company's product mix changes over time. They may encourage companies to: (i) improve efficiency in their production processes; (ii) reduce their exposure to emissions-intensive assets and/or (iii) increase the share of lower-intensity products in the company's portfolio. They also help investors to compare the trajectories of differently sized companies in a normalised way.

39. However, intensity targets are not a substitute for absolute emission reduction targets. Because intensity metrics are a measure of the average emissions for each unit of energy produced or sold, they provide no information about the company's 'actual' emissions. In principle, a company could reduce its carbon intensity even while increasing its absolute emissions (e.g. by maintaining or increasing the size of emissions-intensive parts of the business, while growing the less emissions-intensive parts of its business).

40. For that reason, intensity targets should either be accompanied by: (i) absolute targets or (ii) at the minimum, disclosures with respect to how the intensity target will impact the company's absolute emissions (to enable a full picture of climate risk and how that is being managed).

[72] The UN HLEG, the ISO Net Zero Guidelines, the UN Race to Zero minimum criteria, the CA100+ Net Zero Benchmark criteria, the SBTi, ACT and TPI all include provision for companies to include scope 3 emissions in company-level targets. See: UN HLEG, "Integrity Matters: Net zero commitments by business, financial institutions, cities and regions", page 17; ISO, "Net Zero Guidelines", section 8.2.5; UN Race to Zero, "Starting Line and Leadership Practices 3.0", page 2; CA100+. "Climate Action 100+ Net Zero Company Benchmark", page 1, 2 and 5; SBTi, "Criteria and Recommendations", page 5; ACT, "Oil and Gas Methodology", page 44 and 132; and TPI "Sectoral decarbonisation pathways", page 8.

41. There is broad consensus in international net zero standards, and among leading third party assessors of corporate transition plans, that intensity-based emissions targets are not a proxy or replacement for absolute emissions targets. For example:

a. The UN HLEG's main recommendation was that, "*Non-state actors must have short-, medium- and long-term absolute emissions reduction targets* […]".[73]

b The SBTi states that, "*Rapid, deep cuts to value-chain emissions are the most effective and scientifically-sound way of limiting global temperature rise to 1.5°C. This is the central focus of the Net-Zero Standard and must be the overarching priority for companies*."[74] The SBTi has also explicitly cautioned that, "*Absolute reduction targets are the most meaningful in reducing global total atmospheric emissions*," and that "*there is no guarantee that emissions to the atmosphere will be reduced under intensity targets*".[75]

c. ACT states that, "*Absolute greenhouse gas emissions over time is the most relevant measure of emissions performance for assessing a company's contribution to global warming*."[76]

d. The Institutional Investor Group on Climate Change states in its *Net Zero Standard for Oil and Gas Companies*, "*Emission targets can be set on an absolute or intensity basis. However, companies adopting intensity targets should state the expected impact of falling intensity on absolute emissions […]."*[77]

e. The TPI states that "*global temperature increases in proportion to cumulative absolute emissions of CO2. This is why meeting the Paris Agreement temperature goals of well below 2°C, preferably 1.5°C, requires staying within an absolute CO2 emissions budget*."[78] On Shell's assessment page, it specifically notes "*When interpreting TPI Carbon Performance data, it is important to bear in mind that climate science shows temperature change is proportional to cumulative absolute*

[73] UN HLEG, "Integrity Matters: Net zero commitments by business, financial institutions, cities and regions", page 17.

[74] SBTi, "The Net-Zero Standard", accessible here.

[75] SBTi, "Sectoral Decarbonization Approach" (May 2015), page 18, available here.

[76] ACT, "Oil and gas assessment methodology", page 46, available here.

[77] **[PWMB1/97]**, IIGCC, "Net Zero Standard for Oil and Gas companies" (September 2021), page 10, accessible here.

[78] **[PWMB1/573]**, TPI, "TPI Explainer: Interpreting TPI's emissions scenarios and benchmarks", slide 2, available here.

CO2 emissions."[79] TPI estimates an intensity pathway for the oil and gas sector by starting with the absolute carbon budget for the sector. The main reason the TPI benchmark uses a carbon intensity metric is so that companies can be compared on a normative basis.[80]

Paris-alignment

42. Many institutional investors consider that the best way for companies to manage climate risk is for them to align their business with the GTO (to become "**Paris-aligned**").[81]

43. There is no single universally accepted standardised methodology for assessing whether a company's targets and strategy is Paris-aligned. However, there are a number of widely-respected organisations which perform or feed into this analysis and assessment. These principally include four of the organisations to which I referred at paragraph 11, sub-paragraphs 11.h)-11.k), i.e. ACT, TPI, Climate Action 100+ and Carbon Tracker.

Section B: Risks to Shell

44. At paragraphs 21-23 above, I have explained at a high level the consensus that oil and gas companies face serious (and indeed potentially existential) risks arising out of climate change.

45. In this section, I explain in more detail specific risks faced by Shell which are most relevant to this claim. Some of these risks are inter-linked. Much of this section is likely to be common ground between the parties given that the Board publicly acknowledges that Shell faces material risks in the energy transition. In its 2021 Annual Report, the Board categorised the climate-related risks faced by Shell as follows: (i) commercial risk; (ii) regulatory risk; (iii) societal risk (including litigation risk); and (iv) physical risk. I expand upon the first two of these, i.e. commercial risk and regulatory risk, before explaining the concept of 'stranded assets'.

(1) Commercial risk

46. The Board has summarised its climate-related commercial risk as follows:

[79] TPI, "Shell", available here.

[80] **[PWMB1/573]** TPI, "TPI Explainer: Interpreting TPI's emissions scenarios and benchmarks", slide 2.

[81] There are numerous investor initiatives seeking to ensure that the companies in which they are invested have adopted Paris-aligned targets and strategies. Key examples include the IIGCC, which has released the Oil and Gas Net Zero Standard, and the CA100+, which assesses companies on whether they are Paris aligned in its Net Zero Company Benchmark.

"*The transition to a low-carbon economy may lead to lower sales volumes and/or margins due to a general reduction or elimination of demand for oil and gas products, possibly resulting in under-utilised or stranded oil and gas assets and a failure to secure new opportunities.*

Changing preferences of investors and financial institutions could reduce access to and increase the cost of capital".[82]

47. All of the IEA's energy transition scenarios now result in a decline in demand for fossil fuels, to varying extents and at varying rates. In credible 1.5°C scenarios, the fall in demand is particularly steep (as a result of e.g. displacement by renewables and regulatory pressure). By way of example:

    a. The IPCC's Sixth Assessment Report of 2021/2022 found that:

    "*[i]n modelled pathways that limit warming to 1.5°C (>50%) with no or limited overshoot, the global use of coal, oil and gas in 2050 is projected to decline with median values of about 95%, 60% and 45% compared to 2019*";[83]

    b. The IISD finds that, under feasible[84] IPCC 1.5°C scenarios, "*oil and gas production needs to decrease by 30% by 2030 and by 65% by 2050. This is equivalent to an annual reduction of 3% on average for both oil and gas between 2020 and 2030."*[85] The UN Environment Programme has reached a similar finding of annual average decline rates of 4% for oil and 3% for gas between 2020 and 2030.[86]

    c. In 2021, the IEA's *Net Zero by 2050* report stated: "*Net zero means a huge decline in the use of fossil fuels. They fall from almost four-fifths of total energy supply today to slightly over one-fifth by 2050*."[87] Under the IEA's latest (2022) iteration

[82] **[PWMB1/202],** Shell, "2021 Annual Report", page 80.

[83] IPCC, AR6 WGIII, '*Summary for policymakers*' (4 April 2022), section C.3.2, at page 28, accessible here. Note that these are median declines, which are less ambitious than NZE 2050 due to this median including both feasible and unfeasible scenarios.

[84] The IISD states in its report on page iii, "*This report is based on the pathways that limit warming to 1.5°C and that do not exceed the IPCC's assessment of the feasible and sustainable levels of carbon capture and storage and of carbon dioxide removal from the atmosphere, as the IPCC notes that the deployability of these unproven-at-scale technologies is one of the greatest risks to limiting warming to 1.5°C*." See IISD, "Lighting the Path: What IPCC energy pathways tell us about Paris", available here.

[85] IISD, "Lighting the Path: What IPCC energy pathways tell us about Paris", page 4.

[86] United Nations Environment Programme, "2021 Production Gap Report", page 15, available here.

[87] IEA, "Net Zero by 2050: Roadmap for the Global Energy Sector", page 18. See also page 21: "*Beyond projects already committed as of 2021, there are no new oil and gas fields approved for development in our pathway, and no new coal mines or mine extensions are required. The unwavering policy focus on climate change in the net zero pathway results in a sharp*

of the NZE 2050 scenario:

i. Oil supply declines approximately 22% by 2030, and 58% by 2040; and

ii. Unabated natural gas supply declines approximately 28% by 2030 and 77% by 2040.[88]

d. Carbon Tracker has assessed "*what happens to production levels in the 2030s under the NZE 2050 for the world's 40 largest listed oil and gas companies, compared to their production in 2021. It shows that for most companies – including majors like Shell, Chevron and Eni – production falls by at least half*."[89]

48. Displacement of fossil fuels by renewables is already underway: for example, wind and solar energy supplied more of the EU's electricity than any other power source in 2022.[90]

49. Of course, cost plays a critical role in this regard. The cost of renewables has decreased considerably over the past decade,[91] and this trend is expected to continue. The IEA forecasts that "*Oil and gas resources generally become more expensive to extract over time in our scenarios, as […] resources become more difficult and geologically challenging to develop*."[92]

50. It also forecasts, without assuming that any major breakthroughs in technology occur, that "*[…] clean technology costs continue to come down in our scenarios, […] depending on the level of policy support and the extent of deployment*."[93]

51. The Board has accepted the risk of "*lower demand and margins for oil and gas products*", and explained (*inter alia*) that "*An excess of supply over demand could reduce fossil fuel prices. This could be a factor contributing to additional provisions for our assets and*

decline in fossil fuel demand, meaning that the focus for oil and gas producers switches entirely to output – and emissions reductions – from the operation of existing assets. Unabated coal demand declines by 98% to just less than 1% of total energy use in 2050. Gas demand declines by 55% to 1 750 billion cubic metres."

[88] IEA, "2022 World Energy Outlook", Table A.1c: World energy supply, page 445, available here. The underlying figures are that oil supply declines from 183 exajoules (EJ) in 2021 to 143 EJ in 2030 and 76 EJ by 2040, while unabated natural gas supply drops from 146 EJ in 2021 to 105 EJ by 2030 and 34 EJ by 2040.

[89] **[PWMB1/582],** Carbon Tracker, "Adapt to Survive", page 6, available here.

[90] Ember, "European Electricity Review 2023", available here.

[91] For example, see World Economic Forum, "The price of solar power has fallen by over 80% since 2010. Here's why", available here.

[92] IEA, "2022 World Energy Outlook", page 116 available here.

[93] IEA, "2022 World Energy Outlook", page 117.

result in lower earnings, cancelled projects and potential impairment of certain assets".[94]

52. Lower demand and margins for oil and gas products, i.e. the value erosion or destruction of the company's fossil fuel business, is the principal climate-related financial risk for the company.

53. The Board has also correctly identified risks in respect of access to and the cost of capital, which are in some cases already materialising.[95]

(2) <u>Regulatory risk</u>

54. The Board has summarised its climate-related regulatory risk as follows:

"*The transition to a low-carbon economy will increase the cost of compliance for our assets and/or products, and may include restrictions on the use of hydrocarbons. The lack of net-zero-aligned global and national policies and frameworks increases the uncertainty around this risk.*"[96]

55. ClientEarth agrees that this is a material risk for Shell. 195 states are signatories to the Paris Agreement, with 194 having ratified it – in other words, almost every country in the world. Under Article 4, signatories are required to submit "*successive nationally determined contribution[s]*", which "*will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition*."

56. As such, contracting state parties have an obligation under the Paris Agreement to progressively increase the ambition of their national plans and targets over time. They have undertaken to change their activities in order to achieve the GTO.

57. Net zero commitments by governments already encompass 91% of the global economy.[97] 128 countries and self-governing territories have a net zero target, 104 of which have committed to achieving net zero between 2041 and 2050.[98] National legislation, with

[94] **[PWMB1/202]**, Shell, "2021 Annual Report", page 80.

[95] For example, Lloyds Bank announced in October 2022 that it would not support direct financing to develop new oil and gas fields. Similarly, HSBC announced in December 2022 that it will stop funding new oil and gas fields. See Reuters, "UK's Lloyds ditches project finance for new oil and gas fields", available <u>here</u>; and Reuters, "HSBC to stop funding new oil and gas fields as part of policy overhaul", available <u>here</u>.

[96] **[PWMB1/202**], Shell, "2021 Annual Report", page 80.

[97] Net Zero Tracker, "Net Zero Stocktake 2022" (June 2022), page, 16, available <u>here</u>.

[98] Ibid.

binding interim emissions reduction targets and/or a net zero by 2050 target, has already been adopted in (for example) Australia,[99] Canada,[100] the European Union,[101] France,[102] Germany,[103] Japan,[104] South Korea[105] and the United Kingdom.[106] Through an executive order, the United States has adopted a net zero by 2050 target, as well as an interim target for 2030.[107] Brazil has adopted a net zero by 2050 target in its Nationally Determined Contributions ("**NDC**"), as well as legally binding interim targets.[108] In its NDC, China sets out its aim to reach peak carbon dioxide emissions by 2030 and reach net zero by 2060.[109] In its NDC, India confirms its net zero by 2070 target.[110]

58. The nature of the obligation under Article 4 means that states are already increasing their ambition. In 2019, the UK increased its legally-binding emissions reduction target from 80% by 2050 (relative to 1990) to 100%, i.e. net-zero.[111] In 2021, Germany increased its targets from 55% by 2030 (relative to 1990) and net-zero by 2050, to 65% by 2030 and net-zero by 2045, with a new interim target of 88% by 2040.[112] This trend is given additional impetus by the fact that national courts have begun to use the Paris Agreement to inform and imbue domestic legal principles and obligations.[113]

59. Increasingly ambitious climate commitments are currently being put in place at relative

[99] Australian Government, "Climate Change Act 2022", available here.

[100] Canadian Government, "Net-Zero Emissions Accountability Act", available here.

[101] European Commission, "Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality", available here.

[102] Climate Laws, "The French Energy Transition for Green Growth (Energy Transition Law)", available here.

[103] Climate Laws, "The German Federal Climate Protection Act", available here.

[104] Climate Laws, "The Japanese Act on Promotion of Global Warming Countermeasures", available here.

[105] Climate Laws, "The South Korean Carbon Neutral Green Growth Framework Act to Tackle the Climate Crisis", available here.

[106] UK Government, "Climate Change Act 2008", available here.

[107] White House, "Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability", available here.

[108] Government of Brazil, "The Brazilian National Policy on Climate Change (established by Law 12.197/2009)", available here; and Government of Brazil, " Federative Republic of Brazil Paris Agreement Nationally Determined Contribution", available here.

[109] UNFCCC, "China's Achievements, New Goals, and New Measures for Nationally Determined Contributions", available here.

[110] Government of India, "India's Updated First Nationally Determined Contribution Under Paris Agreement", available here.

[111] See the UK "Climate Change Act 2008" and "The Climate Change Act 2008 (2050 Target Amendment) Order 2019".

[112] See Germany's "Climate Action Plan 2050" and the "German Federal Climate Protection Act".

[113] For example, cases of this kind have been successfully brought against governments in Germany (*Neubauer et al v Federal Republic of Germany* - Case Nos. 1 BvR 2656/18, 1 BvR 288/20, 1 BvR 96/20, 1 BvR 78/20); and the Netherlands (*Urgenda Foundation v. State of the Netherlands* – Case No. ECLI:NL:HR:2019:2007).

speed. I explained at paragraph 29.c(c) that one of the IEA's transition scenarios, the APS, assumes that all climate commitments by governments around the world will be met in full and on time. In 2021, those commitments resulted in a forecasted temperature rise of 2.1°C. In 2022 (i.e. over the course of a single year), improved commitments had been made which had the effect of reducing that forecasted rise by 0.4°C, to 1.7°C. [114]

60. The Board has noted that:

"*With around 90% of the global economy now signed up to net-zero commitments as of January 2022 […] there is an ever-increasing threat that governments set future regulatory frameworks that restrict further exploration and production of hydrocarbons, and bring in controls to limit the use of such products.*"[115]

61. In fact, this is more than a threat: legislation to prohibit oil exploration and/or production has already been passed in a number of jurisdictions. For example:

    a. France has banned the production of oil and gas in all its territories from 2040;[116]

    b. Denmark (at the time of the announcement, the EU's largest oil producer) has banned new exploration and committed to end oil and gas extraction in the North Sea by 2050;[117] and

    c. Spain has banned all new coal, oil and gas exploration with immediate effect (as of 2021), and legislated to end production by 2042.[118]

62. There is also a range of other policy measures which are being taken, or are likely to be taken, by governments worldwide to implement their climate commitments.

63. The United Nations Principles for Responsible Investment ("**UN PRI**") has commissioned a "*climate transition forecasting consortium*" known as the '*Inevitable Policy Response to climate change*' ("**IPR**"). In the 2021 IPR model, the UN PRI

[114] IEA, "2022 World Energy Outlook", page 21, available here; and IEA, "2021 World Energy Outlook", page 16, available here.

[115] **[PWMB1/202],** Shell, "2021 Annual Report", page 80.

[116] Financial Times, "France plans to ban oil and gas production by 2040", available here; and The Guardian, "France bans fracking and oil extraction in all of its territories", available here.

[117] See BBC, "Denmark set to end all new oil and gas exploration", available here; and Euronews (2022), "The end of fossil fuels: Which countries have banned exploration and extraction?", available here.

[118] **[PWMB1/621 -636]**, SP Global, "Spain passes climate bill banning new oil, gas exploration", available here.

concluded that a "*significant acceleration in climate policy by 2025 is likely*",[119] by way of eight principal levers: (i) carbon pricing: (ii) low-carbon buildings; (iii) coal phase-out; (iv) clean industry; (v) 100% clean power; (vi) low-emissions agriculture; (vii) zero emission vehicles; and (viii) forestry.

64. In terms of the policy levers most relevant for oil and gas companies such as Shell (and the following is intended to be illustrative rather than exhaustive):

a. Carbon pricing (also known as emission trading schemes) place a fee on emitting GHG emissions and/or offers an incentive for emitting fewer GHG emissions.[120] Emissions trading schemes are currently in place in many of the world's largest economies, including (among others) the United Kingdom,[121] the European Union,[122] and China.[123] The Board states that "*Shell's annual carbon cost exposure is expected to increase over the next decade because of evolving carbon regulations. The forecasted annual cost exposure in 2030 is estimated to be within the range of $1.0-2.5 billion*".[124] The IPR forecasts carbon prices in the region of USD 60-85 per tonne of CO2 by 2030 in a number of major economies.[125]

b. In respect of low-carbon buildings, the IPR anticipates that all countries will implement new building and product standards targeting an end to the sale of fossil-based appliances, and those with ambitious net-zero targets will do so by 2035-2040.

c. In respect of clean industry, the IPR forecasts (*inter alia*) that all major industrial economies will require new industrial plants to be low-carbon by 2040.[126]

d. In respect of 100% clean power, the IPR anticipates that strong policy frameworks

[119] **[PWMB1/637 - 652]**, UN PRI, "Forecast Policy Scenario and 1.5°C Required Policy Scenario", available here. The following section refers to the IPR's Forecast Policy Scenario, i.e. what the IPR expects to happen, based on detailed analyses of real-world policy developments and policy trends.

[120] UNFCCC, "About carbon pricing", available here.

[121] UK Government, "UK Emissions Trading Scheme markets", available here.

[122] European Commission, "International carbon market", available here.

[123] Forbes, "China's Emissions Trading System Will Be The World's Biggest Climate Policy. Here's What Comes Next.", available here.

[124] **[PWMB1/202]**, Shell, "2021 Annual Report", page 80.

[125] These include Australia, Canada, China, France, Germany, Italy, Japan, Korea, the UK and the USA. See UN PRI, "The Inevitable Policy Response: Policy Forecasts", slides 12 – 17, available here.

[126] Ibid.

to end all unabated fossil generation in leading countries will be in place by 2040 (with other major countries to follow by 2050).

e. In respect of zero emission vehicles, many countries have already made commitments to ban the sale of new internal combustion engine vehicles. These include among others, the United Kingdom (ban to commence in 2030),[127] the European Union (2035),[128] the United States (2035)[129] and China (2035).[130] The Board has stated in this regard "[…] *as the cost of low-carbon vehicles comes down, for example, they will replace vehicles powered by internal combustion engines. The IPCC scenarios show the tipping point to be somewhere between now and 2030, leading to net-zero transport after 2050*."[131]

65. It is clear, and expected to be common ground, that these regulatory and policy shifts present a material and foreseeable risk to the company.

(3) <u>Stranded assets</u>

66. The IEA defines stranded assets as: "*investments which have already been made but which, at some time prior to the end of their economic life (as assumed at the investment decision point), are no longer able to earn an economic return, as a result of changes in the market and regulatory environment brought about by climate policy*."[132]

67. The term 'stranded assets' can be defined in different ways. I use the term in this statement to refer to those assets which become unviable or less profitable as a result of climate risk materialising: in other words, they give lower-than-expected financial returns. This could be, for example, because of reduced demand and prices, governments taking action that expressly prevent the development of particular projects, and/or companies becoming unable to raise the finance necessary to develop or continue with such projects.

68. The factors set out at paragraphs 46-65 above mean that Shell is exposed to stranded

[127] UK Government, "Outcome and response to ending the sale of new petrol, diesel and hybrid cars and vans", available here.

[128] European Parliament News, "EU Ban on the sale of new petrol and diesel cars from 2035 explained", available here.

[129] White House. "Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability", available here.

[130] World Economic Forum, "China joins list of nations banning the sale of old-style fossil-fuelled vehicles", available here.

[131] **[PWMB1/63]**, Shell, "Energy Transition Strategy", page 10.

[132] IEA, "Redrawing the Energy-climate Map", page 98, available here.

asset risk. This is particularly the case because oil and gas infrastructure typically has a long operating life and requires high levels of capital expenditure.[133]

69. The extent to which assets will become stranded depends on the way in which the energy transition unfolds. By way of example:

    a. The IEA in its 2020 report, *The Oil & Gas Industry in Energy Transitions*, looked at two scenarios: SDS and STEPS (which I explain at paragraph 29 above). The report states:

    "*The present value of the cumulative net income of private oil and gas companies in the STEPS to 2040 is just over USD 5.1 trillion (at a 10% discount rate); in the SDS, it is USD 3.8 trillion. There would be large variations between different types of companies, but the 25% difference between the two scenarios implies a risk of USD 1.4 trillion net present stranded value.*"[134]

    b. In 2015, Citi released a report estimating that stranded fossil fuel assets could amount to USD 100 trillion in scenarios consistent with keeping global warming below 2°C.[135]

    c. As far back as 2013, HSBC released a report warning that, because most fossil fuel reserves could not be burnt in order to have any chance of staying within a 2°C global warming target, the potential value at risk for oil and gas businesses could rise to 40-60% of market capitalisation.[136]

70. In respect of Shell's current Upstream and Integrated Gas property, plant and equipment ("**PPE**") – the company's auditors ("**EY**") have estimated that over 80% will be fully depreciated by 2030, with evidence that the remaining reserves will be recoverable. On that basis, EY reported that, based on evidence that exists today, the risk that there will be material stranded assets is low. EY appears to define 'stranded assets' as "*assets that are carbon intensive, where there may be a higher risk of the reserves not ultimately being produced*".[137]

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[133] See, e.g., Lloyds "Stranded Assets" (February 2017), accessible here.

[134] IEA, "The Oil & Gas Industry in Energy Transitions", slide 102, accessible here.

[135] Citi, "Energy Darwinism: Why a Low Carbon Future Doesn't Have to Cost the Earth", page 8, accessible here.

[136] HSBC, "Oil & Carbon revisited. Value at risk from unburnable reserves", page 1 and 4, available here.

[137] **[PWMB1/338]**, Shell, "2021 Annual Report", page 216.

71. My understanding is that even if assets are expected to be depreciated, this does not necessarily mean that they will deliver the cash flows or returns that were originally expected of them, and so commercial risk – as the Board has identified (see paragraph 46) – remains in that regard. I understand there to be a distinction between assets which are 'stranded' in the sense of being wholly unviable or unprofitable (or, on EY's definition, where the reserves are no longer produced) and assets which are less profitable than expected.

72. I further note in the context of stranded assets that the Board has explained that:

"*The energy transition is expected to bring volatility and there is large uncertainty as to how commodity prices will develop over the next decades* […] *the risk of stranded assets is prevalent with downside price risk in energy transition scenarios*".

73. It has sought to quantify this risk to the company's Upstream and Integrated Gas PPE by performing sensitivity analyses using oil and gas price lines derived from climate change scenarios.[138] In that regard, the Board uses two price lines:

    a. Average prices from four 1.5-2°C external climate change scenarios.[139] Under this price line, the Board estimates total potential impairments (the Board refers to this as "*sensitivity*") of between USD 27-33 billion. This gives a sense of the scale of the risk. I note that only one of the four external climate change scenarios used by the Board for this exercise is aligned with 1.5°C (namely, NZE 2050). This means that even the estimate of USD 27-33 billion would be an under-estimate if oil and gas prices forecast under NZE 2050 were to materialise.

    b. "*Hybrid Shell Plan and IEA NZE 2050*": this price line applies Shell's mid-price outlook for the next 10 years and thereafter NZE 2050. Shell's mid-price outlook represents management's reasonable best estimate and is the basis for the company's financial statements, operating plans and impairment testing. This results in a sensitivity of USD 15-18 billion.

74. The Board has accordingly identified the risks of climate change. Indeed, it should be common ground in these proceedings that the company faces material and foreseeable

[138] See **[PWMB1/364 - 365]**, Shell, "2021 Annual Report", pages 242 – 243.

[139] These are: HIS Markit / ACCS 2021; Woodmac WM AET-2 degree; IEA NZE 2050; and IEA SDS. See **[PWMB1/364]**, Shell, "2021 Annual Report", at page 242.

risks as a result of climate change, which adversely affect or could have a material adverse effect on the company.

75. This case however concerns the way in which the Board is managing that risk, as I set out at Section C below.

Section C: Shell's strategy

76. In this section, I explain the following aspects of the Board's management of climate risk and the basis on which they give rise to breaches of duties:

    a. The emission reduction targets that the Board has adopted;

    b. Its approach to new exploration, development and extraction of oil and gas ("**new projects**");

    c. Its approach to capital allocation and expenditure; and

    d. Its reliance on carbon capture and storage, and nature-based solutions to mitigate climate risk.

(1) Emission reduction targets

77. Since 2017, the company has made various announcements in respect of its climate risk management and emission reduction targets:

    a. In November 2017, the company announced an ambition to reduce the carbon intensity of the energy products it sells by "*around half*" by 2050 and by "*around 20%*" by 2035 (the "**November 2017 Statement**").[140] The former CEO, Ben van Beurden, stated that the November 2017 Statement was "*a rate of reduction consistent with the global goals of Paris*"[141] and "*fully consistent with the Paris Agreement*".[142]

    b. In 2018, the company published an 'Energy Transition Report' (the "**2018 ETR**") describing how it managed climate-related risks and opportunities. The 2018 ETR did not contain any emissions reduction targets beyond the November 2017 Ambition and noted that the company had "*no immediate plans to move to a net-*

[140] Shell, "Management Day 2017: Shell updates company strategy and financial outlook, and outlines net carbon footprint ambition" (28 November 2017), accessible here.

[141] **[PWMB1/659]**, Shell, "Getting to Net Zero Emissions" (9 July 2019), accessible here.

[142] Shell, "Speeches by Chair and CEO at 2019 Annual General Meeting" (May 2019), page 6, available here.

zero emissions portfolio over our investment horizon of 10-20 years".[143]

c. In April 2020, the company announced an "*ambition to be net zero on all the emissions from the manufacture of all our products (scope one and two) by 2050 at the latest*", and updated its carbon intensity targets set by the November 2017 Ambition to 30% by 2035, and 65% by 2050.[144] It stated that this too was "*in step with*" the GTO. In a separate announcement a week prior, the company had repeated that it had no immediate plans to move to a net-zero emissions portfolio over the next 10-20 years.[145]

d. In February 2021, Shell announced an "*acceleration*" of its drive "*to be a net-zero emissions energy business by 2050, in step with society's progress*,"[146] as part of its broad '*Powering Progress*' strategy.[147] The company also trailed its flagship '*Energy Transition Strategy*', which it stated it would submit to shareholders for an advisory vote at the 2021 AGM. The company stated that it would update the plan every three years and seek an advisory vote on the progress made each year (the results of those votes and related shareholder resolutions are set out at paragraphs 168-171).

The Energy Transition Strategy

78. The Energy Transition Strategy ("**ETS**") was published on 15 April 2021.[148] Much of the Board's current climate risk management strategy is contained within the ETS.

79. In respect of emission reduction targets, the ETS set out a number of targets to reduce the net carbon intensity of the energy the company sells, across Scopes 1-3 (the "**Carbon Intensity Targets**"). The Carbon Intensity Targets are as follows:

[143] **[PWMB1/709]**, Shell, "Energy Transition Report" (2018), page 78.

[144] **[PWMB1/711 - 716]**, Shell, "Responsible Investment and Annual Briefing update" (16 April 2020), available here.

[145] Shell, "2019 Sustainability Report", page 40, available here

[146] **[PWMB1/717 - 724]**, Shell, "Shell accelerates drive for net-zero emissions with customer-first strategy" (11 February 2021), available here.

[147] As of the date of this witness statement, Shell's company website explains: "*Powering Progress sets out our strategy to accelerate the transition of our business to net-zero emissions. It is designed to create value for our shareholders, customers and wider society. Powering Progress has four main goals in support of our purpose, to power progress together by providing more and cleaner energy solutions*." The four main goals of Powering Progress are: "*generating shareholder value*", "*achieving net-zero emissions*", "*powering lives*" and "*respecting nature*". See **[PWMB1/727]**, Shell, "Powering Progress", available here.

[148] **[PWMB1/52 - 87]**, Shell, "Energy Transition Strategy", available here.

a. In the short to medium term: 2-3% by 2021 (this target was met),[149] 3-4% by 2022, 6-8% by 2023, 9-12% by 2024,[150] and 20% by 2030, using a baseline of 2016.

b. In the longer term: 45% by 2035 and 100% by 2050 (i.e. net zero), also using a baseline of 2016.

80. In respect of absolute emissions, the ETS explained that the company expected its total absolute emissions to have peaked in 2018 at 1.7 gigatonnes CO2 equivalent per annum.

81. The ETS did not set any absolute emission reduction targets. However, on 28 October 2021, Shell announced a target to reduce its Scope 1 and Scope 2 absolute emissions by net 50% by 2030.[151] Shell has stated that Scope 1 and 2 (or 'operational') emissions "*make up less than 10% of our total emissions*".[152]

82. In April 2022, Shell published an update on the implementation of the ETS in its Energy Transition Progress Report 2021 ("2021 ETP").153 A 'Progress Summary' is set out on page 7, with the headline point that, in 2021, Shell reduced its Scope 1 and 2 emissions ('operational emissions') by 18% compared to 2016, and reduced net carbon intensity by 2.5%.[154]

83. As far as I am aware, Shell has not assigned relative numerical values to its indicated levers for reducing net carbon intensity to 2030. As graphically depicted in Figure 3 (from the 2021 ETP), Shell aims to achieve this reduction in emissions intensity by:

a. increasing the ratio of gas/LNG to oil in its sales portfolio;

b. growing its electricity sales;

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[149] In its 2021 Annual Report (page 94), the Board disclosed that the 2021 target was met, in that the carbon intensity of its products in 2021 was 2.5% lower than the 2016 baseline, although had increased 2.7% year-on-year, **[PWMB1/216]**.

[150] Shell's 2024 target was not contained within the ETS itself, but was subsequently set by the Board in the 2021 Annual Report.

[151] **[PWMB1/653 - 654]**, Shell, "Shell sets new target to halve scope 1 and 2 absolute emissions, complementing existing climate goals", available here.

[152] **[PWMB1/655 - 658]**, Shell, "Our Climate Target", available here.

[153] **[PWMB1/744 - 782]**, Shell, "Energy Transition Progress Report 2021", available here.

[154] Shell also records on page 6 of the 2021 Energy Transition Progress Report a 16% reduction in the company's Scopes 1 - 3 net absolute emissions between 2016 and 2021. Curiously, this is not referred to again or explained within the Report, but the Board does explain in its 2021 Annual Report (page 93) that the company's 2021 Scope 3 emissions "*are largely unchanged from last year. The decrease in 2020 from 2019 mainly relates to a decrease in demand for oil products given market conditions in 2020, and a decrease related to volumes associated with additional contracts being classified as held for trading purposes with effect from January 2020*", **[PWMB1/215].**

c. increasing low-carbon fuel sales; and

d. increasing the use of 'carbon capture and storage' and 'nature-based solutions' carbon offsetting (explained at paragraphs 151 and 153).

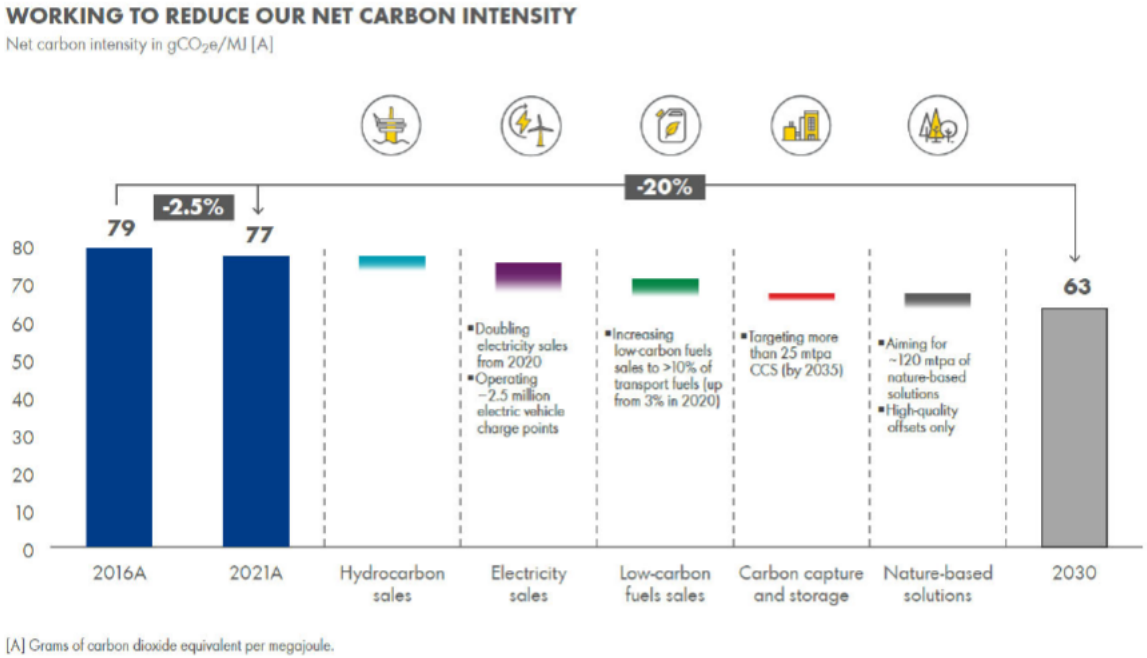


Figure 3: Shell's Depiction of Strategies to Reduce Net Carbon Intensity to 2030

84. The short, medium and long term Scopes 1-3 emissions-related targets the Board has committed itself to since February 2021 are summarised in the following table:[155]

Emissions covered	**Target type**	**Reduction (from 2016 baseline)**			
		Near term	**2030**	**2035**	**2050**
Scope 1+2 (operational emissions)	Absolute net emissions	No target	-50%	No target	-100%
Scope 3 (from energy sold)	Absolute net emissions	**No target**	**No target**	**No target**	-100%
Scopes 1-3 (from energy sold)	Carbon intensity (gCO2e/MJ)	-3-4% by 2022 -6-8% by 2023 -9-12% by 2024	-20%	-45%	-100%

[155] **[PWMB1/751]**, Shell, "Energy Transition Progress Report," page 6. Unless otherwise specified, the targets listed above encompass emissions of carbon dioxide, methane (CH4), and nitrous oxide (N20), the three most significant greenhouse gases. CH4 and N2O are converted to carbon dioxide equivalents (CO2e) in Shell's calculations. All of the targets are calculated on a 'net' basis, meaning Shell subtracts carbon offsets the company has purchased and volumes of carbon it has captured and stored towards reductions in carbon intensity and absolute emissions.

85. The Board's 2035 and 2050 targets are not incorporated into the company's operating plan, outlook and budgets, which are forecasted for a 10-year period.[156]

Paris Alignment

86. The Board has consistently stated that its targets are "*aligned*" or "*fully consistent*" with the GTO.[157] The Board has sought to justify these claims as follows:

"*There is no established standard for aligning an energy supplier's decarbonisation targets with the temperature limit goal of the Paris Agreement. In the absence of a broadly accepted standard, we developed our own approach to demonstrate Paris alignment by setting carbon intensity targets using a pathway derived from the Intergovernmental Panel on Climate Change (IPCC) scenarios aligned with the Paris Agreement's goal. We believe our NCI [net carbon intensity] and absolute emissions targets support the more ambitious goal of the Paris Agreement: to limit the increase in the average global temperature to 1.5 degrees Celsius above pre-industrial levels. It is aligned with the findings of the IPCC which concluded that the world must reach net-zero carbon emissions by around 2050 to limit global warming to 1.5 degrees Celsius and avoid the worst effects of climate change. We determined our targets using scenarios taken from a database developed for the IPCC Special Report on Global Warming of 1.5°C. We filtered out certain outlying IPCC scenarios to ensure that Shell's targets are aligned with earlier action, and low-overshoot scenarios. Overshoot refers to the extent to which a scenario exceeds an emissions budget and subsequently relies on sinks to compensate for the excess emissions.*"[158]

87. The Board does not disclose which IPCC scenarios are used in any of its target setting methodology. It does not disclose how reliant its pathway is on carbon capture and storage, or nature-based solutions, to compensate for any additional cumulative emissions. It has also not disclosed to shareholders whether its targets would lead to absolute reductions in GHG emissions at the pace implied by IPCC scenarios (although

[156] **[PWMB1/122]**, Shell, "2021 Annual Report", page iii.

,[157] For example, see: **[PWMB1/747],** Shell, "Energy Transition Progress Report 2021", page 2, available here; **[PWMB1/54-55, 58, 62, 84]**, Shell, "Energy Transition Strategy", page 1, 2, 5, 9 and 31, available here; **[PWMB1/789]**, "2022 Notice of Annual General Meeting", page 7, available here; Shell, "Speeches by Chair and CEO at 2022 Annual General Meeting", page 5, available here; **[PWMB1/815]**, Shell, "Second Quarter Results 2022", slide 9, available here; and **[PWMB1/852]**,Shell, "First Quarter Results 2022", slide 18, available here.

[158] **[PWMB1/201]**,Shell, "2021 Annual Report*"*, page 79, accessible here.

see paragraph 101 below).

88. For present purposes this lack of transparency does not have a material impact on ClientEarth's case, because the problems with the Board's approach are apparent from the disclosure that has been made. Should the Board make further disclosures in these proceedings to explain its approach, I accept that it is possible that some of the points I make may need to be adjusted to reflect additional information.

Absence of Scope 3 absolute emissions targets or proportionate carbon intensity targets

89. As is apparent from the above summary, the Board has not set any target to reduce its Scope 3 absolute emissions prior to 2050 (at which point 'net zero' means, in effect, a 100% reduction). In particular, it has not set any Scope 3 absolute emission reduction target for 2030.

90. The Board's only short and medium term emission reduction targets relate to:

    a. Scopes 1 and 2 emissions. Its target for 2030 is a 50% net reduction; and

    b. the net carbon intensity of the products it sells. Its target for 2030 is a modest 20% reduction.

91. In respect of (a) (Scopes 1 and 2 emissions), Shell acknowledges that this target covers less than 10% of its emissions. Shell graphically depicts the relatively minimal contribution of Scope 1 and 2 emissions to total emissions in its own "Emissions Explainer," as pictured and annotated below in Figure 4.

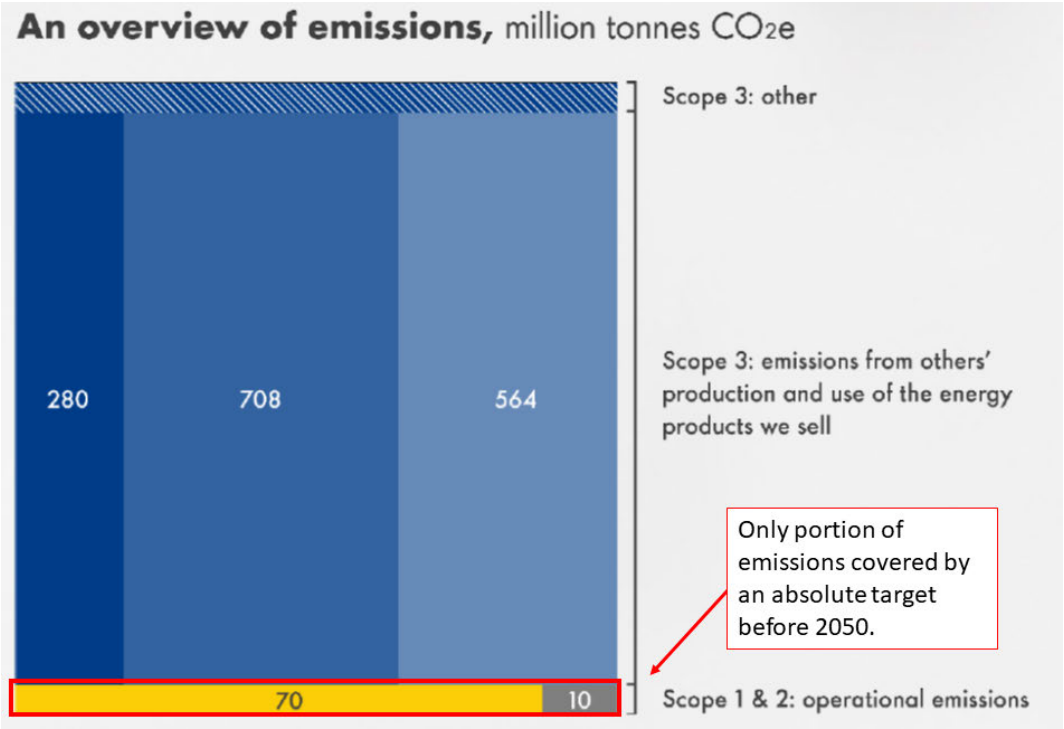


Figure 4: Shell's 2019 emissions by Scope and type (annotated).[159]

92. Indeed, if Shell's Scope 3 emissions were to remain at 2021 levels until 2030 (and in fact, they are forecast to increase – see paragraph 102), the Scope 1 and 2 target, alone, would result in just a 2.5% reduction in absolute net emissions, relative to Shell's baseline year of 2016.

93. In respect of (b) (the Board's carbon intensity targets): I have explained the concept of intensity targets at paragraphs 36-41 above. Broadly, this means that the Board's only medium term target in respect of its Scope 3 emissions is that the portfolio of products that Shell sells will produce more energy per tonne of emissions.

94. In its *2021 Energy Transition Progress Report*, the Board explains its use of carbon intensity (rather than absolute emissions) targets in the following way:

[159] **[PWMB1/868],** Shell, "Emissions Explainer" (n.d.), page 6, available here.

"*We use net carbon intensity to show our progress, which measures emissions associated with each unit of energy we sell. Crucially, it reflects both a reduction in sales of oil and gas products, and growth in sales of low- and zero-carbon products and services.*

Reducing net carbon intensity encourages us to work with our customers in sectors such as aviation and shipping to decarbonise their use of energy, whilst still providing the oil and gas they need today. And, as an intensity metric, it measures the true transformation that is happening in the company as we implement our energy transition strategy.

Other metrics, such as a simple total carbon emissions metric, would reflect how our sales of oil and gas products is shrinking but would not provide information on how we are changing our mix of products."[160]

95. I have explained at paragraph 38 that intensity targets can be helpful, in particular as a proxy for final product mix.

96. However, the main cause of climate-related financial risk for the oil and gas sector is the value destruction of fossil fuel assets (see paragraph 52). That risk is principally mitigated by reducing the size of the company's fossil fuel business. The Board is correct that an absolute emissions target (or, as it calls it, a "*simple total carbon emissions metric*") would reflect how the company's sale of oil and gas products is shrinking (thereby mitigating climate risk).

97. That may be reflected in an intensity metric, particularly if the carbon intensity target set is high. That is because the higher the intensity target, the more likely it is that it will lead to absolute emission reductions (although, as explained at paragraphs 40-41, the consensus is that the resulting impact on absolute emission reductions should be disclosed alongside the carbon intensity target, to enable a proper assessment of climate risk management).

98. The problem is that it does not necessarily follow from an intensity metric that absolute emissions will fall. For example, sales of oil and gas could remain high while sales of lower carbon products also grow. In that case, carbon intensity would reduce, but

[160] **[PWMB1/756],** Shell, "Energy Transition Progress Report 2021", page 11, available here

absolute emissions would remain at the same level, and the material risk associated with the value destruction of fossil fuel assets would remain.

99. This partly explains the consensus that intensity targets are not a substitute for absolute emissions targets. Even if Shell achieves the modest 20% reduction in its Scope 3 emissions intensity by 2030, there is no necessary correlated change or reduction in its overall Scope 3 emissions. The problem, put simply, is that Scope 3 emissions make up over 90% of the company's total emissions – and if the company is not reducing its total absolute emissions, it is unrealistic to conclude that it is materially reducing its fossil fuel business. If it is not materially reducing its fossil fuel business, it is not materially mitigating its climate risk.

100. In fact, it is clear that whilst the Board does anticipate a modest decline in oil production in the period to 2030, its principal focus is on expansion of sales of other energy products, particularly gas/LNG, that will add to Shell's overall Scope 3 emissions (albeit with lesser carbon intensity). I explain this further at paragraphs 102 and 108 below.

101. The Board has provided no guidance or analysis to shareholders as to how it expects its total absolute emissions to change to 2030. Indeed, the Board suggested at the 2021 AGM that it simply does not know.[161] The company's disclosures to the Carbon Disclosure Project ("**CDP**") are more revealing. There, Shell lists the "*% change anticipated in absolute Scope 3 emissions*" for each of its 2022, 2023, 2030 and 2035 carbon intensity targets as "*0*" (zero).[162]

102. Independent analyst research from Global Climate Insight (the "**GCI Research**") is broadly in line with that estimate. On the basis of Shell's public disclosures, GCI's latest forecast for the company's Scope 1-3 emissions, as of September 2022, finds that there is likely to be a 3% rise in Shell's absolute emissions by 2030, relative to 2019. If Shell's assumptions on CCS and NBS are accepted, GCI forecasts a 5% decrease in net emissions.[163] GCI's October 2021 paper on Shell states:

"*Emissions reduction in the next 10 years is critical in keeping warming to 1.5°C. The*

[161] In response to one shareholder question at the 2021 AGM as to what the company expected its absolute emissions would be by 2030 if it met its current intensity targets, the former CEO stated (*inter alia*): "*where we will be at 2030 would indeed be a guess. So I'm not going to hazard a guess*".

[162] **[PWMB1/873-910],** CDP , "Shell: Climate Change 2021", available here I refer to the 2021 disclosure as it appears that there are typographical errors in Shell's 2022 disclosure.

[163]**[PWMB1/965],** GCI, "Update: Shell emissions forecast", page 13, available here.

fundamental requirement of any climate transition strategy must be to reduce absolute emissions in the near term. Management and boards must approach the need to decarbonise with the same level of rigour and urgency as any other business risk or regulatory issue".[164]

103. That research was reportedly met with a response from Shell (*inter alia*) that:

"*We have always been clear that the business plans we have today will not get us to net zero*".[165]

104. ClientEarth alleges that the Board's current targets are not aligned with the GTO, and that this is borne out by standardised assessments of corporate alignment with the GTO. For example:

a. The CA100+ Net Zero Company Benchmark, using data from TPI, concludes that the Board's short and medium term targets "*do not meet any criteria*" in respect of being "*aligned with the goal of limiting global warming to 1.5°C*".[166]

b. The World Benchmarking Alliance, using the ACT framework, finds that "*Shell's performance to date is not aligned with a low-carbon transition*", and Shell's net-zero strategy is "*insufficient to align with a 1.5°C pathway*".[167]

c. Carbon Tracker found that Shell did not meet its three "*hallmarks of Paris compliance*", stating:

"*A persistent reluctance to commit to climate goals which incorporate end-use emissions while ploughing ahead with a business model that is predicated on their continued release should have investors seriously questioning whether those without Scope 3 goals are in any way prepared for the energy transition*".[168]

105. In 2021, GCI found that NZE 2050 would require a 36% reduction in Shell's absolute emissions by 2030 on 2019;[169] as above, absolute emissions are currently forecast to

[164] **[PWMB1/923]**, GCI, "Part 1: Royal Dutch Shell GHG Emissions", page 13.

[165] EnergyVoice, 'Shell's emissions to rise on LNG focus, report claims' (22 October 2021), accessible here.

[166] I note that, while Shell's 2050 net zero target is technically assessed as long-term aligned by the TPI, this is simply because Shell has a net zero by 2050 target that covers scopes 1 – 3 emissions. This is not an assessment of whether Shell's cumulative emissions to 2050 are aligned with the GTO (see paragraph 41.e).

[167] **[PWMB1/975-976]**,World Benchmarking Alliance, "Royal Dutch Shell", available here.

[168] **[PWMB1/981, 992, 999]**, Carbon Tracker, "Absolute Impact 2022", e.g. pages 2, 13 and 20, available here.

[169] **[PWMB1/930]**, GCI, "Part 1: Royal Dutch Shell GHG Emissions", page 20.

increase by 3%; on a net basis (i.e. accepting Shell's assumptions on CCS and NBS), these decrease by only 5%.[170]

106. In light of the above, ClientEarth alleges that the Board's current targets do not materially mitigate the climate risk facing the company, and are not proportionate to the scale of that risk. In the circumstances, its failure to adopt, disclose and implement a proportionate Scope 3 absolute emissions reduction target, or carbon intensity targets which credibly result in demonstrable absolute emission reductions in line with the GTO, is manifestly unreasonable and in breach of duty.

107. In circumstances where the Board has set a net zero target by 2050 and stated its strategy to be Paris-aligned, ClientEarth further alleges that the failure to set any or any proper interim targets to actually meet those objectives is unreasonable and a breach of duty.

(2) New projects

108. The Board's strategy for the company's oil and gas production is as follows:

    a. In respect of oil production, it expects a modest decline of, on average, 1-2% per year to 2030;[171]

    b. It intends to actively grow the company's gas and liquefied natural gas ("**LNG**") business – in the case of LNG, by "*creating new markets and embracing new customers*".[172] The strategy is based on an expectation that LNG demand will grow up to 4% per year until 2040,[173] and targets more than 7 million tonnes per annum ("**MTPA**") of new LNG production capacity by the mid-2020s.[174] Shell expects its gas business to grow to 55% of its production by 2030.[175]

109. In terms of the Board's approach to oil and gas projects, it is helpful to distinguish between the broader term 'projects' (under which multiple oil and gas fields can fall), and 'assets' (which, in this context, typically refers to an individual field or a phase within a larger project). It is also helpful to distinguish between:

[170] **[PWMB1/952-974]**, GCI, "Update: Shell emissions forecast", available here.

[171] **[PWMB1/73],** Shell, "Energy Transition Strategy", page 20.

[172] **[PWMB1/1032],** Shell, "First Quarter 2021 Slides" slide 8, available here.

[173] **[PWMB1/1107],** Shell, "Strategy Day 2021 slides," slide 46, available here.

[174] **[PWMB1/1033].** Shell, "First Quarter 2021 Slides" page 9.

[175] **[PWMB1/58].** Shell, "Energy Transition Strategy", page 5.

a. Existing assets 'in production', i.e. those which are already producing oil and gas;

b. Assets under construction, i.e. assets for which the company has already made a final investment decision ("**FID**"), but production has not yet started;

c. Discovered assets, i.e. where the company has already explored and announced discoveries of oil and gas which it could develop – but no FID has been made; and

d. Undiscovered assets, i.e. where the company has a stake in an exploration licence but has not yet finished exploration and/or confirmed a discovery.

110. I rely in the following paragraphs on data from the Rystad Energy UCube ("**Rystad**"), as published by Oil Change International in its February 2023 report, '*Data Update: Shell's Oil and Gas Project Pipeline*' ("**OCI Data Update**").[176] Rystad is the principal commercial, asset-based database and model that contains reserves, production, economics and valuation data for every oil and gas field, discovery and exploration licence globally. Rystad makes a number of assumptions and projections when compiling its data.[177]

Assets under construction

111. Shell continues to approve major new oil and gas projects for construction. In 2021 and 2022 alone, the company took FIDs to develop the following major assets: the Whale and Rydberg fields in the U.S. Gulf of Mexico; the Jerun, Marjoram, Rosmari & Timi fields in Malaysia; Phase 3 of the Ormen Lange project in Norway; Phase 4 of the Gumusut-Kakap-Geronggong-Jagus East project in Brunei; Jackdaw in the UK; Crux in Australia; and new expansions of the Mero project in Brazil and the Karachaganak project in Kazakhstan.[178]

[176] **[PWMB1/1140-1147]**, Oil Change International, "Data Update: Shell's Oil and Gas Project Pipeline", available here.

[177] Projections are based on Rystad's assessment of the geology and costs of each asset – using governmental databases, company presentations, professional and scientific reports, media reports, and independent analysis – and the asset's expected rate of return under a future oil price forecast. Rystad's base price case is determined by Rystad's forecasts of short- and medium-term supply and demand balance. At the time of analysis (January 2023), Rystad's base oil price case sees prices falling to below USD 40/bbl by 2030, and then steadily rising to a flat USD 67/bbl from 2040 to 2050 (all expressed in real $2023). As I understand it, the reserves and resource estimates in the OCI Data Update tables thus reflect Rystad's forecast for what would be commercial to develop and extract at an oil price equal to or above that level.

[178] **[PWMB1/128, 173-178]**, Shell, "2021 Annual Report", pages 5 and 51-56; **[PWMB1/1148-1171]**, Milieudefensie and Oil Change International, "Shell's Fossil Fuel Production: Still pushing the world towards climate chaos", available here; Shell, "Shell Invests in Phase 4 of the Gumusut-Kakap-Geronggong-Jagus East Deepwater Development", available here; Karachaganak, "Partners in the Karachaganak Project and the Authorized Body Sanction the Implementation of a Major Investment Project by Signing the Agreement for the Karachaganak Expansion Project-1B", available here.

112. As of January 2023, Shell has 27 significant[179] oil and gas[180] assets under construction. Together, these hold 2.48 billion barrels of oil equivalent ("**BOE**") in estimated resources owned by Shell. Of these 27 assets, Shell will be the operator of 16, and owns a majority share (i.e. 50% or more) in 12 of them. These assets are set out at Table 1 of the OCI Data Update (see Part 2 to the Schedule to the Particulars of Claim, at page 26).

113. These assets are estimated to be producing oil and gas for decades to come. Rystad data, analysed by Oil Change International, indicates the amount of economically recoverable resources[181] each asset currently holds, the estimated last year of production of each asset and the estimated amount of resources remaining per year over the lifetime of each asset. On the basis of that data, Figure 5, below, sets out the amount of resources remaining by 2030, 2040 and 2050.

Figure 5 – Significant under construction assets – Rystad's estimation of the number of assets still in production and their combined remaining resources by 2030, 2040 and 2050[182]

	Jan 2023	2030	2040	2050
Number of assets still in production	*27 (assets under construction)*	27	18	11
Resources remaining (million BOE)	2481	1671	663	257
Resources remaining (percentage)	100%	67%	27%	10%

114. In short, the data indicates that all 27 assets will still be in production after 2030. By 2030, Rystad estimates that around 67% of the resources held by these 27 assets will not

[179] i.e. assets with over 1 million BOE in estimated resources. I understand that under construction assets with fewer than 1 million BOE in estimated resources are grouped under the row entitled "other" in Table 1 of the OCI Data Update, **[PWMB1/1141-1143]**.

[180] I have excluded reference in the body of this statement to shale gas projects because, as I understand it, investment and development cycles of these projects are not directly comparable to those of conventional oil and gas projects. These projects are however included under the heading "*Shale projects*" in Table 1 of the OCI Data Update, **[PWMB1/1141-1143]**.

[181] Rystad defines resources in its base case as "*the remaining economically recoverable volumes*."

[182] This table has been sourced from Table 2 of the OCI Data Update, **[PWMB1/1143]**.

yet have been extracted. Over a quarter will still not have been extracted by 2040.

Discovered assets

115. Shell has a considerable number of discovered assets (pre-FID), which are at various stages of design and engineering.[183]

116. As these assets may or may not be developed, I focus illustratively on the company's largest 25 discovered oil and gas[184] assets for potential approval in the 2020s and 2030s. These 25 assets together hold just under 6.1 billion BOE in estimated resources owned by Shell. Each of them individually holds more than 75 million BOE in estimated resources. Shell would be the operator of 13 of these assets and owns a majority share (i.e. 50% or more) in 13 assets. These assets are set out at Table 3 of the OCI Data Update (see Part 2 to the Schedule to the Particulars of Claim at pages 28 to 30).

117. Figure 6, below, sets out the amount of resources remaining by 2030, 2040 and 2050.

Figure 6 – 25 largest discovered assets (for potential approval in the 2020s and 2030s) – Rystad's estimation of the number of assets still in production and their combined remaining resources by 2030, 2040 and 2050[185]

	Jan 2023	2030	2040	2050
Number of assets still in production	*25 (assets pre-FID)*	25	25	22
Resources remaining (million BOE)	6083	5913	4256	2939
Resources remaining (percentage)	100%	97%	70%	48%

118. In short, the data indicates that, if approved, the vast majority of these assets are likely to be operating for decades to come. All 25 assets are projected to still be in operation until at least 2040, with 22 still in operation in 2050. Over 97% of the underlying resources

[183] For example, see the "funnel of opportunities" that Shell presents as part of its Upstream strategy. See Shell, "Shell insights: Upstream strategy", slide 10, available here.

[184] I have excluded reference in the body of this statement to shale gas projects because investment and development cycles of these projects are not directly comparable to those of conventional oil and gas projects. These projects are however included under the heading "*Shale projects*" in Table 3 of the OCI Data Update, **[PWMB1/1144-1146].**

[185] This table has been sourced from Table 4 of the OCI Data Update, **[PWMB1/1146].**

will not have been extracted by 2030, 70% remains in 2040, and nearly 50% will not have been extracted by 2050.

Undiscovered / exploration assets

119. Shell also continues to engage in new exploration to add still further resources to its development pipeline.

120. In 2021, the company spent USD 1.4 billion on new oil and gas exploration.[186] The Board's 2021 Annual Report highlights new exploration activities and discoveries in the Gulf of Mexico, Brunei, Brazil, Malaysia, the UK, Argentina, Namibia, South Africa, and Suriname.[187] The 2021 ETP states that the company plans to continue spending around USD 1.5 billion per year on exploration through to 2025.[188]

121. Although the Board states that it anticipates ending new frontier exploration post-2025, there are no plans to stop exploration in areas where the company already has developed production assets.[189]

122. When taking into account all undiscovered conventional oil and gas assets in which Shell owns a stake, including smaller projects, Shell has access to approximately 1.87 billion BOE in estimated reserves.[190]

123. Given the inherent uncertainty of assets at this early stage of development, I do not seek to rely in the same way on estimated start and end production dates or rates of resource extraction for significant assets. However, the intrinsically lengthy timeframe associated with moving from exploration to production means that these assets – if confirmed and developed – would only begin production in many years' time. Illustratively:

    a. The UK Climate Change Committee ("**CCC**") has found that, in the UK, "*the timeline from the issuing of an exploration license to production commencing ranges from under a decade to several decades, with an average of around 28*

[186] **[PWMB1/351],** Shell, "2021 Annual Report," page 229.

[187] **[PWMB1/182],** Shell, "2021 Annual Report," page 60; Shell, "Upstream Strategy" (May 25, 2021), slide 11.

[188] **[PWMB1/763]**, Shell, "Energy Transition Progress Report," page 18.

[189] For example, in March 2021 Shell announced it had acquired new stakes in four offshore exploration blocks in Malaysia, for which Shell will be the operator: Shell, "Shell Signs New Exploration Contracts With Petronas And Commences Work On The Gumusut-Kakap Phase 3 Development" (23 March 2022), available here.

[190] **[PWMB1/1144]**, See OCI Data Update, page 5.

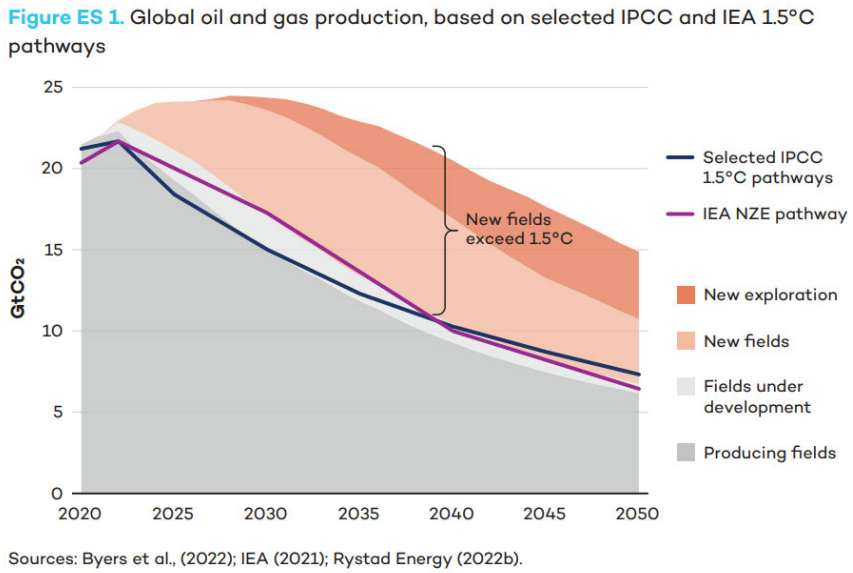
years."[191]

b. The IEA has found that it takes, on average, around 19 years from the granting of an exploration licence for a new conventional project to begin production and "*a further three to five years for projects to ramp up to their maximum level of production after they started producing*".[192]

The scale and timeframes of the project pipeline

124. ClientEarth alleges that the size and scale of the oil and gas project pipeline, and the timeframes in which it will be operating, runs directly contrary to the Board's assertions that it is preparing the company for the transition to a Paris-aligned economy, and indeed to its own net zero target.

125. A number of scientific studies have found that a significant portion of fossil fuels which have already been discovered cannot be exploited (they must 'stay in the ground') in order to hold global warming to 1.5°C (or even 2°C).[193] A key implication of feasible 1.5°C models with low or no overshoot, as well as the IEA NZE pathway, is that no new conventional fossil fuel projects are developed.[194] This is illustrated in Figure 7, below:



[191] Climate Change Committee, "Letter: Climate Compatibility of New Oil and Gas Fields" (2022), available here.

[192] IEA, "World Energy Outlook 2022", page 353.

[193] Welsby D, Price J, Pye S and Ekins (2021), "Unextractable fossil fuels in a 1.5°C world", Nature, available here; **[PWMB1/1172-1177],** Meinshausen et al (2009), "Greenhouse-gas emission targets for limiting global warming to 2°C", Nature, available here; **[PWMB1/1178-1213],** Carbon Tracker Initiative (2011), "Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?," available here; **[PWMB1/1214-1256],** McGlade C and Ekins P (2015), "The geographical distribution of fossil fuels unused when limiting global warming to 2°C", *Nature*, available here.

[194] IEA, "World Energy Outlook 2022", page 357, available here. Also see IISD, "Navigating Energy Transitions: Mapping the Road to 1.5°C", page iv, available here.

Figure 7 – Emissions implied by oil and gas fields in different stages of development, compared to the reduction in oil and gas production consistent with (i) the median estimate of the 26 1.5°C low or no overshoot scenarios that were considered feasible by the IISD and (ii) the IEA NZE.[195]

126. In 2022, under the latest iteration of the NZE 2050, the IEA concluded that "*fossil fuel demand can be met through continued investment in existing assets and already approved projects, […] without any new long lead time upstream conventional projects*."[196] This conclusion was based on a comparison of: (i) the oil and gas supply that is available and economic to extract within already developed fields and; (ii) the rate at which oil and gas use must decline to stay within the remaining 1.5°C carbon budget.

127. In other words, the IEA concluded that there is enough supply in conventional fields already producing or under-construction to satisfy 1.5°C-aligned oil and gas demand. As such, development of new supply would either lock in levels of production that are incompatible with 1.5°C, or create a need to shut down other existing assets to compensate for that excess supply (leading to stranded assets).

128. The IISD has found that there is a "*large consensus*" across all published studies that developing new oil and gas fields is "*incompatible*" with the GTO.[197]

129. ClientEarth will contend that, given the Board's strategy is purportedly "*designed to minimise [the risks of the energy transition] while enhancing our ability to profitably lead as the world transitions to an energy system that is aligned with the goal of the Paris Agreement*", the size and scale of the project pipeline simply does not make sense.

130. Indeed, rather than minimising the risks, the Board's approach appears to materially increase them.

131. All of the significant assets described above are estimated to be producing oil and gas until at least 2030 – often far beyond. The Board has described the time period after 2030 as "*more uncertain*" and "*applies more risk*" to it in its sensitivity analyses (see paragraph 73). As set out at paragraph 47, fossil fuel demand is expected to decline under all IEA

[195] IISD, "Lighting the Path", page 5, available here. "*New fields*" denotes discovered assets; "*new exploration*" denotes undiscovered assets.

[196] IEA, "World Energy Outlook 2022", page 80, available here.

[197] IISD, "Navigating Energy Transitions: Mapping the Road to 1.5°C", page iv, available here.

scenarios, and exponentially under NZE 2050.

132. To illustrate further the difficulties with the Board's approach, I refer to two reports from Carbon Tracker:

    a. '*Adapt to Survive: Why oil companies must plan for net zero and avoid stranded assets*', dated September 2021;[198] and

    b. '*Paris Maligned: Why investors should assess the climate alignment of oil & gas companies*', dated December 2022.[199]

133. Using data from Rystad, these reports model current and future oil and gas projects globally, in order to assess which assets could be viably and economically produced in various IEA transition scenarios (NZE 2050, SDS, APS and STEPS, explained at paragraph 29), and thus whether they could be considered aligned with any given scenario.

134. Among other things, and in respect of Shell, the reports find:

    a. In comparison with other oil and gas companies, Shell has the largest proportion of unsanctioned capital expenditure ("**capex**") in oil and gas assets that would be unviable even under a 2.5°C pathway. Such projects are described by Carbon Tracker as "*projects with very high breakeven prices that are inconsistent with even a business-as-usual scenario (STEPS, 2.5°C). These are the projects that are the least climate-aligned*."[200] This is illustrated below (note that NZE 2050 is not referenced in the graph, as no new conventional projects are compatible with that scenario):

[198] **[PWMB1/577-620]**, Carbon Tracker, "Adapt to Survive" (2021), available here

[199] **[PWMB1/1257-1299]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", available here.

[200] **[PWMB1/1282]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", page 26.

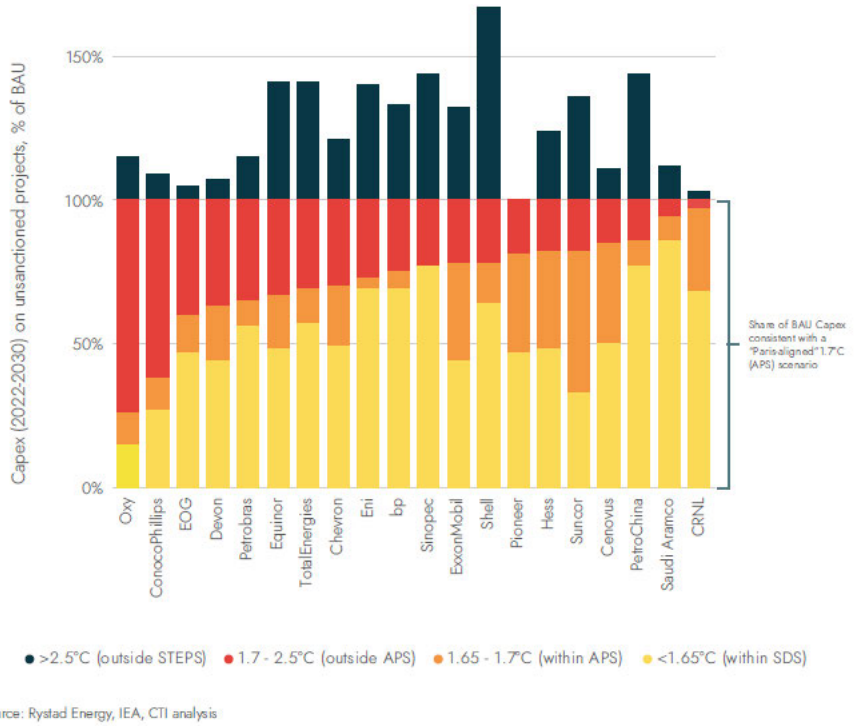


Figure 8 – Carbon Tracker's assessment of the degree of alignment between 20 companies' business as usual investments and the IEA STEPS, APS, and SDS scenarios.[201]

I note that it may be that the Board will contend that, because of their high breakeven prices, these projects are unlikely to go ahead in any event (in other words, that they will not be granted FID).

b. However, as can be seen from Figure 8, a significant proportion of Shell's unsanctioned (i.e. pre-FID) capex also falls outside the APS [red bar] and SDS [orange and red bars] scenarios. I understand from Carbon Tracker's analysis that these projects have breakeven prices which imply economic viability under a business-as-usual (STEPS) scenario (and therefore may be more likely to go ahead).

c. A large proportion of Shell's pre-FID assets are not as cost competitive as those owned by its competitors, particularly those owned by National Oil Companies ("**NOCs**").[202] In particular, NOCs such as PetroChina and Saudi Aramco have a much smaller proportion of unsanctioned capex falling outside of an SDS carbon budget – this is because the average breakeven price of pre-FID assets owned by

[201] **[PWMB1/1257-1299]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", page 27, available here.

[202] **[PWMB1/1257-1299]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", page 37.

these companies is significantly lower.[203]

d. Shell is or will be the owner and/or operator of three of the 15 largest oil and gas projects by capex (2022-2030) that are considered incompatible with a Paris-aligned scenario, where a FID is expected in 2023. All three of these projects fall outside even the STEPS 2.5°C scenario.[204] These are Linnorm and Asterix in Norway, and North Platte (GB 958)[205] in the United States.

e. The implication of NZE 2050 (under which no new conventional oil and gas projects are approved for development) is that Shell's oil and gas production in 2030 would fall by approximately 50% from a 2021 baseline.[206] The Board's plans are set out at paragraph 108: 1-2% decline in oil per annum to 2030, with significant planned growth in gas.

f. Shell is still taking up stakes in exploration assets in inherently uncertain frontier areas, including projects in the Arctic. Carbon Tracker has identified these projects as some of the least resilient in its modelling.[207]

135. Carbon Tracker's reports therefore indicate that Shell's pre-FID assets are heavily exposed to stranded asset risk – and some of their largest projects are not even viable under STEPS, the 'business as usual' scenario.

136. Given the scale of the risk that climate change poses to the company, ClientEarth's case under this head is that the Board's approach to new projects is manifestly unreasonable and contrary to the long-term success of the company.

(3) Capital expenditure

137. A further way to understand the Board's strategy is by reference to capital expenditure ("**capex**"), albeit that there is some overlap here with new projects (in that new, large oil and gas projects require high levels of capex).

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[203] See **[PWMB1/577-620]**, Carbon Tracker, "Adapt to Survive", page 9 and 32 – 33; and **[PWMB1/1257-1299]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", page 37.

[204] **[PWMB1/1257-1299]**, Carbon Tracker, "Paris Maligned: Why investors should assess the climate alignment of oil & gas companies", page 28.

[205] According to Carbon Tracker, in June 2022 Equinor agreed to sell a stake in the project and transfer operatorship to Shell, with the project to be renamed to the Sparta development.

[206] **[PWMB1/577-620]**, Carbon Tracker, "Adapt to Survive", page 16.

[207] **[PWMB1/577-620]**, Carbon Tracker, "Adapt to Survive", pages 30 – 31.

138. One way to mitigate, or at least potentially or partially mitigate, the company's exposure to climate risk would be to diversify the company's business by investment in low-carbon alternatives. The Board appears to recognise that, stating:

"*One of the ways to address the resilience of our portfolio is to continue delivering through our three strategic business pillars: Upstream, Transition and Growth. Shell's financial strength and access to capital give us the ability to reshape our portfolio as the energy system transforms and demand changes*".[208]

139. As such, the Board states that "*We are significantly increasing our expenditure on low- and zero-carbon energy, helping both Shell and its customers to meet their climate targets*".[209]

140. In the 2021 ETP, the Board set out how it expected capex to evolve over time, as follows:

2021 delivery and outlook

Net debt end 2021 $53 billion	Cash capital expenditure		Operating expenses		Total expenditure		Cash flow from operations (CFFO)		Target internal rate of return (IRR)
	2021	2025-2030	2021 [A]	2025-2030	**2021**	**2025-2030**	2021 [B]	2025-2030 [C]	
Marketing	24%	45-50%	28%	40-45%	27%	40-45%	12%	25-30%	15-25%
Renewables and Energy Solutions									>10% [D]
Integrated Gas	44%	30-35%	40%	35%-40%	42%	35-40%	38%	40-45%	14-18% [E]
Chemicals and Products									10-15% [E]
Upstream	32%	20%	32%	20-25%	31%	20-25%	48%	30-35%	20-25%

[A] Including exploration expenses.
[B] Excluding 2% CFFO from the Corporate segment.
[C] Assumes Brent price of $60 per barrel.
[D] The IRR target for Renewables and Energy Solutions covers Integrated Power only – note added on April 22, 2022 for additional clarification.
[E] Corrected on 21 April 2022 because of typographical error.

Figure 9 – Shell's spending in 2021 and expected spending in 2025 – 2030.[210]

141. It is, however, very difficult to establish what this actually means in terms of investment in low and zero-carbon energy. This is principally for two reasons:

    a. The figures for the 'Renewables and Energy Solutions' business are provided together with 'Marketing'. The company's Marketing business "*includes Retail,*

[208]**[PWMB1/120-478]**, Shell, "2021 Annual Report", page 85. The "Upstream" pillar represents Shell's exploration and production business; the "Transition" pillar comprises "*Integrated Gas, and our Chemicals and Products business*"; and the "Growth" pillar "*includes [the company's] service stations, fuels for business customers, power, hydrogen, biofuels, charging for electric vehicles, nature-based solutions, and carbon capture and storage*". See **[PWMB1/52-87]**, Shell, "Energy Transition Strategy", page 22.

[209]**[PWMB1/744-782]**, Shell, "Energy Transition Progress Report 2021", page 25.

[210]**[PWMB1/744-782**], Shell, "Energy Transition Progress Report 2021", page 24.

Lubricants, Business-to-Business (B2B), Low-Carbon Fuels (biofuels and renewable natural gas (RNG)), our interests in the Raizen JV, and Pipelines".[211] Retail appears to largely comprise selling fuel at service stations;[212] and B2B encompasses the sale of fuels to commercial customers (including e.g. the company's aviation business, bitumen business and sulphur solutions business).[213] It is in any event clear that Marketing is not comprised exclusively of low or zero-carbon energy products or services.

b. Renewables and Energy Solutions is also not comprised exclusively of such products or services, and itself includes activities such as "*marketing and trading gas and power; selling gas and power to commercial, industrial and retail*".

142. I believe that the Board has not disclosed the total amount of capex going towards low and zero-carbon energy, or a breakdown of that (e.g. capex to solar or wind). The closest to that appears to be the disclosures in the 2021 Annual Report concerning Shell's "*taxonomy eligible*" activities (described in the footnote).[214] Under those disclosures, the company's capex on renewable energy, hydrogen and biofuels, CCS (see paragraph 151) and forest conservation, and low-carbon transport infrastructure, amounted to USD 694 million in 2021.[215] In order to be "*taxonomy-eligible*", the Board has applied various exclusions to this calculation (e.g. interests in equity-accounted associates, sales of third party products) and so this may not represent total capex spent on these activities.

143. I note that the Board's lack of transparency in this regard resulted, in February 2023, in a complaint to the US Securities and Exchange Commission (the "**SEC Complaint**").[216]

144. It is therefore difficult to establish the true level of capex on low and zero-carbon energy.

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[211] **[PWMB1/120-478]**, Shell, "2021 Annual Report", page 65.

[212] In the context of its Retail business, Shell states on its website that it owns over 45,000 service stations in nearly 80 countries, selling approximately 200 billion litres of fuel per year: Shell, "Why choose Shell retail", accessible here.

[213] **[PWMB1/120-478]**, Shell, "2021 Annual Report", page 67.

[214] "Taxonomy eligible" activities are those that meet screening criteria under the EU Taxonomy, which is a classification system set up under EU legislation to identify sustainable economic activities. See, European Commission, "EU taxonomy for sustainable activities", available here.

[215] USD 288 million in capex spent on solar power, wind power and the installation, maintenance and repair of renewable technologies; USD 284 million in capex spent on the manufacture of hydrogen, biogas, biofuels and bioliquids; USD 4 million in capex spent on conservation forestry and transport / permanent storage of CO2; and USD 118 million in capex spent on infrastructure for low carbon transport / electric charging. See **[PWMB1/120-478]**, Shell, "2021 Annual Report", pages 302 – 304.

[216] Global Witness, "Shell faces groundbreaking complaint for misleading US authorities and investors on its energy transition efforts", available here.

However, the disclosures show:

a. In 2020,[217] the company had total cash capex of USD 17.827 billion. This comprised (*inter alia*) approximately USD 7.3 billion on Upstream, USD 3.4 billion[218] on Integrated Gas and USD 3.3 billion on Oil Products. The company spent USD 0.9 billion on Renewables and Energy Solutions, representing approximately 5% of total capex.

b. In 2021,[219] the company had total cash capex of USD 19.7 billion. This comprised (*inter alia*) approximately USD 6.3 billion on Upstream, USD 3.4 billion[220] on Integrated Gas and USD 3.9 billion on Oil Products. It spent USD 2.4 billion on Renewables and Energy Solutions, representing approximately 12% of total capex.

c. In 2022, the company had total cash capex of USD 24.8 billion. This comprised (*inter alia*) approximately USD 8.1 billion on Upstream, USD 4.3 billion on Integrated Gas, and USD 4.8 billion on Marketing.[221] It spent USD 3.5 billion on Renewables and Energy Solutions,[222] representing approximately 14% of capex.

d. For 2023, the company's projected cash capex is USD 23-27 billion. This is comprised of (*inter alia*) approximately USD 8 billion on Upstream, USD 5 billion on Integrated Gas, and USD 6 billion on Marketing. Projected spend on Renewables and Energy Solutions is USD 2-4 billion, representing (at the midpoint of the given ranges) 12% of total capex.[223]

The Board's approach to capex

145. ClientEarth's case is that the primary driver of climate risk is the anticipated value destruction of the company's fossil fuel business. That risk is only properly mitigated by reducing the size of that business.

[217] Shell, "2020 Annual Report", pages 42, 46, 50, 53 and 70.

[218] Total capex on Integrated Gas for 2020 was USD 4.3 billion; however, I have deducted the USD 0.9 billion attributable to Renewables and Energy Solutions, which was until 2022 reported by the company under "Integrated Gas".

[219] [**PWMB1/120-478**], Shell, "2021 Annual Report", pages 35, 45, 49, 50 and 65.

[220] Total capex on Integrated Gas for 2021 was USD 5.8 billion; however, I have deducted the USD 0.9 billion attributable to Renewables and Energy Solutions, which was until 2022 reported by the company under "Integrated Gas".

[221] The company amended its segmental reporting with effect from 2022, such that "Marketing" was no longer reported under "Oil Products": see [**PWMB1/120-478**], Shell, "2021 Annual Report", page 10.

[222] **[PWMB1/1300-1331],** Shell, "4th Quarter 2022 Full Year Unaudited Results", pages 1, 3, 5, 7 and 9, available here.

[223] **[PWMB1/1446-1464]**, Shell, "Fourth Quarter and full year 2022 results", slide 5, available here.

146. ClientEarth accepts that this risk may be partially mitigated or offset by the diversification of the company's business into climate risk-resilient products and services. Low- and zero-carbon energy would fall into that category.

147. However, the Board's current approach to capex, and the proportion of low-carbon energy in the company's energy mix, do not demonstrate that climate risk is being partially mitigated in this way. For example:

    a. The Board's disclosures for 2021 indicate that capex in the range between USD 694 million and USD 2.4 billion was spent on low and zero-carbon products and services, i.e. only between 3.5 – 12% of total cash capex. The SEC Complaint alleges that in fact only 1.5% was directed towards renewable energy in the form of wind and solar power generation.[224]

    b. According to a 2022 study, between 2009 and 2020 Shell spent just 1.33% of its capex on "*clean energy investments*". The study concluded that "*Piecing together CAPEX and electricity generation amounts, we find no evidence to suggest any major [including Shell] has entered the renewables market at a scale that would indicate a shift away from fossil fuels*".[225]

    c. As of 2021, GCI estimated that the company's own renewable energy generation made up approximately 0.4% of Shell's total energy portfolio.[226] GCI estimated that by 2030, 78% of the company's energy mix would still be comprised of fossil fuels, with a further 14% of power deriving largely from non-renewable sources.[227]

    d. The World Benchmarking Alliance, using the ACT framework, finds that "*Shell's fuel and product mixes are not changing at the rate required to deliver emissions reductions aligned with its 1.5°C pathway.*"[228]

148. I note that the Board does not appear to agree that capex is a sensible way to "*measure progress in the energy transition*". It states, for example:

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[224] Global Witness, "Shell faces groundbreaking complaint for misleading US authorities and investors on its energy transition efforts", available here.

[225] Li et al., "The clean energy claims of BP, Chevron, ExxonMobil and Shell: A mismatch between discourse, actions and investments" (2022), available here.

[226] **[PWMB1/911-951]**, GCI, "Part 1: Royal Dutch Shell GHG Emissions", page 25, available here.

[227] **[PWMB1/911-951]**, GCI, "Part 1: Royal Dutch Shell GHG Emissions", page 16, available here.

[228] [**PWMB1/975-976**], World Benchmarking Alliance, "Royal Dutch Shell", available here.

"*[Capital expenditure] does not reflect the fact that some of our Marketing and Renewables and Energy Solutions business are less capital intensive compared with our Upstream activities, and have higher operating costs.*

We believe that the only true way to measure our progress in the energy transition is not just to look at changing spending patterns, but also to look at our progress against our net carbon intensity targets. […]"[229]

149. ClientEarth's case, as set out at paragraphs 106-107, is that the carbon intensity targets are not sufficient to manage climate risk; and that the Board's approach to capex demonstrates that this risk is not even being partially mitigated.

(4) Carbon capture and storage (CCS) / nature-based solutions (NBS)

150. The Board's Energy Transition Strategy also relies on the use of 'carbon capture and storage' ("**CCS**") and 'nature-based solutions' to climate change ("**NBS**"), as illustrated in Figure 10 below (where NBS is headed 'Natural sinks'):

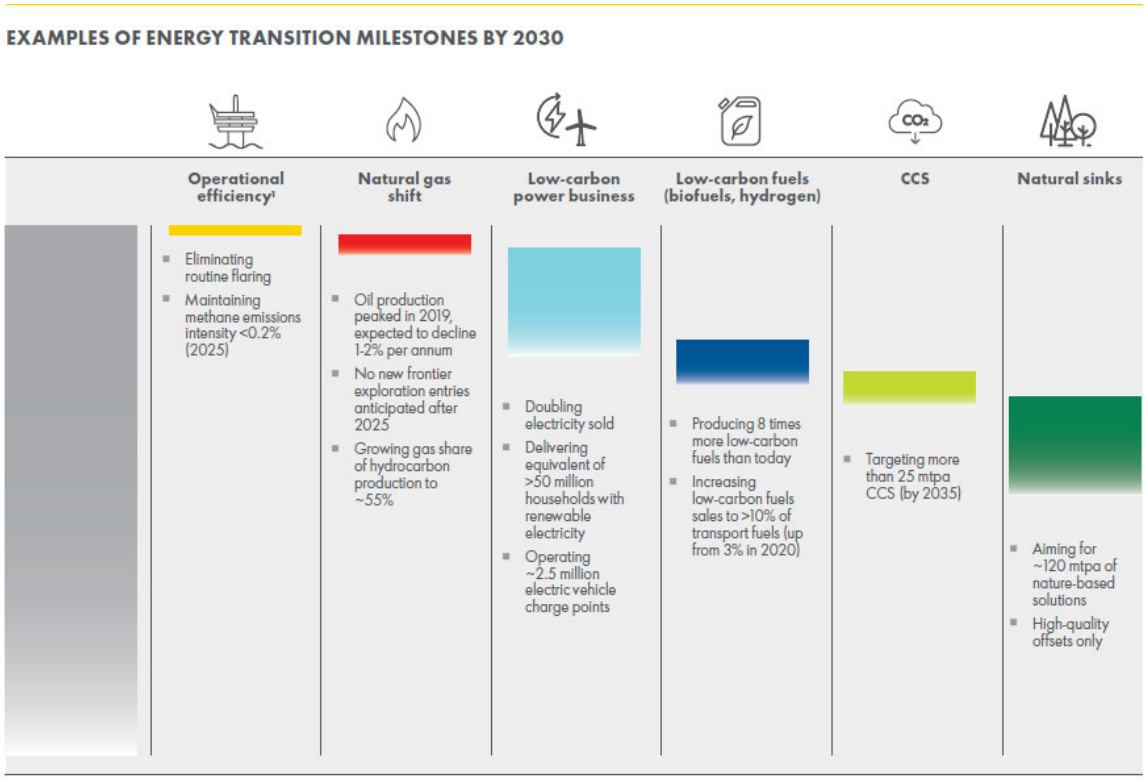

Figure 10 – A chart from the ETS, described as "illustrative of the potential impact across

[229] [**PWMB1/744-782**], Shell, "Energy Transition Progress Report 2021", page 25.

these levers."[230]

CCS

151. CCS refers to technologies used to capture carbon dioxide ("**CO2**") from large point sources. The CO2 captured can either be used on site (e.g. to increase oil production yields, known as 'enhanced oil recovery' ("**EOR**")) or it may subsequently be conditioned, compressed and transported to a storage location for long-term isolation from the atmosphere (i.e. thousands of years) ("**geological storage**").[231]

152. The Board's strategy relies on CCS to reduce the company's absolute Scope 1 and 2 emissions by 3-6 million tonnes per annum ("**MTPA**") by 2030.[232] The Board states that it aims for the company to "*have access to*" 25 MTPA by 2035.[233] The company's total reported emissions for 2021 across Scopes 1-3 were 1,367 million tonnes per annum.[234] Shell holds a minority stake in two CCS facilities in operation: 'Quest' in Canada (which it operates); and 'Gorgon' off the coast of Australia (operated by Chevron).

NBS

153. The Board describes NBS as *"projects that protect, transform or restore land. In this way, CO2 emissions from the natural environment are reduced and more CO2 emissions from the atmosphere are absorbed. These projects can lead to the marketing, trading and sale of carbon credits*".[235] A 'carbon credit' is a notional avoidance or removal of GHG emissions (typically one tonne of CO2) that is used to compensate for GHG emissions that occur elsewhere. The process whereby a company includes the emissions benefit notionally represented by the carbon credit in the 'net' emissions it reports, is called 'carbon offsetting'.[236] In order to claim the carbon credit, companies must 'retire' it, i.e.

[230] **[PWMB1/52-87]**, Shell, "Energy Transition Strategy", page 15.

[231] IPCC, "AR6 WGIII Annex 1 (Glossary)", page 1796, available here; IPCC, "AR6 WGIII Full Report Ch. 11.3.6", page 1185, available here.

[232] [**PWMB1/744-782**], Shell, "Energy Transition Progress Report 2021", page 9.

[233] **[PWMB1/744-782]**,Shell, "Energy Transition Progress Report 2021", page 12; and [**PWMB1/52-87**], Shell, "Energy Transition Strategy", page 16.

[234] [**PWMB1/120-478**], Shell, "2021 Annual Report", page 91.

[235] [**PWMB1/52-87**].Shell, "Energy Transition Strategy", page 16.

[236] The UK Climate Change Committee, "Voluntary Carbon Markets and Offsetting", page 20, available here.

cancel it in a registry, after which it can no longer be sold on.[237]

154. The Board's target for carbon offsetting Shell's emissions on the basis of NBS is to retire and offset 120 million per year by 2030. In 2020, Shell retired and offset 3.9 million tonnes of carbon credits. In 2021, it retired and offset 5.1 million tonnes of carbon credits.[238] I explained at paragraph 102 that Shell's absolute emissions are forecast to rise by approximately 3% by 2030, and its net emissions are forecast to be approximately 5% lower. That net reduction of 5% is brought about by a combined 128 million tonne reduction – the vast majority of which (120 million tonnes) is attributable to NBS.

155. There is currently a broad consensus that both CCS and NBS can play some role in global emission reduction pathways, although the exact nature of that role remains subject to debate. The IPCC has found that all 1.5°C pathways with limited or no overshoot project some use of carbon dioxide removal (including NBS and other technologies that remove CO2 from the atmosphere),[239] and it is used in high overshoot scenarios as well. Indeed, both CCS and NBS are commonly used (to varying extents) in exploratory and normative climate scenarios. However, as explained below, reliance on carbon credits by companies to 'offset' their emissions is controversial.

<u>The Board's reliance on CCS and NBS</u>

156. There are a number of well-recognised difficulties with CCS. These are principally the following:

    a. It can only address Scope 1 emissions, and then only carbon dioxide emissions (i.e. it cannot address other GHG emissions such as methane). Not all carbon can be captured.[240]

    b. Its use (other than for EOR) remains nascent: to date, there are only 30 commercial

[237] [**PWMB1/1332-1339**].McKinsey Sustainability, "How the voluntary carbon market can help address climate change", available here.

[238] [**PWMB1/744-782]**.Shell, "Energy Transition Progress Report 2021", page 22.

[239] IPCC, "Special Report on Global Warming of 1.5°C", page 17, available here.

[240] Peak capture rates are estimated to reach 85-95%, but (illustratively) Quest achieved, by the company's account, between 76.8% and 83% in the years 2015-2020. An independent report found that the Quest project's capture rate may actually be as low as 48%, when emissions from the flue waste gas stream are taken into account. On that basis, the plant is still emitting more GHG emissions than it is capturing. See Alberta Department of Energy, "Quest Carbon Capture and Storage Project: Annual Summary Report" (March 2021), page 4-1, available here; and Global Witness, "Hydrogen's Hidden Emissions", available here.

CCS facilities in operation with a total capacity of just 42.5 MTPA.[241] Over 70% of this capacity is used for EOR rather than geological storage of carbon (although both Quest and Gorgon are geological storage facilities).[242] According to the IEA, "*the prospects for the rapid scaling up of [CCS] are very uncertain for economic, political and technical reasons*".[243] The Board "*recognise[s] the scale of the challenge in developing CCS globally as quickly and as widely as needed*".[244]

c. It is expensive. For example, independent research suggests that CCS at the Gorgon project has cost approximately USD 2.5 billion, and stored approximately 5 million tonnes of CO2. That is equivalent to USD 480 per tonne.[245]

157. Even if one were to accept that CCS were a technologically and economically viable means of achieving the Board's emission reduction targets (which ClientEarth does not), ClientEarth's primary case in respect of CCS is not founded on these difficulties. Rather, ClientEarth's case is that CCS effectively does nothing to mitigate the company's transition risk.

158. This is because the primary driver of climate risk is the value destruction of the company's fossil fuel business (see paragraph 52). CCS does not assist to mitigate that risk in any way. In this respect, it just costs the company money.[246]

159. Furthermore, even assuming the Board's CCS 3-6 MTPA by 2030 target is met, the resulting emissions reductions are tiny in proportion to the company's total emissions. Illustratively, 6 million tonnes is 0.44% of the company's total emissions for 2021.

160. ClientEarth's alleges that, in those circumstances and in respect of transition risk management, CCS is ineffective, and the Board's reliance on it is unreasonable.

161. Turning to NBS and the Board's reliance on NBS carbon credits to 'offset' the company's emissions: again, there are difficulties associated with it. These include, for example:

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[241] Global CCS Institute, "Global Status of CCS 2022", page 7, available here.

[242] Ibid, page 53 and 54.

[243] IEA, "Net Zero by 2050: Roadmap for the Global Energy Sector", page 94.

[244] Shell, "Sustainability Report 2019: Carbon Capture and Storage", available here.

[245] Not including the ongoing cost of monitoring and potential liabilities. See GCI "Part 1: Royal Dutch Shell GHG Emissions", page 29, available here **[PWMB1/911-951]**.

[246] In 2021, the company's capex on CCS was USD 146 million: Shell, "Managing greenhouse gas emissions: Carbon capture and storage", available here.

a. International standards on corporate transition strategies commonly provide: (i) that companies must reduce their own emissions before considering neutralising remaining emissions; and (ii) that carbon credits should not be counted as emissions reductions for the purposes of short or medium-term targets. On that basis, carbon credits are not, and should not be seen as, a substitute for direct emissions reductions;[247]

b. Offsetting based on carbon credits is currently not specifically regulated – that may change in ways adverse to Shell (for example, under current draft EU sustainability reporting rules due to come into force in 2024, Shell would not be permitted to disclose carbon credits as a counterbalance or offset for its reported GHG emissions, or to disclose carbon credits as a means to reach reported GHG emissions reductions targets);[248]

c. There is "*strong evidence*" that emissions reductions/removals from overseas carbon credits are overstated, due to issues of additionality, impermanence and methodology (explained, for brevity, in the footnote);[249] and

d. Serious concerns have been identified regarding the feasibility and proposed scale of NBS.[250] For example:

    i. There are limits on available land. Government commitments to NBS alone would require a land area equal to the total global food growing base (in other words, "*deeply unrealistic*", even before corporate commitments are taken into account).[251] In respect of Shell, the GCI Research found that the Board's 2030 NBS target equates to land approximately the size of the

[247] See, for example: UN HLEG, "Integrity Matters: Net zero commitments by business, financial institutions, cities and regions", page 19, available here; [**PWMB1/5-46]**, UK Transition Plan Taskforce, "TPT Implementation Guidance", page 13, available here; UN Race to Zero, "Starting Line and Leadership Practices 3.0", available here; and UK CCC, "Voluntary Carbon Markets and Offsetting", page 40 -41, available here.

[248] European Financial Reporting Advisory Group, "Draft European Sustainability Reporting Standards", page 39, available here.

[249] "Additionality" means that the change in emissions would not exist in the absence of revenue from the purchase of the carbon credit. The level of "permanence" refers to the length of time that a project removes/retains CO2 from the atmosphere: to be considered high-integrity, forestation projects should last for 100 years or more. Methodologies must be in place to ensure that emission reductions can be accurately quantified and verified by an independent third party. See UK Climate Change Committee, "Voluntary Carbon Markets and Offsetting", pages 44 and 45 available here; see also Source Material, "The Carbon Con", available here.

[250] The IPCC states that "*[Carbon dioxide removal (**CDR**)] deployment of several hundreds of GtCO2 is subject to multiple feasibility and sustainability constraints (high confidence)*": IPCC, "Special Report on Global Warming of 1.5°C", page 270, available here.

[251] Dooley K. et al, "The Land Gap Report", available here.

UK;[252]

ii. Future climate change (the extent of which depends in turn on the pace of fossil fuel GHG emissions reductions) "*present[s] a threat to the permanence of biological options and nature-based solutions*";[253] and

iii. I understand that economy-wide demand for voluntary carbon credits is forecast to be somewhere between 500-1500 MT (0.5-1.5 GT); or 1000-2000 MT (1-2 GT).[254] Shell's 120 MT credit target therefore represents a sizeable proportion of that demand – approximately between 6-24%. This appears *prima facie* unrealistic.

162. Alongside the problems with offsetting, there are also certain opportunities presented by the financial flows from purchases of carbon credits on voluntary carbon markets – see, for example, the summary table of the UK Climate Change Committee at Figure 11 below:

Table 1
Evidence on issues and opportunities presented by voluntary carbon markets to Net Zero

	Issues	Strength of evidence
1	Slowing direct emissions reduction	Medium
2	Emissions reductions/removals from carbon credits from the UK are overstated	Medium
3	Emissions reductions/removals from carbon credits from overseas are overstated	Strong
4	Negative impacts on global emissions reduction ambition	Limited
5	Negative impacts on biodiversity* and equity	Medium
	Opportunities	**Strength of evidence**
1	Support UK Net Zero pathway by funding biological or engineered removals	Medium
2	Support UK Net Zero pathway by supporting UK land outcomes	Medium
3	Direct financial flows to nature-based projects/biological removals globally	Strong
4	Raise overall global emissions reduction ambition	Limited

[252] **[PWMB1/911-951],** GCI, "Part 1: Royal Dutch Shell GHG Emissions", page 31, available here.

[253] UK Climate Change Committee, "Voluntary Carbon Markets and Offsetting", page 57; see also Dooley K. et al, "The Land Gap Report", page 16: "*Continued increases in temperatures could see a near halving of land sink strength by as early as 2040 (Duffy et al., 2021)*".

[254] [**PWMB1/1405-1414**], Trove Research, "Future Size of the Voluntary Carbon Market" (2021), available here; and Taskforce on Scaling Voluntary Carbon Markets, "TSVCM Final Report" (2021), available here.

Figure 11 – table published by the UK Climate Change Committee.[255]

163. ClientEarth alleges that NBS offsetting, like CCS, does effectively nothing to mitigate the company's transition risk – indeed, it adds to the costs of the company maintaining or growing its fossil fuel business. The Board's proposed emission reductions for NBS offsetting are more significant than those attributable to CCS (see paragraphs 152 and 154): at 120 million tonnes, the target represents (if achieved) approximately 8.8% of the company's total emissions for 2021. The significant constraints and risks related to NBS offsetting described above therefore present a serious risk to the company achieving its emissions targets. However, more fundamentally, NBS offsetting simply does not address the key climate risk to the company: the value destruction of its fossil fuel business. It is in those circumstances that ClientEarth principally alleges that the Board's reliance on it is unreasonable.

164. ClientEarth further or in the alternative alleges that, in light of the points set out at paragraph 161 above, the Board's assumptions with regard to NBS offsetting, and reliance on it, are unreasonable.

Section D: Support that ClientEarth has received for this claim and related shareholder resolutions

165. As of the date of this statement, ClientEarth has received support for this claim from fellow shareholders who I understand together hold approximately 12.2 million shares in the company. I understand the number of shares held amounts to approximately 0.17% of the total shares in the company. The total assets under management of those supporting shareholders amounts to approximately £450 billion (at today's exchange rates). That support has been set out to ClientEarth in the form of the letters attached at **[WAH1/384-388];[WAH1/397-399]**; **[WAH1/401-418]**.

166. ClientEarth has also received letters of support from shareholders who, while not expressing support for the claim itself, stated that their position is aligned with the arguments that ClientEarth makes. These shareholders hold together approximately 12.5 million shares in the company (approximately 0.18% of the shares in the company), with total assets under management of approximately £191 billion (at today's exchange rate).

[255] UK CCC, "Voluntary Carbon Markets and Offsetting", page 15, available here.

These letters are attached at **[WAH1/ 389-396]** and **[WAH1/400].**

167. ClientEarth has received still further letters of support for the claim, or the concerns raised by it, from investors who divested from the company as a result of their concerns with the Board's climate risk management. These investors have total assets under management of approximately £30 billion (at today's exchange rates). In these cases, the position of the relevant investors is broadly that, were the Board to adopt and implement a credible Paris-aligned strategy, the company would become eligible for reinvestment. Those letters are attached at **[WAH1/419-425]**.

Shareholder resolutions

168. Shareholder resolutions relevant to the matters raised by ClientEarth's claim have been tabled at previous AGMs of the company, most recently in 2021 and 2022.

169. In 2021:

a. The Board tabled an advisory vote on the ETS. The wording of the relevant resolution was simply "*that the Shell Energy Transition Strategy, which is published on the Shell website (www.shell.com/agm), be approved.*"[256] The Board expressly stated that this "*purely advisory*" vote "*will not be binding on shareholders*" and "*does not shield or abdicate the Board's or management's legal obligations under the UK Companies Act*".[257] 88.74% of votes cast approved the ETS on this advisory basis.[258]

b. A special resolution was also filed at the 2021 AGM by an NGO called 'Follow This' ("**Resolution 21**"). That resolution requested the company (*inter alia*) to:

"*set and publish targets that are consistent with the goal of the Paris Climate Agreement: to limit global warming to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C*".[259]

The full text of the resolution is set out at page 6 of the 2021 AGM Notice. The Board responded to the resolution as follows:

[256] [**PWMB1/1415-1438**], Shell, "Notice of Annual General Meeting 2021", item 20, accessible here.

[257] [**PWMB1/52-87**], Shell, "Energy Transition Strategy'", page 2, accessible here.

[258] [**PWMB1/1439-1441**], Shell, "Result of General Meeting" (2021), item 20, accessible here.

[259] [**PWMB1/1415-1438**], Shell, "Notice of Annual General Meeting 2021", item 21, accessible here.

"*Your Directors consider that Resolution 21 is not in the best interests of the Company and its shareholders as a whole and unanimously recommend that you vote against Resolution 21 for the reasons set out on page 7 [of the AGM Notice]*."[260]

Resolution 21 attracted 30.47% support.[261]

170. In 2022:

a. The Board tabled an advisory vote that the 2021 ETP be approved. Again, the Board explained that this vote was "*purely advisory and will not be binding on its shareholders. The legal responsibility for Shell's strategy lies with the Board and Executive Committee*".[262] The resolution received 79.91% support, with over 20% voting against the Board's recommendation.[263]

b. Follow This submitted a special resolution in substantively the same terms as 2021,[264] which received 20.29% support.

171. I also refer in this regard to Hooker 1, which I have had the opportunity to read and which, at paragraphs 2.3 and 8.1 of [**WAH1/ 130-152**], sets out for the Court further information regarding these resolutions.

Section E: Full and frank disclosure and fair presentation

172. I understand that the Application will initially be considered by the Court on the papers pursuant to section 261(2) of the Companies Act 2006, and further that the Court will refuse the Application at that stage if it considers there is no prima facie case for the grant of permission.

173. I confirm that I have had the duty of full and frank disclosure and fair presentation in mind and have sought to discharge that duty in this witness statement. I am aware that there is likely to be a hearing attended by the parties in due course.

174. Three further matters:

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[260] [**PWMB1/1415-1438**], Shell, "Notice of Annual General Meeting 2021" , page 5, accessible here.

[261] [**PWMB1/1439-1441**], Shell, "Result of General Meeting" (2021), item 21, accessible here.

[262] [**PWMB1/783-806**],Shell, "Notice of Annual General Meeting 2022", page 5, available here.

[263] [**PWMB1/1442-1445**], Shell, "Voting results of the 2022 Annual General Meeting", item 20, available here.

[264] [**PWMB1/783-806**], Shell, "Notice of Annual General Meeting 2022", page 6.

a. First, I wish to draw the Court's specific attention to the Board's pre-action letter dated 20 May 2022 [**WAH1/ 130-152**]. Where appropriate, points raised by the Board have also been addressed in Hooker 1.

b. Second, throughout this witness statement I have identified that there is a "*consensus*" in respect of certain propositions of fact. It is possible that the Board will contend in due course that I am wrong about there being a "*consensus*" and will seek to adduce evidence to dispute that. Of course, a consensus is not the same as there being unanimity of opinion and, particularly in the field of climate change, there are views that sit outside the consensus. Where I have referred to a "*consensus*", I have sought to explain where that consensus derives from, and I have considered whether that is in fact an accurate description by reference to my own knowledge.

c. Third, I have explained how ClientEarth has approached the issue of evidence, including expert evidence. It may be that Shell takes the position that evidence should be addressed differently in this claim. This statement sets out what I regard as uncontentious statements of fact (save where noted otherwise), together with the basis on which ClientEarth alleges breaches of duty, which the Board has indicated it will contend.

Statement of Truth

I believe that the facts stated in this witness statement are true. I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

Signed: [redacted]

Name: PAUL BENSON

Position: SENIOR LAWYER, CLIENTEARTH

Date: 8 FEBRUARY 2023

Schedule 1 - Reference List

#	Source	URL
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2.	IEA, "About"	https://www.iea.org/about
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On behalf of: Applicant
Paul W M Benson
First
Exhibit PWMB1
8 February 2023

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
INSOLVENCY AND COMPANIES LIST (Ch)

Claim No.: [XXX]

BETWEEN:

CLIENTEARTH

(on behalf of the First Defendant SHELL PLC)

Applicant

-and-

(1) SHELL PLC

(2) –(12) THE DIRECTORS OF SHELL PLC

(as named in Part 1 of the Schedule to the Particulars of Claim)

Proposed Respondents

EXHIBIT PWMB1
