CA100+ Climate Accounting and Audit Alignment Assessment

<table>
<thead>
<tr>
<th>Exxon Mobil Corporation</th>
<th>Currency: USD ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil &amp; Gas, United States</td>
<td>Revenues: $276.7bn¹</td>
</tr>
<tr>
<td>Ticker: XOM</td>
<td>Net profit: $23.6bn</td>
</tr>
<tr>
<td>Year ended: December 31, 2021</td>
<td>Total assets: $338.9bn</td>
</tr>
<tr>
<td>AGM date: May 25, 2022</td>
<td>PPE, net: $216.6bn</td>
</tr>
</tbody>
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Accounting standards: US GAAP  
Auditing standards: PCAOB² auditing standards  
Audit firm / Audit partner: PwC (since 1934) / Thomas Euclid Smith Jr.

This review is focused on one dimension of issuer preparedness for the energy transition: the audited financial statements. Current and ongoing actions to reduce emissions, whether by governments, society, or corporations themselves, can impact assets, liabilities, and profitability. This work analyses the extent to which companies and their auditors are addressing the financial impacts of these items in their financial statements today.

OVERVIEW OF ASSESSMENT: Unlike the prior year, in 2021 Exxon Mobil Corporation (Exxon) made some references to climate-related matters in the financial statements. It stated that the greenhouse gas (GHG) prices it used in impairment testing “reflect existing or anticipated policy actions that countries or localities may take in support of Paris Accord pledges”³. However, Exxon did not identify the actual prices that it used or provide the outcome of these considerations. It also indicated that its Energy Outlook, which it uses for its impairment testing, is not aligned to a net-zero pathway. Additionally, Exxon did not appear to consider climate across any other relevant items in the financial statements. Moreover, Exxon has failed to adequately address a pending shareholder resolution⁴ to improve financial statement disclosures and to provide a sensitivity of relevant assets and liabilities to using the International Energy Agency’s Net Zero by 2050 (IEA NZE) inputs. Accordingly, the above changes were not sufficient to improve its scores from 2020.

### Climate Action 100+ ASSESSMENT METRICS AND SCORES³

<table>
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<tr>
<th>CAAA metrics</th>
<th>Metric 1a: incorporated the effects of material climate-related matters.</th>
<th>Metric 1b: disclosed quantitative climate-related inputs.</th>
<th>Metric 1c: were consistent with other reporting.</th>
<th>Metric 2a: how the auditor assessed impacts of material climate-related matters.</th>
<th>Metric 2b: inconsistencies in the company’s reporting.</th>
<th>Metric 3a: The financial statements used inputs that were aligned with this drive⁷.</th>
<th>Metric 3b: The audit report identified that the inputs used were aligned with this drive⁷.</th>
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<td>Mapping to 2021 AGM topics</td>
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<td>Visibility in accounts</td>
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<td>Consistency check</td>
<td>Paris alignment</td>
<td>Comments on Paris alignment</td>
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<tr>
<td>FY2021: Overall score</td>
<td>The alignment assessment was not met</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sub-indicators met?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Metrics met?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
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</tbody>
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PRIOR YEAR SCORES (FY2020)

<table>
<thead>
<tr>
<th>Overall score</th>
<th>The alignment assessment was not met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-indicators met?</td>
<td>No</td>
</tr>
<tr>
<td>Metrics met?</td>
<td>No</td>
</tr>
</tbody>
</table>

¹ Sales and other operating revenue.  
² US Public Company Accounting Oversight Board.  
³ Exxon Mobil Corporation Form 10-K For the fiscal year ended December 31, 2021 (Exxon 2021 10-K), p. 78.  
⁵ New provisional Climate Accounting and Audit Alignment Assessment (CAAA). See also “Background to this Assessment” at end of summary.  
⁶ And no more than 1.5 degrees warming. We referred to the IIGCC Investor Expectations for Paris-aligned Accounts when developing the assessment methodology and reference the International Energy Agency’s Net Zero by 2050 (IEA NZE) scenario when assessing this metric.  
⁷ Or disclosed a sensitivity to these inputs (assumptions and estimates).  
⁸ Or the auditor performed its own sensitivity analysis on the potential implications.

Review date: April 12, 2022
Overview

Exxon is an integrated oil and gas company. It is involved in the exploration and production of crude oil and natural gas, the manufacturing, trading, transportation, and sale of crude oil, natural gas, petrochemicals, and ventures such as carbon capture and storage and hydrogen. It has three segments: Upstream, Downstream and Chemical.

Exxon’s Energy Outlook10 (the Outlook) forms the basis of Exxon’s long-term planning and investment decisions and its view of global energy demand by 2050. It uses a range of scenarios to inform its thinking, including the IEA NZE scenario. Exxon acknowledges that the assumptions underlying the Outlook are not aligned to those used in the IEA NZE scenario. For example, whereas the IEA NZE entails a significant drop in liquid fuel demand from 99 million barrels per day (mb/d) in 2019 to an estimated 78 mb/d in 2030 and 31 mb/d in 205011, Exxon sees demand for liquid fuels growing12 to approximately 114mb/d per day by 2050 (an increase of 14% from 2019)13. Exxon sees natural gas meeting 55% of global energy demand growth in 2050 (an increase of 35% from 2019) and oil “remain[ing] the largest source of energy with its share remaining close to 30 percent in 2050”14. The Outlook uses a proxy cost on energy-related CO2 emissions, which is assumed to reach $100 per metric ton in 2050 in OECD nations.

Significant YOY changes: In 2021, Exxon updated its aim of reducing emissions intensity (Scopes 1 and 2) from its operated assets to include a net zero 2050 goal, as well as updating its interim targets15. We note that, unlike many of its European peers16, Exxon still does not have a target or ambition covering its Scope 317 emissions, even though these represent most of the emissions relating to the production and usage of Exxon’s products. Exxon also launched its Low Carbon Solutions business “to establish a new business in carbon capture and storage, hydrogen and biofuels to accelerate emission reductions for customers and in its existing business”18.

Strategies: Exxon’s strategies to achieve its emission reduction targets include, but are not limited to, investing in carbon capture and storage (CCS), hydrogen, biofuels, electrifying its operations with low-carbon power (including natural gas with carbon capture, utilisation, and storage [CCUS]), methane mitigation, emission offsets, and nature-based solutions19. Exxon plans to invest more than $15bn on initiatives to lower GHG emissions over the next six years20.

Assessment of financial statements (Sub-Indicator 1, Score: No)

We noted that, for Exxon, the most relevant, material items that could be materially affected by climate change-related issues were:

1 Exxon 2021 10-K, pp. 75 and 103.
10 Ibid, pp. 43-45.
11 Estimates of total liquid fuel demand were converted from IEA NZE supply amounts (in exajoules or EJ) using a fixed 0.52 EJ to mb/d conversion factor. For purposes of this discussion, supply is considered to be equivalent to demand. Notably, under the IEA NZE, the share of oil in these totals declines as more demand is met by biofuels and ammonia. See IEA World Energy Outlook October 2021, p. 309.
12 Driven by non-OECD share of liquid fuels demand.
13 Exxon 2021 10-K, p. 44.
14 Ibid.
15 These include by 2030 (from 2016): a 20-30% reduction in corporate-wide GHG intensity (absolute reduction of ~20%); a 40-50% reduction in Upstream GHG intensity (and absolute reduction of 30%); a 70-80% reduction in corporate-wide methane intensity; and a 60-70% reduction in corporate-wide flaring intensity. Note: Exxon has announced plans to become net zero in the Permian basin by 2030 (Scope 1 and 2). This basin represents 40% of Exxon’s Upstream production. Also, Exxon stated it had met its 2025 targets in 2021. “Exxon Advancing Climate Solutions 2022 Progress Report” (2022 ACS), pp.4 and 6.
16 For example, bp, Equinor and Shell.
17 Scope 3 emissions represent most of Exxon’s emissions. We calculated Exxon’s use of sold products emissions at 1,790mCO2e (m)-see page 48. Exxon only reports Scope 3 emissions from Upstream production to avoid “duplication accounting”, here we have added an estimated refining throughput and petroleum sales emissions as disclosed by the company. Exxon’s Scope 1 emissions were much smaller at 104m (equity) or 92m (operated) & Scope 2 emissions 7m (both equity and operated). 2022 ACS, pp.48 and 47.
18 Ibid, p.17.
19 Ibid, p.4.
20 We note that in 2020 Exxon indicated that it planned to invest “$3 billion in lower-emission energy solutions through 2025”. ExxonMobil 2020 Annual Report, Letter from the Chairman, p. iii.
• Property, plant, and equipment (PPE), net, of $216.6bn, of which $157.0bn relates to Upstream, $27.4bn Downstream, $21.8bn to Chemicals and $10.4 bn to Other. Exxon recorded $1.2bn in impairments in 2021. Exxon indicated this was mostly related to changes to its Upstream development plans, which may include a reduction in GHG emissions (and included impairments of suspended wells). This was not explicitly climate related.

• Equity investments and advances of $39.6bn. Most of these investees operate in the oil and gas sector. Exxon did not provide a breakdown of asset value by investee. In 2021, Exxon recorded impairments related to Upstream equity investments of $0.2 billion. No further detail was provided.

• Other assets, including intangibles, net, of $18.0bn, comprised primarily of right of use assets ($6.1bn), deferred tax assets ($4.5bn) and derivatives/long-term financial assets ($5.1bn).

• Asset retirement obligations (AROs) were $10.6bn in 2021. Exxon noted that it has AROs for certain assets but did not specify which assets. As in the prior year, Exxon also noted that “obligations for downstream and chemical facilities generally become firm at the time the facilities are permanently shut down and dismantled. However, these sites have indeterminate lives based on plans for continued operations and as such, the fair value of the conditional legal obligations cannot be measured, since it is impossible to estimate the future settlement dates of such obligations.”

Consideration of climate-related matters (Metric 1a: No): As previously noted, Exxon added some information in its 2021 disclosures:

• Exxon bases its impairment testing assumptions on its Energy Outlook which, by its own admission, “does not project the degree of required future policy and technology advancement and deployment for the world, or the Corporation, to meet net-zero by 2050.” Additionally, in the MD&A, Exxon explained that while third-party scenarios, such as the IEA NZE may be used for resiliency tests, “they are not used as a basis for developing future cash flows for impairment assessments.”

• It stated that the GHG emission prices that it used when testing the recoverability of assets “reflect existing or anticipated policy actions that countries or localities may take in support of Paris Accord pledges.” However, Exxon did not provide the impacts of these considerations on the assumptions and estimates in its impairment testing, such as the prices used. Additionally, Exxon did not identify how or whether it might have to reduce the useful lives (or units-of-production) of PPE assets (and so accelerate the timing of its AROs) to meet its GHG emission reduction targets and climate-related strategies.

• Like the prior year, Exxon indicated that it does not view temporary low prices as indicators of impairment and that industry prices over the long-term will be driven by market supply and demand fundamentals. While in 2021 it noted that it considered “alternative energy sources” on the demand side, Exxon did not expand on this point and so it is unclear how this impacted its estimates and assumptions, if at all.

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22 Ibid, p. 46.
23 Included in the Consolidated balance sheet in “Investments, advances and long-term receivables” of $45.2bn. Ibid, p. 72.
24 “Primarily engaged in oil and gas exploration and production, and natural gas marketing in North America; natural gas exploration, production and distribution in Europe; liquefied natural gas (LNG) operations and transportation of crude oil in Africa; and exploration, production, LNG operations, and the manufacture and sale of petroleum and petrochemical products in Asia and the Middle East. Also included are several refining, petrochemical manufacturing and marketing ventures.” Ibid, p. 83.
25 Ibid.
26 Ibid, pp. 89, 92 and 108.
27 Out of the total, $10.0bn were long-term and $0.6bn were short term. Estimated cash payments in 2022 and 2023 are $645 million and $648 million, respectively. Ibid, p. 86.
28 Ibid.
29 It noted “[a]s future policies and technology advancements emerge, they will be incorporated into the Energy Outlook, and the Corporation’s business plans will be updated accordingly.” Ibid, p. 78.
30 Ibid, p. 64.
31 Ibid.
32 Ibid, p. 77.
• As in the prior year, Exxon did not indicate if it considered the impacts of climate change/ the energy transition/ its own aims or targets on the estimated timing of its AROs. Overall, Exxon did not meet the requirements of this metric because it did not provide an indication of whether and how it incorporated the impacts of material climate-related matters, on a comprehensive basis, when accounting for the relevant assets and liabilities.

Disclosure of quantitative assumptions and estimates used (Metric 1b: No): We noted that Exxon used the following assumptions and estimates33 that could be materially impacted by climate-related issues:

• long-term forecasted oil and gas commodity price assumptions (for Upstream impairment tests);
• GHG emissions prices;
• estimated refining margins (for Downstream impairment tests);
• estimated production or sales volumes;
• the estimated remaining useful lives of assets (or units-of-production); and
• the average estimated timing, undiscounted estimated costs, and discount rates to calculate its AROs.

However, as in the prior year, Exxon did not disclose the relevant climate-related quantitative assumptions and estimates that it used in the financials. Additionally, in impairment testing, Exxon noted its “evaluations make use of the Corporation’s assumptions of future capital allocations, crude oil and natural gas commodity prices including price differentials, refining and chemical margins, volumes, development and operating costs including GHG emission prices, and foreign currency exchange rates”34. Yet Exxon did not disclose the climate-related quantitative inputs. This information is needed to provide a meaningful picture of climate-exposed amounts so investors can assess the extent to which Exxon is including climate change considerations in its financial statements (if at all), Exxon’s resilience to the energy transition, and adjust as necessary. As Exxon did not provide the requisite quantitative information, it did not meet this metric.

Consistency of the financial statements (Metric 1c: No): This metric score is contingent on Metric 1a, which was scored as “No”. As noted in Metric 1a, there was no evidence of whether, or how, Exxon considered the financial impacts of the climate-related matters (that it also discussed outside the financials) when preparing its financial statements. Accordingly, this metric was scored as “No”.

Additional information: The fact that Exxon believes that hydrocarbon demand will increase means that the financial statements were not entirely inconsistent with discussions in its MD&A. However, Exxon also included the following climate-related discussions in its other reporting:

• its GHG emission targets/aims, such as the long-term aim of achieving net zero by 2050 from its operated assets;
• its strategy to achieve its emission targets including, but not limited to, growth in biofuels, hydrogen, carbon capture and offsets; and
• relevant climate-related risks such as the potential for reduced demand for hydrocarbons due to GHG emission restrictions, dependence on its ability to grow its low carbon solutions, and increased regulation/ policy on climate-related matters35.

Assessment of audit report (Sub-Indicator 2, Score: No)

As in the prior year, PwC identified the following single Critical Audit Matter (CAM): “The Impact of Proved Oil and Natural Gas Reserves on Upstream Property, Plant and Equipment, Net”. We noted that this CAM could be materially affected by climate change-related issues. For example, Exxon’s ability to continue to produce these resources economically could be impacted by reduced demand for Exxon’s products (leading to declining oil and gas prices), climate regulations that result in either increased costs of carbon emissions or...

33 Exxon 2021 10-K, pp. 64 and 65.
34 Ibid, p. 78.

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that reduce the use of oil and gas products, and/or Exxon’s own emissions reduction aims. All of these factors could reduce the volume of resources that could be classified as reserves.

**Consideration of climate in the audit report (Metric 2a: No):** Like in 2020, there was no evidence that PwC considered the impacts of relevant climate-related matters in its audit. (In addition, PwC evaluated the management specialists\(^{36}\) that Exxon used to estimate proved oil and natural gas reserves.) Accordingly, PwC did not meet this metric.

**Identification of inconsistencies between financial statements and ‘other information’ (Metric 2b: No):** This metric is partially contingent on Metric 1c, which was assessed as "No". Despite this, the auditor can still receive a Yes on this metric if the inconsistencies were included in the other information that the auditor is responsible for reviewing, and if the auditor identified such inconsistencies in its audit report.

PwC expressed its role as extending to the audit of the consolidated financial statements\(^{37}\) and made no mention of procedures to ascertain consistency of other information included in the 10-K. Under PCAOB auditing standards, information in the “front-end” of the 10-K is subject to the auditor’s consistency check. We noted that since Exxon believes hydrocarbon demand will increase, the financial statements were not entirely inconsistent with discussions in its MD&A. However, Exxon still included climate-related information in the front of the 10-K that we expected Exxon to consider in its financial statements (such as the impact of climate-related risks or its own emission reduction aims and strategies to achieve them). The apparent lack of consideration of these issues in its financial statements appeared inconsistent. PwC made no mention of any inconsistencies in Exxon’s reporting. Accordingly, it did not meet this metric.

**Audit Committee:** Exxon discusses climate change and climate-related resolutions in its 2022 Proxy Statement. However, this commentary does not extend to a discussion regarding how climate may impact its financial statements; Exxon’s audit committee report\(^{18}\) does not comment on the incorporation of climate risks into the accounts or the consistency of Exxon’s reporting. The 2022 Proxy Statement also references a shareholder resolution\(^{39}\) (Item 8) requesting that by February 2023 Exxon seek an audited report that provides a sensitivity of relevant assets and liabilities to using the assumptions and estimates of the IEA NZE. In the 2022 Proxy Statement Exxon indicates that its Advancing Climate Solutions - 2022 Progress Report (2022 ACS) responds to this request and so the proposal is “unnecessary”.\(^{40}\) We have studied both the resolution and the 2022 ACS, and we do not believe that Exxon has met the resolution’s request. See our analysis in the Appendix herein.

**Assessment of alignment with net zero by 2050 (or sooner)\(^{41}\) (Sub-Indicator 3, Score: No)**

Financial statements use (or provide a sensitivity to) inputs aligned with this (Metric 3a: No): Exxon was clear that “[w]hile third-party scenarios, such as the International Energy Agency Net Zero Emissions by 2050, may be used to test the resiliency of the Corporation’s businesses or strategies, they are not used as a basis for developing future cash flows for impairment assessments.”\(^{42}\) It also noted that “due to the inherent difficulty in predicting future commodity prices or margins, and the relationship between industry prices and costs, it is not practicable to reasonably estimate the existence or range of any potential future impairment charges related to the Corporation’s long-lived assets”\(^{43}\). Additionally, as Exxon did not disclose the relevant assumptions/estimates that it used to prepare the financial statements, such as long-term commodity prices, estimates of future production or carbon prices or changes in demand or margins, there would have been no way for us to assess if the inputs were aligned with achieving this metric.

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36 These were senior level geoscience and engineering professionals, assisted by the Global Reserves and Resources Group. Exxon 2021 proxy statement 10-K, p. 69.  
37 “Our responsibility is to express opinions on the Corporation’s consolidated financial statements and on the Corporation’s internal control over financial reporting based on our audits.” Ibid, p. 68.  
38 DEF 14A Exxon Mobil Corporation 2022 Proxy Statement (2022 Proxy Statement), pp. 33 and 34.  
40 2022 Proxy Statement, p. 77.  
41 And no more than 1.5 degrees warming. We currently use the IEA NZE scenario to assess this.  
42 Exxon 2021 10-K, p. 64.  
43 Ibid, p. 65.
Note: In its 2022 ACS Exxon indicated that it tested its portfolio against the IEA NZE scenario. However, as noted above, we determined that this report does not provide the quantitative ($) impacts of using IEA NZE inputs on Exxon’s relevant assets and liabilities and so also fails to meet this metric. See further discussions of our review of the 2022 ACS in the Appendix herein.

The audit report identifies that the company’s inputs were aligned with net zero by 2050 (or sooner) or provides a sensitivity analysis to this (Metric 3b: No): PwC did not comment on whether the assumptions and estimates that management used were aligned with this or what appropriate inputs might be. It did not conduct a sensitivity to such inputs. Accordingly, PwC did not meet this metric.

BACKGROUND TO THE ACCOUNTING ASSESSMENT: In 2022, the Climate Action100+ added a provisional Climate Accounting and Audit Alignment Assessment (CAAA) to its Net Zero Benchmark. Exxon’s FY2020 and FY2021 financial statements and auditor’s report were assessed under the CAAA. The 2020 assessment results were translated from a prior analysis to assessment results under the new CA100+ methodology.

APPENDIX: ASSESSMENT OF EXXON’S IEA NZE ANALYSIS

In 2021, Exxon shareholders filed a resolution requesting that, by February 2023, Exxon seek an audited report that provides the quantitative (dollar) impacts of using inputs from the IEA NZE on the values of relevant assets and liabilities. As noted above, investors need this information to assess the extent to which Exxon is including climate change considerations in its financial statements (if at all), Exxon’s resilience to the energy transition and achieving the goals of the Paris Agreement, and to adjust as necessary. Exxon has indicated that it provided the information requested in its 2022 ACS. We performed an itemized analysis of the information in the 2022 ACS and concluded that Exxon did not provide the items requested. The following table includes the relevant financial statement topic (in alphabetical order), text and page references from the 2022 ACS, and an explanation of why the quoted 2022 ACS text/disclosure fails to adequately address the shareholder resolution. For context, the shareholder resolution sought:

“…that ExxonMobil’s Board of Directors seek an audited report assessing how applying the assumptions of the International Energy Agency’s Net Zero by 2050 pathway would affect the assumptions, costs, estimates, and valuations underlying its financial statements, including those related to long-term commodity and carbon prices, remaining asset lives, future asset retirement obligations, capital expenditures and impairments. The Board should obtain and ensure publication of the report by February 2023, at reasonable cost and omitting proprietary information.”

We interpreted this to call for, at a minimum, the dollar amount difference between commodity and carbon prices that Exxon used in its financial statements and those in the IEA NZE, and the resulting dollar impacts of using IEA NZE assumptions on remaining asset lives, asset impairments, and AROs.

44 2022 ACS, pp. 37 and 38.
45 Further information can be found in the CAAA methodology. The financial statement and audit report assessments are grounded in the existing requirements of the relevant accounting and audit standard setters, with Net Zero by 2050 requested by investor groups. The CAAA uses a binary Yes/No scoring system at the metric level assessment. Metric scores are combined at the Sub-indicator and overall level, with a “Partial” score indicated where there is at least one ‘Yes’ assessment.
46 Scores are based on the new March 2022 CA100+ CAAA. The company’s prior year reporting was initially assessed based on a four-level rating system (significant concerns, some concerns, few concerns and good practice), which in part used the IIGCC Investor Expectations for Paris-aligned Accounting as a framework. The results were published as part of the “Flying Blind” report. We did not attempt to aggregate the seven scores for those assessments. For the 2021 AGM four level scores, please reference prior company summary.
47 https://engagements.ceres.org/engagementdetailpage?recID=a0l5c00000IXTueAAH.
48 2022 Proxy Statement, p. 77.
49 See also https://carbontracker.org/exxonmobil-is-planning-on-climate-failure-despite-advancing-climate-solutions/.
50 https://engagements.ceres.org/engagementdetailpage?recID=a0l5c00000IXTueAAH.
<table>
<thead>
<tr>
<th>Topic</th>
<th>2022 ACS</th>
<th>Page(s)</th>
<th>Why ACS is not responsive</th>
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</table>
| Asset retirement obligations (AROs)  | **IEA NZE SCENARIO ANALYSIS**

f/n 64: “Modeling assumptions include… (5) market position as a percentage of demand under IEA NZE for current business (Upstream, F&L, Chemicals) and new products (biofuels, hydrogen, and carbon capture and storage) is in line with the Company’s current market positions in existing businesses…” | 37, 53  | • This disclosure does not quantify the dollar impact of using the IEA NZE scenario on stated asset retirement obligations as requested by shareholders.  

• The assumption that Exxon maintains market share in a declining market does not answer the question of whether those assets remain economically viable for their full current remaining lives, or whether asset retirement obligations might accelerate. Exxon does not indicate the effects of these assumptions on the timing of asset retirement obligations as requested by shareholders. |

| Asset retirement obligations (AROs)  | “In addition, under this scenario, production of traditional refined products would decline as sites are either closed, converted to terminals or reconfigured to shift production to chemicals, lubricants, base stocks and lower-emission fuels. Investments in carbon capture and storage, hydrogen, and biofuels, would increase significantly as carbon pricing provided in the IEA NZE scenario increases.” | 38      | • This indicates that refining would be adversely impacted by the IEA NZE scenario—a qualitative disclosure. It does not indicate how the balance sheet treatment of those assets would change as requested by shareholders.  

• It discusses new investments—qualitatively not quantitatively— which are not on the balance sheet today.  

• It makes no comment on the dollar impact to existing assets, which are on the balance sheet today, and that shareholders have requested. |

| Carbon prices                       | **IEA NZE SCENARIO ANALYSIS**

f/n 64: “Modeling assumptions include: … (6) investment to abate estimated GHG emissions from remaining Upstream, F&L, and Chemicals businesses by 2050…” | 37, 53  | • This does not provide any indication of the carbon price or the average “abatement cost” amount, in dollars, if any, that Exxon used in its modeling assumptions and that shareholders have requested.  

• It is unclear if, by indicating an “investment to abate estimated GHG emissions from remaining Upstream, F&L, and Chemicals businesses by 2050…”, this means that Exxon has included abatement costs in future estimated cash flows for asset impairment testing. Additionally, this does not provide the actual dollar carbon price/cost assumptions that Exxon used, or the point at which Exxon started to include such costs in the model (e.g., from 2050? sooner?) as requested by shareholders. |

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**Why ACS is not responsive**

**Carbon prices**
- The CO₂ price graph displays approximate carbon price ranges used in various climate scenarios. It does not provide the dollar carbon price assumptions that Exxon used in its financial statements, much less the expected impact (in dollars), that using the IEA NZE price would have on Exxon’s financial results and that shareholders have requested.

**Commodity prices**
- “All investments are tested over a wide range of commodity price assumptions and market conditions. In extreme scenarios like the IEA NZE, higher-cost assets could become disadvantaged without active portfolio management.”

**Impairments**
- “The chart below illustrates potential changes to ExxonMobil’s business portfolio through 2050 resulting from this modeling. It demonstrates that under the IEA NZE assumptions, the Company could continue to grow cash flows over time through reduced investments in oil and gas and increased investments in accretive projects in chemicals, carbon capture and storage, low emissions fuels and hydrogen.”

**Impairments**
- “Actions needed to advance the Company’s 2030 greenhouse gas emission-reductions plans are incorporated into its medium-term business plans, which are updated annually. The reference case for planning beyond 2030 (including impairment assessments and future planned development activities) is based on the Energy Outlook, which contains the Company’s demand and supply projection based on its assessment of current trends in technology, government policies, consumer preferences, geopolitics, and economic development.”

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51 Exxon 2021 10-K p. 44.
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<th>2022 ACS</th>
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<th>Why ACS is not responsive</th>
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</table>
| Impairments                   | “Consistent with the scenario’s long-term decline in oil and natural gas demand and pricing, the Company would cease oil and gas exploration in new basins and reduce spending on new developments. This would result in lower overall production as natural depletion outpaces investment in new volumes. It would also lead to initially higher net cash flow due to the lower investment levels. Upstream resources with shorter production cycles, such as unconventional developments, and a lower cost of supply, like deepwater production, would continue to attract capital and generate competitive returns.” | 37      | • This is a qualitative disclosure of the direction of impact.  
• Despite having modelled the expected impact of the IEA NZE via its demand and pricing assumptions, this statement does not indicate the impact, in dollars or other, on any financial statement items as requested by shareholders.  
• Exxon focuses on new investments in a “low carbon solutions” business and cessation in new oil and gas developments—both of which are not on the balance sheet today.  
• It makes no comment on its existing assets, which are on the balance sheet today and is the information which shareholders have requested.                                                                                                                                                                                                                       |
| Remaining asset lives         | IEA NZE SCENARIO ANALYSIS [64](f/n 64: “Modeling assumptions include… (5) market position as a percentage of demand under IEA NZE for current business (Upstream, F&L, Chemicals) and new products (biofuels, hydrogen, and carbon capture and storage) is in line with the Company’s current market positions in existing businesses…” | 37, 53  | • Exxon does not indicate the effects of these assumptions, if any, on the remaining useful economic lives of relevant assets as requested by shareholders.  
• The assumption that Exxon maintains market share in a declining market does not answer the question of whether those assets remain economically viable for their full current remaining lives, or not.                                                                                                                                                                                                                                             |

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