THE UNIVERSITY OF CHICAGO

HARRIS SCHOOL OF PUBLIC POLICY

ESG & Impact Investing (PPHA 36150)

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Note: All charts, tables & references are included as links at the end of the report. The author has solely written this report and adheres to the academic integrity of the Harris School of Public Policy.

Qualitative Analysis

APA Corporation is an hydrocarbon exploration and production company, meaning its ESG risks and exposures are closely tied to the energy sector. Due to the industry's reliance on human labor, its ESG issues are also relevant to the social element of ESG.

Materiality Assessment

Greenhouse Gas (GHG) Emissions & Climate Change: Regulatory issues such as carbon taxes, international emissions protocols, and the global transition to renewable energy, could significantly impact APA's position in the market. This risk is categorized as High Exposure.

Water Management: Extraction of Oil & gas requires hydraulic fracturing which requires significant amounts of water and also necessitates safe water disposal techniques. APA's operations in Egypt & the Gulf of Mexico (now America) where water scarcity issues persist, exposes itself to reputational and regulatory risk. This risk is categorized as Medium-high Exposure.

Labor Safety: The oil & gas industry is a labor intensive operation, moreover, it involves hazardous working conditions. Lapse in safety standards or incidents can lead to shutdowns, permanent in some cases. While rare in incidence, lapses in labor safety can also lead to worker strikes, financial penalties, & lawsuits which makes this High-medium risk.

Disclosure Assessment

- **Greenhouse Gas (GHG) Emissions & Climate Change:**
    - Company-specific narrative. APA has shown a downward trend in their CH_4 emissions & flaring emissions in production. However, these are not compared to industry standards.
    - The company has disclosed Scope 1 and 2 emissions, reduction plans, both short & medium term, and performance metrics. Scope 3 emissions are not included.
- **Water management:**
    - Includes metrics and targets for reduction of freshwater consumption, and increased use of non fresh water.
    - There are disclosures for use of chemicals in hydraulic fracturing.
    - There is use of company-specific narrative which shows their challenges in ensuring these standards are met in all their global operations.
    - There is use of boilerplate language to describe how their company uses knowledge of local geology, monitoring of data to increase water efficiency.
- **Labor Safety:**
    - They include strict metrics for measuring worker safety targets. Some of these include TRIR, SIR, instances of stop-work, and descriptions of fatal incidents.
    - They have disclosed the adoption of IOGP life-saving rules

- There is some use of company-specific narrative to explain their performance in regions and some lapses such as incidents.
- There is use of boilerplate language while making high-level commitments.

Management Assessment

Referring to a list of top hydrocarbon exploration companies in the US focused on upstream activities, I have chosen SM energy for comparison in management assessment as they have similar operational locations in the US (Texas, New Mexico) as APA Corp. does. They also have similar market caps: SM Energy ($4.3Billion) and APA Corp. ($7.9 Billion).

Greenhouse Gas (GHG) Emissions & Climate Change

APA Corp., in their annual sustainability report for 2024 reported that they are on track to reduce GHG emissions by 1 Million metric tons. This program was enacted in 2021 which would have meant a 17% reduction in GHG emissions from baseline within 3 years. This is an aggressive reduction strategy. (insert pie chart). Comparing this with SM Energy's goal of reducing GHG emissions intensity by 50% from 2019 to 2030:

- APA Corp.'s target is absolute (total metric tons reduced), whereas SM Energy focuses on intensity (emissions per unit of production).
- APA has a more aggressive approach, but is more short term.
- SM Energy's goal is larger in percentage, but is spread out over the long-term.

SM Energy wants to reduce its Scope 1 + Scope 2 emissions intensity by 50% by 2030 with 2019 as the base year. On the other hand, APA Corp. wants to reduce its Scope 1 + Scope 2 emissions by 10-15% by 2030. Considering they are in the same industry and have comparable size and financial metrics, APA's targets seem laggard.

Water Management

APA Corp.'s use of water is efficient and they have consistently reported > 95% use of nonfresh and recycled water in their operations in the last 5 years. However, there is need for better reporting of data as most of their operations in the US are in water-scarce locations. In Hydraulic fracturing, there use of freshwater varies a lot from 23% in 2019 to 2% in 2021, however, there is no clear downward trend. Their water management strategies need to have more specific goals. SM energy, in their annual report for 2024, reported that they established 57% improvement in freshwater intensity, however, they don't report baseline figures. APA Corp.'s performance in this category seems average in comparison.

Labor Safety

APA Corp. has adopted the [International Association of Oil & Gas Producers (IOGP) Life-Saving Rules] which are considered the best practices throughout the industry. SM Energy, on the other hand, doesn't report the adherence to any industry or external standards. APA Corp. reports a TRIR (total recordable incident rate) of 0.22 which is worse than the TRIR reported by SM Energy (0.20). Due to their participation in IOGP, but taking into account their worse rates, the corporation would fall into the laggard-average category.

Social/Environmental Impact Assessment

For worker safety, they expect management to get involved in workers' safety and health through the *AIM for ZERO* company wide initiative. These are a set of rules and norms shifts that the company has implemented at all levels of management with specific dos and don'ts. This provision of clear guidelines is great for ensuring accountability at all levels in the workplace. However, since these guidelines are effective only when everyone participates, there is a risk that it is not taken up completely. The success of this program is dependent on coordination, and it is not the best approach given the downside is a serious injury.

Disclosures of hydraulic fracturing fluid chemicals: These chemicals are harmful to the environment, however, also necessary to the operation of APA Corp. They have been reporting 100% of their chemical use to FracFocus.org which is a chemical disclosure registry. Full transparency in chemical use which reduces concerns about hidden environmental risks and increases investor and regulatory expectations.

Both these initiatives minimize and mitigate the negative externalities associated with APA Corp.'s business model and practices which are namely worker safety and water management.

Quantitative Analysis

The selection of 10 comparable companies was derived from using company size (no. of full time employees) and industry type. The data was first filtered to only include 'Oil & Gas' in the Industry group name and then the ten closest companies were chosen based on employee size as compared with APA Corp. These companies are listed in the Charts & Tables section (Figure 1).

The 5 ESG metrics in the dataset that are most relevant to APA Corp. along with Materiality Assessment done in the Qualitative Analysis section are:

1. **Trend in Scope 1 Emissions:** APA operates in the oil and gas sector, where Scope 1 emissions (direct emissions from operations) are a major environmental concern.
   a. APA corp. has had a high rate of Scope 1 emissions, highest in ¾ years. However, there is a downward trend. Refer to Figure 2.
2. **Employee Accidents:** Worker safety is a top priority in oil and gas due to the high-risk nature of drilling and extraction operations. It gives light onto the risk of worker safety, which may lead to strikes or possible shutdowns.
   a. APA corp. has had slightly above average employee accidents. Refer to Figure 3.
3. **Injuries/million hours worked:** Tracks workplace injury frequency and this metric is normalized to hours worked which makes this metric comparable across industries.
   a. It has slightly below average injuries per million hours worked compared to other peers. Refer to Figure 4.
4. **Water use/revenue:** High water use can increase costs and expose APA to regulatory risks in water-scarce regions where they operate. Since this metric is normalized to revenue, it is a comparable metric for its evaluation against its peers.
   a. It has the highest water-use to revenue ratio compared to its peers. This can be problematic given that its operations are present in water-scarce areas. Refer to Figure 5.
5. **Presence of sustainability compensation incentives:** Encourages leadership to prioritize long-term ESG performance over short-term profits. More importantly for investing, it helps attract sustainability-focused investors.
   a. Most of APA Corp.'s peers have sustainability compensation initiatives, and APA Corp. also has it in place. However, there is need for deeper data on this to understand if APA Corp. is an industry leader or laggard. Refer to Figure 6.

The quantitative analysis, along with qualitative research, shows that APA Corp. is a laggard in GHG & Carbon Emissions & water management. However, they perform average on worker safety and accidents. The quantitative data provides an overall view of the peers in this industry and one can assess where APA Corp. stands in these domains.

Charts & Tables

Figure 1: Table showcasing companies shortlisted for comparison.

Company Name	Number of Employees
Sunoco LP	2302
Pioneer Natural Resources Co	2076
Devon Energy Corp	1800
Ovintiv Inc	1744
EOG Resources Inc	2850
Hess Corp	1623
Marathon Oil Corp	1570
Calumet Specialty Products Partners LP	1530
CVR Energy Inc	1470
Par Pacific Holdings Inc	1397

Figure 2: Graph showcasing trend in Scope 1 emissions

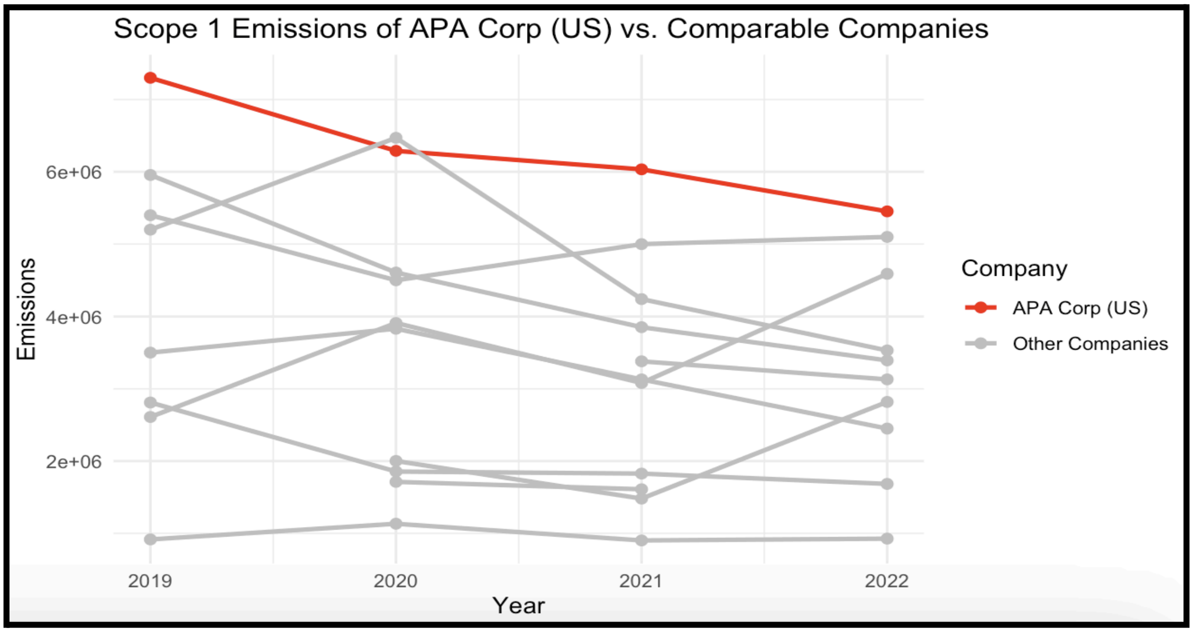

Figure 3: Graph showcasing employee accidents (total)

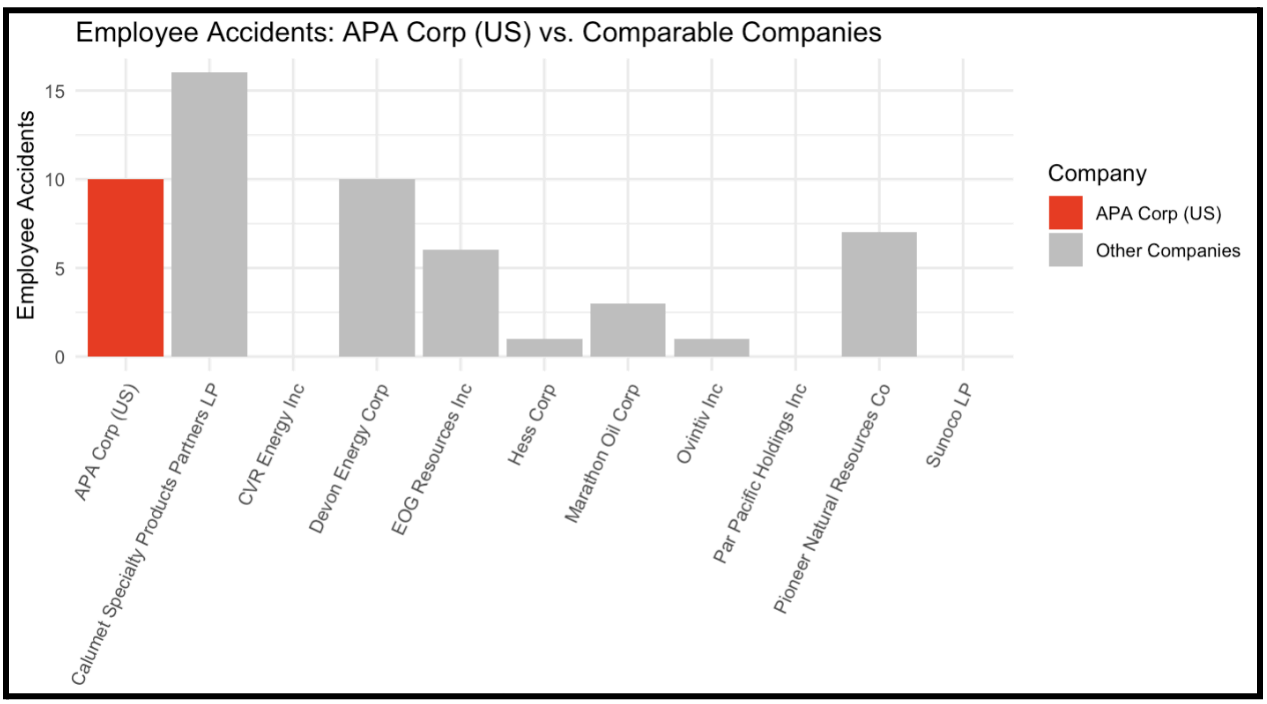

Figure 4: Graph showcasing worker injuries per million hours worked

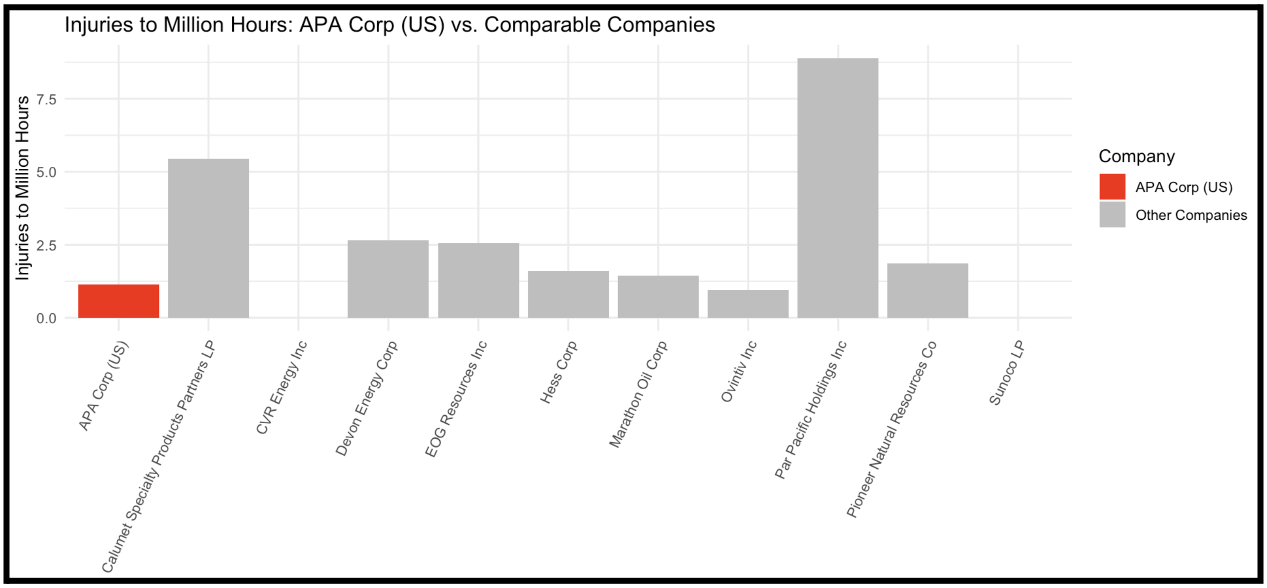

Figure 5: Graph showcasing water use normalized to revenue.

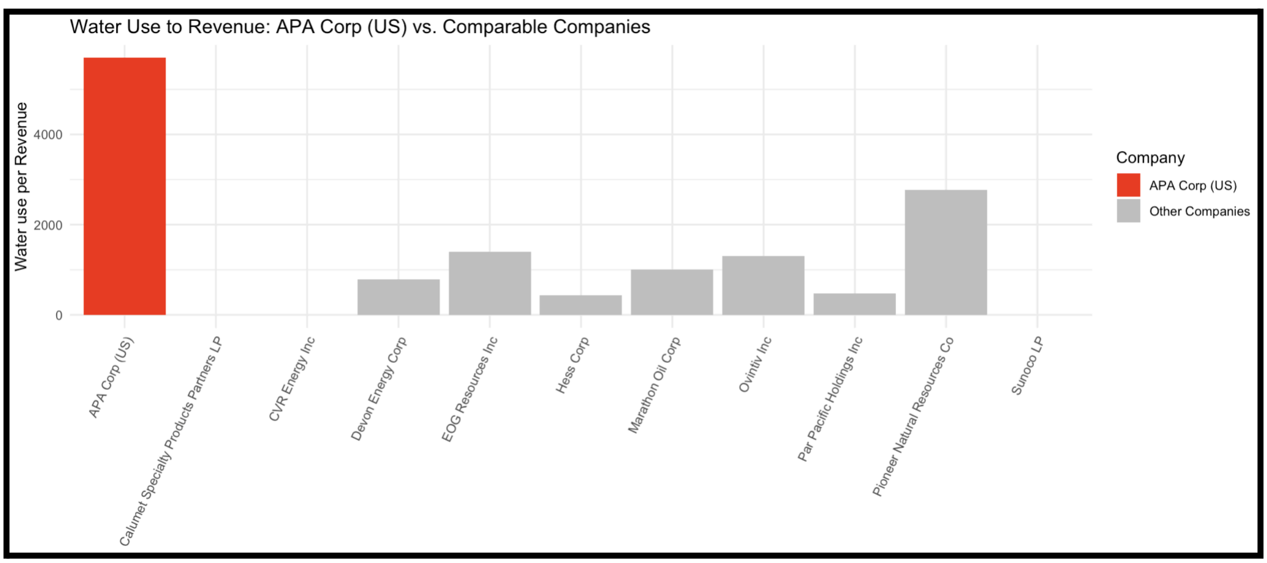

Figure 6: Table showing whether company has Sustainable compensation initiative

Sustainable Compensation Initiatives by Company

Company Name	Sustainability Compensation Incentives
APA Corp (US)	Yes
CVR Energy Inc	Yes
Calumet Specialty Products Partners LP	No
Devon Energy Corp	Yes
EOG Resources Inc	Yes
Hess Corp	Yes
Marathon Oil Corp	Yes
Ovintiv Inc	Yes
Par Pacific Holdings Inc	Yes
Pioneer Natural Resources Co	Yes
Sunoco LP	No

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References

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