SK Innovation

South Korea, Oil & Gas

Accounting		Climate Assumptions		Audit		Date of analysis: May 14 2021
Judgements	Consistency with other reporting	Visibility	Paris alignment	Visibility in KAMs	Consistency check	Year end: December 2020 Report date: March 18 2021[1] AGM: March 26 2021
Significant concerns	Significant concerns	Significant concerns	Significant concerns	Significant concerns	Significant concerns	CA 100+ company, so seen by investors as key to driving global net zero emissions

Summary view:

- A major integrated oil & gas business that continues to invest both in upstream activities and in its petrochemicals operations.
- SK Innovation is aiming for an unspecified 'Green Balance' from 2030, where positive environmental benefits outweigh the negatives. The largest apparent element towards delivering this aim is rapid growth in its battery business, currently focused on electric vehicles but expanding to industrial scale offerings with significant investment and ramp-up.
- There is little reflection in its financial statements of the significant climate change issues faced by the company,

Background

The Business

- SK Innovation is an oil explorer and producer, with an integrated downstream refinery business. The petroleum segment provided 66% of net sales, and the bulk of losses, in 2020; petrochemicals 20% of sales; and lubricants (the only profitable segment in 2020) 7%. SK Innovation also has a lithium-ion battery business (around 6% of total 2020 sales).
- Spun out of Korean conglomerate SK Holdings in 2007, it is still 33% held by that group, with a further 11% owned by Korea's National Pension Service.
- The company is making continuing substantial investment in its integrated oil and petrochemicals businesses, with continuing exploration expenditure and along other things the W449bn acquisition of the Arkema functional polymer operation in June 2020.
- Significant investment is going into the batteries business, currently focused on batteries for electric vehicles but with the ambition extending into ESS, large-scale electric storage systems to smooth the fluctuations arising from renewable power generation. Capacity is being built rapidly, with 4.7GWh/year available from Korea's Saosan plant in 2019, an additional 7.5GWh/year from 2020 from a new Hungarian plant, and 17GWh/year capacity due to come online in 2021 from new Chinese operations. The stated ambition is for 85GWh/year capacity in 2023 and 125GWh/year in 2025, though 22 GWh/year in 2023 is intended to come from US production and SK Innovation currently faces a battery ban from the country for the next 10 years on the basis of an intellectual property dispute with rivals LG Chem and LG Energy Solutions. This ban is only partly mitigated by 4- and 2-year grace periods for existing deals with Ford and Volkswagen respectively.

Approach to climate change

- The company is early in its journey on climate change commitments. According to the Climate Action 100+ benchmark, it has no net zero commitment, and no medium- or long-term GHG reduction targets. What SK Innovation does have in place is a slightly ill-defined 'Green Balance 2030' ambition, that its positive effects on the environment exceed its negative impacts by that date. The indications about this are that there will be only limited reductions to the traditional oil business and that this 'balance' will be delivered through further expansion of the battery business and development of other new business operations. These are unspecified but there are brief references to carbon capture and storage activities and development of bio-fuels.

[1] This is the date of publication of the Korean-language annual report, which is not available in English at the time of writing. The English-language financial statements were published more than a month later.

- The apparently largest intended element of the positive effects side of the 'balance', and the most concrete currently, is the batteries business. As noted, this is subject to rapid expansion.
- The stated 2025 emissions target was for a 7.8% reduction of Scopes 1&2 emissions against an unspecified business as usual baseline. Some statements indicate that this target has been superseded by an undertaking to abide by Paris Agreement goals, but the precise implications of this undertaking are unclear.
- Disclosed Scopes 1&2 GHG emissions differ marginally (in total and for each major subsidiary) between the Sustainability Report and the Annual Report, but were more than 12.5m tCO2e in 2019, and 11.8m tCO2e in the context of reduced economic activity in 2020. Scope 3 emissions are not disclosed but will be much more substantial given the nature of the oil & gas business.

Accounting: judgements and consistency with other reporting

Accounting judgements		Significant concerns

- SK Innovation reports under Korean IFRS (K-IFRS) standards – which differ from IFRS as issued by the IASB in certain limited ways, including in the presentation of operating profit.
- PP&E is the largest line item among the company's assets, amounting to W17,878bn of the W25,203bn non-current assets and W38,398bn total assets. Many PP&E assets are held in the books on very long lives. Oil pipelines and tanks have useful lives up to 25 years, structures and machinery up to 40 years and buildings up to 50 years. Depreciation is on a straight-line basis over these lives. Estimated remaining lives are around: machinery – 10 years, year-end value W7,203bn; structures – 20 years, year-end value W636bn; and buildings – 35 years, year-end value W1,595bn[2]. Though mentioned in the accounting policy, oil pipelines and tanks are not broken out separately in the PP&E disclosures. Right of use assets also have relatively long lives: buildings up to 18 years, tanks and oil pipelines up to 10 and ships 10-11 years. Among such assets, only ships (W618m) and tanks (W217m) had any significant book value at year end. Implied lives for the ship right of use assets was 9.4 years, and only 3.4 years for the tank right of use assets.
- Non-current assets within the battery segment (including relevant PP&E), amounted to some W3,914bn at year end, a rapid increase from W1,876bn in 2019, reflecting the current expansion of this business. These new assets may skew some of the above average life estimates, but disclosure is not granular enough to provide clarity on this.
- There is W1,224bn of goodwill on the balance sheet, including W321bn in respect of oil fields under exploration. The largest single item is 'Others', worth some W611bn, which appears to be essentially brands. Goodwill is valued at W249bn following the June 2020 acquisition of the Arkema polymer business that added W154bn to the total. This business combination also added W169bn to the 'Others' intangibles line during the year.
- These significant balance sheet values all depend on judgements about the scale and longevity of future profitability. It is not apparent that climate change considerations have been built into the development of the relevant judgements.

Consistency with other reporting		Significant concerns

- The annual report (as yet only a regulatory version rather than a glossy version) is only available in Korean. The English language financial statements were published more than a month later. The sustainability report is published on a different timetable, and at the time of writing only the 2019 report (published June 2020) is available.
- The differences in disclosed 2019 Scopes 1&2 GHG emission numbers between the sustainability report and the annual report are only marginal (total 12.518m tCO2e in the sustainability report compared with 12.528m tCO2e in the annual report) but they are visible

[2] In the absence of better data, implied lives are roughly estimated using depreciation expense and year end asset values net of depreciation.

across the numbers attributable to each subsidiary. This raises concerns about consistency, and confidence in the quality of disclosures generally – as well as about the independent assurance process.

- Though the company acknowledges the scale of the climate change issue and the need for sustainability, its undertakings related to climate change remain ill-defined and lacking in precision. The continued investment into the integrated oil and gas and chemicals businesses do not seem to reflect the acknowledged need for change.

Climate assumptions in accounts: visibility and Paris alignment

Visibility of climate assumptions in accounts		Significant concerns

- There are no apparent climate-related assumptions. There is thus no sensitivity analysis.

Paris alignment		Significant concerns

- With no visibility, there can be no alignment with the goals of the Paris Agreement.

Audit: visibility in KAMs and consistency check

Audit firm: Ernst & Young Han Young	Responsible partner: Bok Han Lee
Audit standards: KGAAS – Korean Auditing Standards (aligned with IAASB ISA standards)	

Visibility in Key Audit Matters		Significant concerns

- There is no explicit reference to climate change in the auditor's report.
- There are 2 KAMs identified – (i) deferred tax; and (ii) allocation of price for acquisition of polymer business. It is rare for the auditor of an oil and gas company's accounts not to include KAMs on reserves and decommissioning provisions.
- Deferred tax assets amounted to W899bn, fully 5.8% of net assets. Any assessment as to whether this figure is recoverable depends on assumptions about the future profitability of the business. Key issues such as climate change should be incorporated in any consideration about likely future profitability, but it is not referenced by the auditor.
- The reference to the use of advice from specialists refers to tax specialists, not those expert in climate change or CO2 markets.
- The auditor draws attention to an emphasis of matter with regard to the accounts: an open dispute with the US International Trade Commission, which – following complaints from rivals LG Chem and LG Energy Solutions about alleged intellectual property infringements – is seeking to ban battery and battery-related imports from SK Innovations to the US for 10 years.

Consistency check		Significant concerns

- The auditor's report does not refer to any obligation to read materials beyond the financial statements and to report on any inconsistencies that might be identified between these other materials and the financial statements, together with inconsistencies from what the auditor understands of the company through its work. However, ISA720 does require such actions by the auditor.
- The auditor identifies no such inconsistencies, in spite of the lack of incorporation of climate change issues into the financials and apparent issues such as the GHG emissions discrepancies.
- The Sustainability Report 2019 reproduces Ernst & Young Han Young's audit report from the financial statements, but external assurance on the sustainability report is provided by another provider.

<table>
<tr><td rowspan="5">The Climate Accounting Project is an independent investor-led project to reinforce the statements of the IASB and IAASB that material climate change issues are incorporated within their standards. This analysis seeks to understand the extent to which companies and auditors are delivering against this aspect of these standards and similar local standards.</td><td colspan="2">Key</td></tr>
<tr><td></td><td>Good practice</td></tr>
<tr><td></td><td>Few concerns</td></tr>
<tr><td></td><td>Some concerns</td></tr>
<tr><td></td><td>Significant concerns</td></tr>
</table>

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