MORNINGSTAR | SUSTAINALYTICS

Final Report Executive Summary – Approved for Public Disclosure

January 2024

Responsible Cleantech

THE ISSUE AT HAND

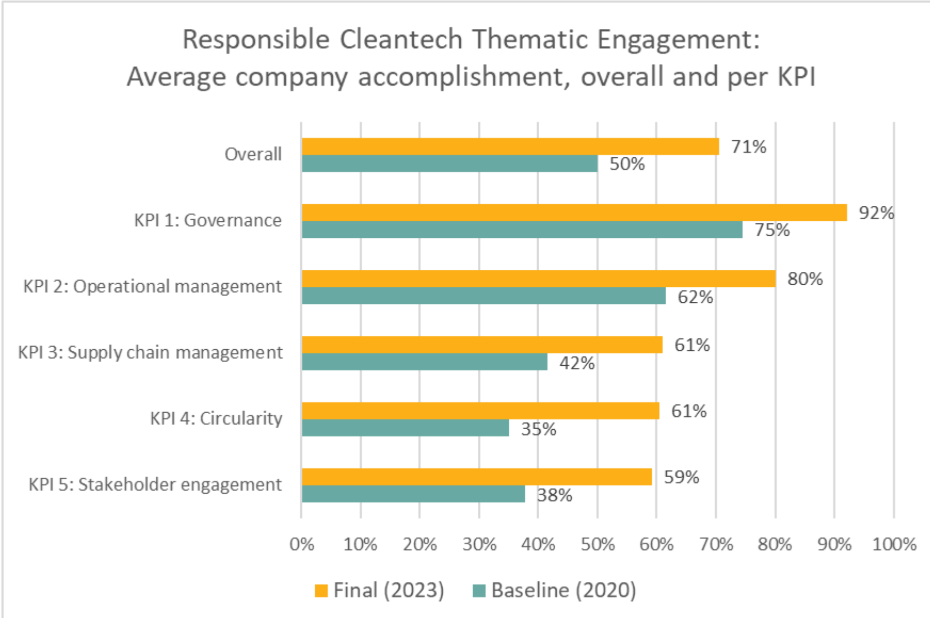
Just like the products it aims to replace or make more efficient, cleantech requires space and natural resources. Companies have a responsibility to respect local communities' human rights and consider the environmental impacts in and around sites where raw materials are sourced, where products are made, and/or where renewable energy is generated. Similarly, the cleantech supply chain relies on human resources. The labour rights of workers in mines and factories need to be respected, including healthy and safe working conditions, freedom of association and collective bargaining, and either avoidance or mitigation of child and forced labour. Furthermore, the recycling of products such as solar photovoltaic (PV) systems, wind turbines and vehicle batteries has received less attention than the benefits of these technologies. It is advantageous to promote circular business models for recovering materials when products reach the end of their life cycle. These products are truly sustainable only if all stages in the value chain are environmentally and socially sustainable.

Sustainalytics' Responsible Cleantech Thematic Engagement addressed both the environmental and social implications of the growth of selected cleantech domains—photovoltaic solar panels, wind turbines, battery electric vehicles and hydrogen—and sought alignment with multiple Sustainable Development Goals, namely: SDG 7 Affordable and clean energy, SDG 8 'Decent work and economic growth', SDG 9 'Industry, innovation and infrastructure', SDG 12 'Responsible consumption and production', and SDG 13 'Climate action'.

ENGAGEMENT RESULTS

This final report accounts for the overall progress since the Responsible Cleantech Thematic Engagement started with a baseline report in September 2020. In total, Sustainalytics approached 33 companies. Ultimately, 19 companies accommodated substantial dialogue. These were: Daqo New Energy, First Solar, Ford Motor, Goldwind, Gurit, Hanwha Solutions, Honda Motor, Hyundai Mobis, Johnson Matthey, LG Energy Solution, LONGi Green Energy Technology, Nordex, Plug Power, Schneider Electric, SunPower, Tesla, TPI Composites, Vestas Wind Systems and Volkswagen.

Throughout the engagement, Morningstar Sustainalytics assessed the engaged companies on five key performance indicators (KPIs) that covered governance, operational management, supply chain management, circularity, and stakeholder engagement. The graph below shows that performance is highest on KPI 1, followed by KPI 2 and then KPIs 3, 4 and 5. In the course of the three-year engagement period, all average scores improved incrementally. The overall average score improved from 50 to 71%.



Some KPIs generated more dialogue than others and there were many topics for us to cover. Some companies asked for more focus, but there were also companies that accepted that investors require management, oversight and accountability of all material environmental and social issues. It was great to see how companies in East Asia, Europe and the U.S. climbed a learning curve with respect to opening up for dialogue, helping investors understand their business reality better and interpret their sustainability reporting. Supply chain management (KPI 3), including participation in multi-stakeholder supply chain initiatives (part of KPI 5), became our biggest topic. From the start, many companies were already considerably more advanced with governance (KPI 1) and operational management (KPI 2). Especially with respect to operational management, it was already possible to go beyond establishment of policies and ambitions and engage more on implementation and actual progress. Last but not least, circularity (KPI 4) was arguably the most challenging topic in this Thematic Engagement, considering how hard it can be to replace the linear 'take-make-waste' status quo by a circular economy that is commercially viable. Morningstar Sustainalytics concluded that this topic merits a more dedicated engagement programme, also with more industry and value chain focus.

It was a good decision to engage multiple cleantech domains on responsible production and sourcing, considering that there is significant overlap in capacity requirements and success factors. Morningstar Sustainalytics was regularly able to offer companies some cross-pollination, for example by pointing a wind company to a strong practice in a sustainability report of a solar company. The companies appreciated this effort. Yet, we also unpacked plenty of industry-specific circumstances, which investors can use to improve their portfolio's risk-return profiles and/or contributions to sustainable development goals.

CONCLUSION

Achieving the Change Objective

The change objective of the Responsible Cleantech Thematic Engagement was to catalyze more sustainable production of some of the most popular cleantech solutions.

We encouraged manufacturers to apply a life-cycle approach and implement policies that adequately addressed environmental and social risks in their operations and supply chains. Companies should also engage their suppliers and customers and start or join collaborative initiatives towards industry-wide improvement. The KPI framework helped structure the engagement conversations and ensured coverage of governance, operational management, supply chain management, circularity and stakeholder engagement.

For this engagement we targeted a mix of leaders and laggards. We gave leading companies a stage to promote their best practices and we encouraged accountability with respect to implementation of their programmes and progress towards their ambitious targets. We promoted best practices among the lagging companies and encouraged more initiative.

Out of the 19 engaged companies, four companies managed to make it to the end of our milestone pathway (Milestone 5) and four more companies got close (Milestone 4). There were three other companies that did not quite get that far but they did also impress us with their progress (Milestone 3). The remaining eight companies are considered less advanced with the implementation of their strategy.

The change objective was ambitious. After three years of engagement, we are seeing a shift in thinking and a desire towards cleantech solutions that are produced responsibly. A life-cycle approach that addresses environmental and social risks in supply chains is needed if we want to have better visibility on how to improve and mitigate risks. Despite closing what we feel is an important engagement, we expect that the engaged companies will continue to advance in these aspects.

Although regulation and assurance standards help mitigate free rider risks with addressing negative environmental and social externalities, it is feeling far from safe to conclude that all cleantech manufacturing companies will deliver sustainable value chains. It remains essential for investors to keep sufficient pressure on their portfolio companies, insisting on multiple, mutually reinforcing sources of assurance, such as reporting, audit, proxy voting and responsiveness to investor engagement inquiries. Several of the investors participating in this Thematic Engagement insisted that the highest quality companies do not merely account for their successes and achievements but also their shortcomings and plans to overcome these.

The Value of Collaborative Engagement

Together with its investor clients, Morningstar Sustainalytics continues to learn how to deliver ESG engagement dialogue efficiently and impactfully. In the case of the Responsible Cleantech Thematic Engagement, the collaborative exchange of insights and expectations between investor and company representatives often yielded a constructive learning environment, with the companies educating the investors about the complex environmental, social and economic challenges in their cleantech value chains and with the investors explaining what sort of industry initiatives and corporate disclosures would need to be prioritized for companies to retain and reinforce their investibility as a sustainable stock. On the engagement calls, investors expressed how they value strong responsiveness to the engagement and readiness to account for performance trends and to discuss actual challenges.

Some companies shared that the engagement helped to build relationships with investors, while others saw it as an opportunity to learn what investors value in terms of 'ESG'. Here a selection of feedback from some of the engaged companies' investor relations or sustainability managers:

"It is important to us to have this sort of dialogue because it is directly linked to our competitiveness, and it helps solidify the trust of our investors."

"This engagement has really helped us advance our ESG agenda and raise more awareness internally. The open dialogue has also reinforced our confidence that we are on track to get the fundamentals right."

"We are very grateful for the opportunity to learn what investors value through the conversation."

"Your guidance and support have helped us in our ESG journey. As a result, the company has become more transparent, with additional disclosures, as well as efforts to improve in various ESG areas."

"Engagement is really important. We need it for long-term viability. Periodical, robust conversations help us make the disclosure more meaningful so that there is less need for investors to reach out to us with one-off requests, saving us and them time."

Besides positive feedback, we also received various suggestions for further improvement of our engagement approach and the role of investors. Some companies sought to understand how ESG insights affect investment decisions, whereas others urged for more focus on the contribution of business to sustainable development and consolidation of sustainability disclosure requirements. Both for companies and investors, short-term economic considerations can easily overrule ESG ones. This reality complicates the promotion of ESG leadership. That said, it was encouraging to witness an increasing number of companies finding intrinsic value in assessing and managing their ESG risk exposure proactively and that this is notion is shared globally, also helping to bridge cultural differences among countries. Furthermore, it was useful that some companies challenged the frequency, duration, and the scope of our engagement calls. There was enough time for each dialogue to grow and for us to keep experimenting with the format.

While the Responsible Cleantech Thematic Engagement ends here, Morningstar Sustainalytics' Stewardship team looks forward to continuing its engagement efforts in close collaboration with investor coalitions. We would like to thank all investors who endorsed and financed this engagement. The investor backing and participation in calls benefitted the quality and impact of the engagements.

Appendix (also approved for public disclosure): "Engagement Case Study: Volkswagen Leveraging ESG Engagement Dialogue"

About Morningstar Sustainalytics

Morningstar Sustainalytics is a leading ESG data, research, and ratings firm that supports investors around the world with the development and implementation of responsible investment strategies. For more than 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Morningstar Sustainalytics works with hundreds of the world's leading asset managers and pension funds who incorporate ESG information and assessments into their investment processes. The firm also works with hundreds of companies and their financial intermediaries to help them consider material sustainability factors in policies, practices, and capital projects. Morningstar Sustainalytics has analysts around the world with varied multidisciplinary expertise across more than 40 industry groups. For more information, visit www.sustainalytics.com.

Sustainalytics
info@sustainalytics.com
www.sustainalytics.com

Engagement case study: Volkswagen
Leveraging ESG Engagement Dialogue

This case study illustrates how a company can leverage collaborative ESG engagement dialogue with multiple investors to reinforce its accountability and investibility.

Engagement background and rationale
Volkswagen is among the world's largest car manufacturing companies. Following the 'Diesel Gate' emissions manipulation scandal in 2015, Morningstar Sustainalytics represented a group of institutional investors in a 'Global Standards Engagement' with Volkswagen, seeking assurances from the company that it provides remediation and takes measures to prevent recurrence. For it to retain its social licence-to-operate, it needed to turn everything around, from organizational culture to technology. Through this process of reflection and change, the company developed a business case for a transition away from internal combustion engine (ICE) technology toward battery electric vehicles (BEVs).

As the Global Standards Engagement approached its resolution, the company saw the benefits of engaging with investors. In January 2021 Volkswagen joined our 'Responsible Cleantech'- themed, collaborative engagement. This engagement ran until December 2023 and Volkswagen was among the most responsive companies. Learning from its earlier controversy, it understood that long-term success of the transition from ICEs to BEVs would have to include not only sustainable technology but also responsible production. A transition toward a low-carbon economy needs to be delivered in a socially just manner as well to support a circular economy. As a reinforcing trend, regulation is increasingly requiring companies to improve their ESG accountability. In Volkswagen's home country Germany, there is a supply chain due diligence law that entered into force on 1 January 2023, ahead of similar regulation at the EU level.

Volkswagen's engagement response
Volkswagen agreed to engage, regarding it as an opportunity to maintain and build its investor relations and to use the dialogue as a relatively safe testing ground for its strategy, enabling investors to challenge its ambition level and account for its progress. The openness helped to assure investors that ESG risks in their investments are managed. We started learning more about and testing the robustness of the company's sustainability strategy through a series of conference calls. The calls began with the investor relations department and evolved to include more to allow for more expertise.

The human rights department accounted for its strategy toward workforce transformation, up- and re-skilling its industrial employees and engineers and recruiting new staff for electrification and digitalization.

The procurement department presented its responsible sourcing strategy, educating investors on how ESG risks in its supply chain are diverse and complex. In addition to regular sustainability reporting, Volkswagen issued its third Responsible Raw Materials Report in 2023 which outlined its aim to source 16 priority materials responsibly. This was further illustrated by Volkswagen's Audi brand's pioneering work on sourcing aluminium, through collaboration with the Aluminium Stewardship Initiative. With the company depending on so many more materials, other group companies have been endorsing similar initiatives for various other materials. Furthermore, the engagement helped promote uptake among car companies to require from their raw material suppliers to implement the ambitious standard of the Initiative for Responsible Mining Assurance. Volkswagen also joined this initiative in 2022.

Key takeaway
Volkswagen accepted how the engagement served investor interests first of all. By generously educating investors and by opening up to discuss business dilemmas, the company grasped the opportunity to reinforce its management of investor expectations and share its multi-faceted sustainability strategy toward responsible production of BEVs.