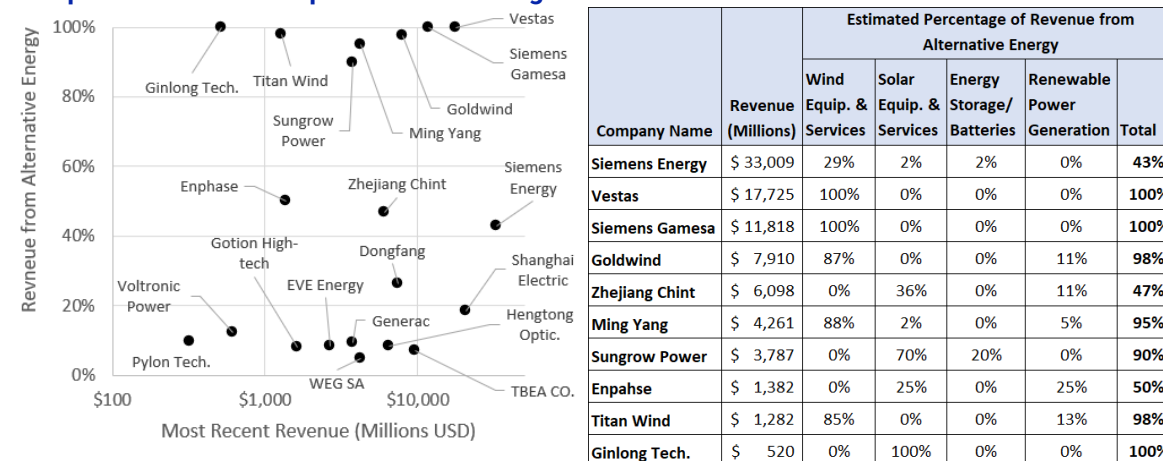


Industry Report | Electrical Equipment

December 2022

- Companies in the **Electrical Equipment** industry¹ may face opportunities for increased market demand for clean technology products, such as wind turbines and solar inverters, as countries and companies have set targets to reduce their greenhouse gas emissions.
- The electrical equipment industry included companies that offered equipment and services to the wind, solar, battery and fuel cell industries. Total reported revenue of the industry peer set was 409 billion USD for the most recent year reported. Of this total, we estimated 18% was derived from alternative energy products, services, and power, and 6% from energy efficiency applications, compared to just 0.9% and 2.1%, respectively, for constituents of the MSCI ACWI Index on average.
- The 10 companies with the most revenues derived from alternative energy derived between 43%-100% of revenues from alternative energy. Of these companies, **Siemens Energy** has the largest total revenues.

Exhibit 1: LEFT: Total revenue compared to percent revenue from alternative energy, largest 20 companies. RIGHT: Companies with the largest estimated share of revenue from alternative energy.



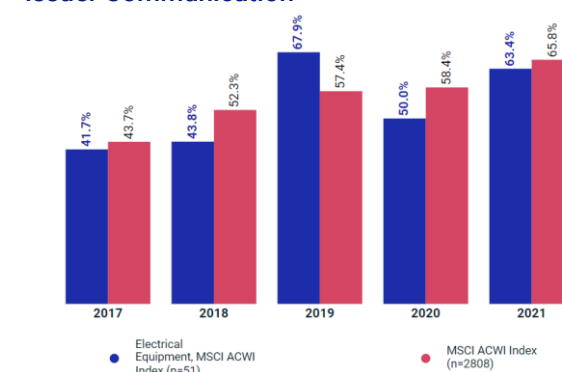
Source: MSCI ESG Research as of November 4, 2022.

¹ The Electrical Equipment Industry peer set comprised of 51 companies that were constituents of the MSCI ACWI Index as of November 4, 2022: Source: MSCI ESG Research LLC. See pages 8 to 12 for further details.

Rating Momentum



Issuer Communication



Report content

Key issues modelling
Key issues snapshot
Corporate Governance
Corporate Behavior
Toxic Emissions & Waste
Opportunities in Clean Tech
Labor Management
Appendices and scores

Related reports

Utilities industry Report

Author

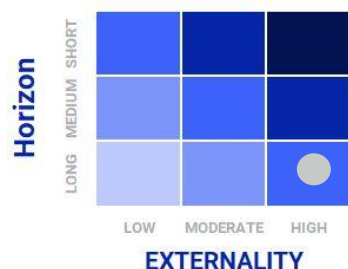
Nelson Lee | Senior Associate

Contributors

Christian Concepcion, Von Saulo Infante, Jonathan Ponder

Key Issues Modelling: Governance Pillar

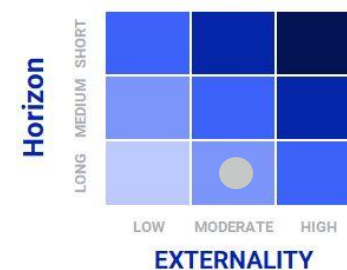
The Governance Pillar score is based on the assessment of two themes and their underlying Key Issues: **Corporate Governance** (Key Issues: Ownership & Control, Board, Pay, and Accounting) and **Corporate Behavior** (Key Issues: Business Ethics and Tax Transparency). A **minimum weight of 33%** is applied to the Governance Pillar for all issuer ESG Ratings. Please see the latest MSCI ESG Ratings Methodology reference guide for additional information.



Corporate Governance Theme

Strong corporate governance practices support the long-term sustainability and resilience of a company, and help balance the economic and social interests of its different stakeholders.

This theme evaluates the impact **companies' ownership structures, board and other corporate governance practices have on investors.**



Corporate Behavior Theme

The materiality and effectiveness of companies' business ethics policies are in their corporate behavior: not by what they say they do but rather by what they do.

This theme evaluates companies' oversight and management of **business ethics** issues such as fraud, executive misconduct, corruption, money laundering, or anti-trust violations, and its **tax transparency**, based on its estimated tax gap and any involvement in tax-related controversies.

KEY ISSUES AND KEY METRICS*

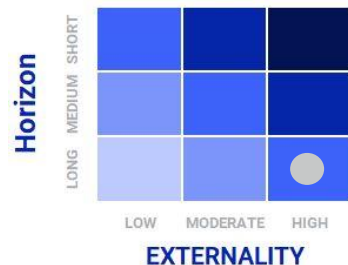
- **Ownership & Control:** Ownership structure (*cross shareholdings*); One share one vote (*voting rights limits shares held*); Control mechanisms (*poison pill*); Shareholder rights (*say-on-pay policy*); Director elections (*proxy access*).
- **Board:** Board leadership (*independent chair*); Board independence (*independent board majority*); Board effectiveness (*overboarded non-exec directors*); Board skills & diversity (*entrenched board*); Audit oversight (*Auditor tenure*); Pay oversight (*pay committee independence*); Strategic oversight (*executive misconduct*)
- **Pay:** Pay performance alignment (*Golden Hellos*); Pay figures (*CEO Pay Total Realized*); Severance & change of control (*Golden Parachutes*); Equity plan dilution (*Run rate concerns*); Non-executive director pay (*Director equity policy*)
- **Accounting:** Account risks (*Revenue recognition*); Accounting events (*Accounting investigations*)

KEY ISSUES AND KEY METRICS*

- **Business Ethics:** Policies and Practices (*bribery and anti-corruption policy, whistleblower protection, employee ethics training*); Business Ethics Risk & Controversies (*Corruption risk exposure & controversies*)
- **Tax Transparency:** Estimated tax gap (i.e. the gap between estimated effective tax rate and estimated corporate income tax rate), and any involvement in tax-related controversies

**in brackets examples of Key Metrics (a total of 96 under Corporate Governance Theme and 10 under Corporate Behavior Theme)*

Key Issues Modelling: Environmental and Social Pillars

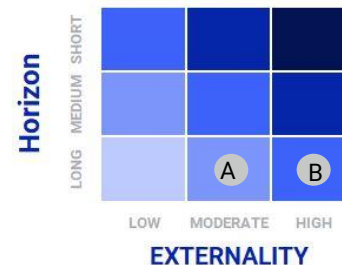


Toxic Emissions & Waste

WEIGHT:

Electrical Components & Equipment: 13%
Heavy Electrical Equipment: 12%

Companies generate large amounts of waste and air pollutants that impact public health and contribute to environmental degradation. This is especially true for the manufacture of insulated wires, storage batteries, and carbon and graphite products.

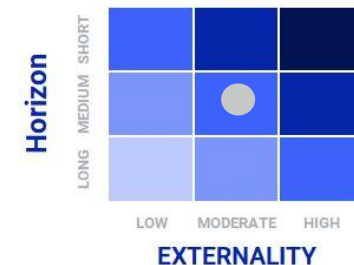


Opportunities in Clean Tech

WEIGHT:

A: Electrical Components & Equipment: 19%
B: Heavy Electrical Equipment: 24%

Clean technology has a positive impact on the global environmental footprint through optimization of resource use and reduced generation of emissions. The electrical equipment industry supplies products that may help satisfy demand for clean energy, such as wind turbines and solar inverters.



Labor Management*

WEIGHT:

Electrical Components & Equipment: 24%
Heavy Electrical Equipment: 23%

With operations across continents and large workforces, labor management is a key challenge for companies in this industry. Operational disruptions and morale impacts can result from labor disputes and layoffs. Reduced operational efficiency can be costly in a highly competitive market.

RISK EXPOSURE INDICATORS

- Types of Operations: Percentage of operations in business segments with high/moderate/low toxicity, carcinogenicity and hazardous waste
- Percent of operations in business segments with involvement in developing clean tech products
- Types of Operations
- Location of Operations
- Size of the Workforce
- Business Restructuring Events

RISK MANAGEMENT INDICATORS

- Quality of environmental management systems, targets, auditing
- Implementation of emissions mitigation measures
- Performance: emissions intensity and trend for hazardous air pollutants and waste
- Accounting risk & events
- R&D capabilities, targets, and clean technology strategy
- Involvement in products or services that address clean energy, emissions, water treatment, energy efficiency, materials, and recycling
- R&D/sales and trend; Revenue derived from clean tech activities
- Percentage of workforce covered by collective agreements
- ESOP; Variable performance-based pay; Non-compensation benefits
- Training & development support
- Monitoring employee satisfaction

*Weights are determined at the GICS sub-industry level. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS®)" is a service mark of MSCI and Standard & Poor's

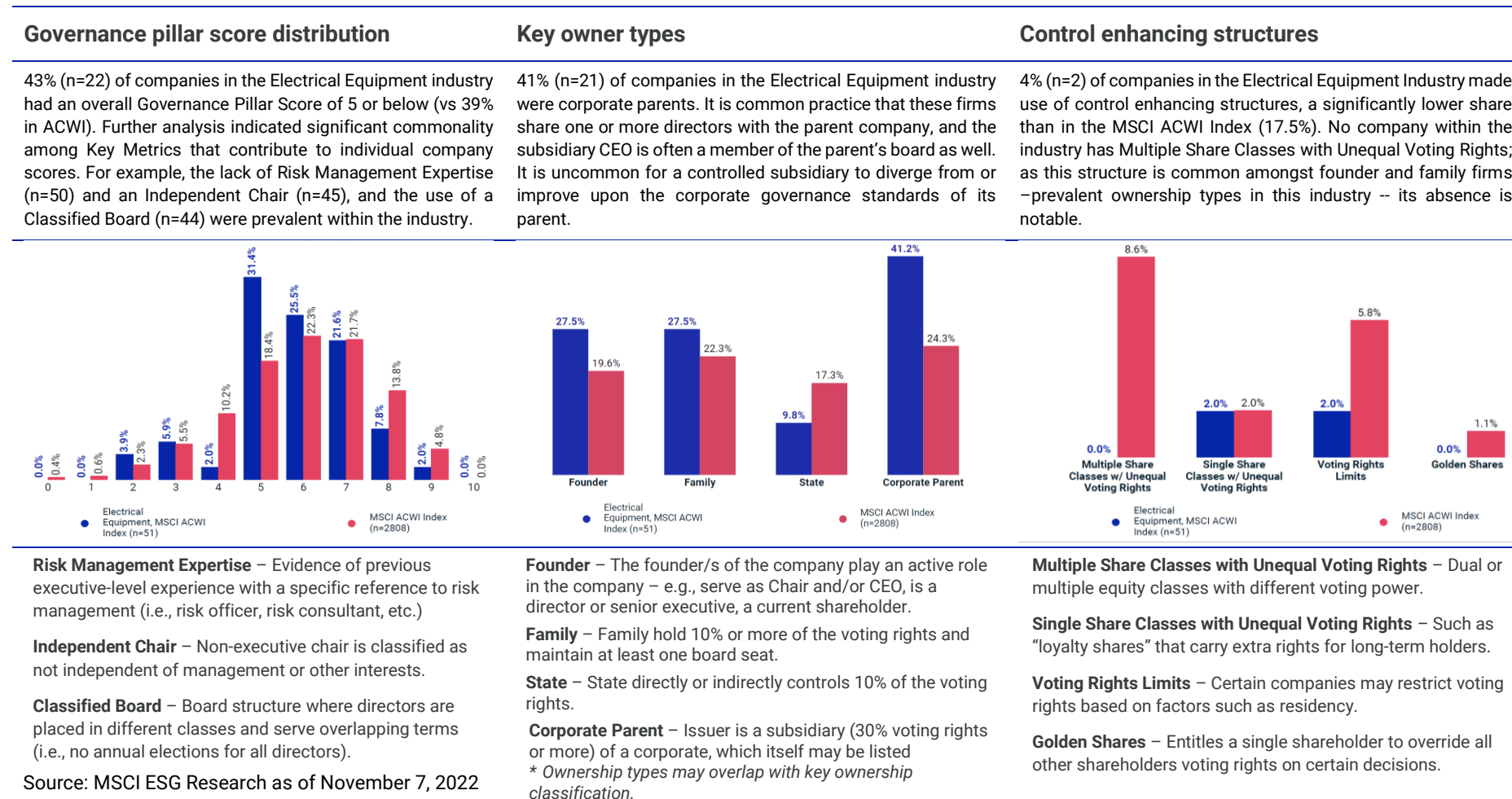
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Key issues snapshot

Corporate Governance: Performance overview

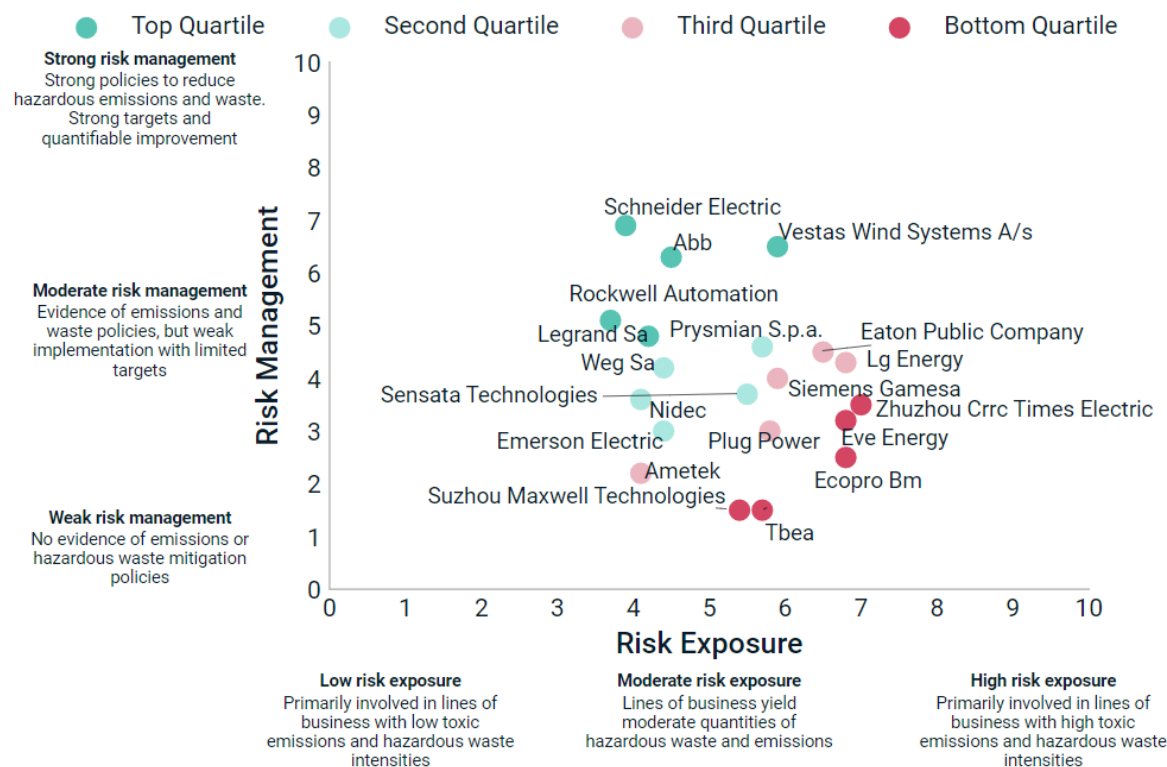
Governance risks vary widely depending on the nature of the company's ownership, the separation of ownership and management, the design of the capital structure and its impact on shareholders' voting rights.

Exhibit 4: Board and Ownership Structures: MSCI ACWI Index vs. Electrical Equipment Industry



Toxic Emissions & Waste: Performance Overview

Description: Risk exposure (x-axis) is evaluated based on the air pollutant intensity and volume of hazardous waste generated in the industries in which a company operates. Risk management (y-axis) combines an assessment of performance (emissions intensity and trend) with strategies and goals to mitigate toxic pollutant and hazardous releases.



Company to watch | Abb

Abb was transparent about its environmental externalities and reported its VOC emissions and hazardous and non-hazardous waste, improving the ability to track progress towards its goals. Abb certified 73% of its manufacturing and service site to the environmental management system standard ISO 14001, and conducted environment audits of its locations on a regular basis. Further, Abb significantly reduced its SOx Emissions from 0.0028 tons per USD million in sales in 2019 down to 0.0003 tons per USD million in sales in 2020 and 2021, a decrease of 89% in one year (as of July 2022).

Company to watch | Emerson Electric

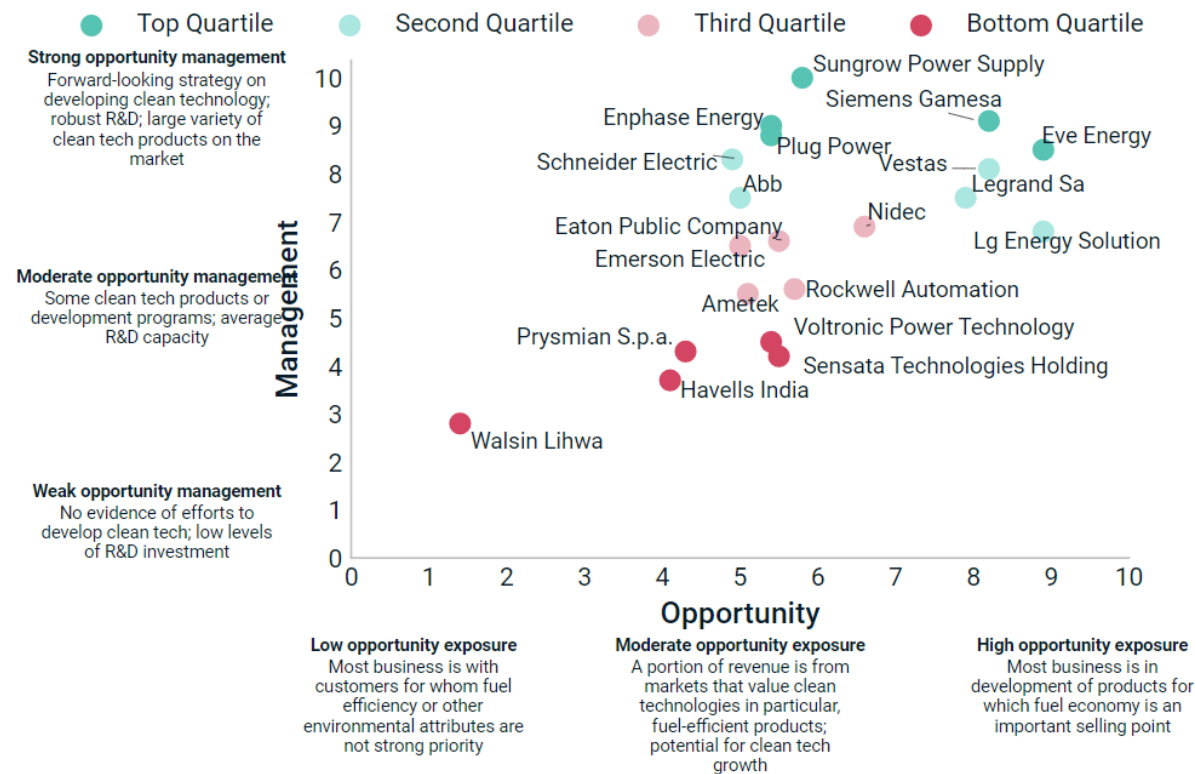
Emerson Electric's lack of transparency around programs and performance metrics to measure and manage air emissions and hazardous waste continues to make it difficult to gauge if the company's performance is improving or worsening over time. For example, we did not find evidence that the company had disclosed air pollutants like SOx and NOx, and no evidence of targets to reduce emissions and waste (as of July 2022).

Source: MSCI ESG Research LLC, as of November 07, 2022.

Note: Only 5 or fewer largest companies per quartile by market cap are included.

Opportunity in Clean Tech: Performance Overview

Description: The x-axis represents companies' exposure to opportunities in clean technology based on the nature and geography of their business. The y-axis indicates our scoring of strategies, programs and targets in place to realize these opportunities, as well as the percentage of alternative energy and energy efficiency revenues in the company's current portfolio.



Company to watch | Sungrow Power Supply

Sungrow Power Supply's main business line was the production of inverters for solar photovoltaic systems (as of Nov 2022). The company grew its revenues by a 36% CAGR while maintaining a 35% CAGR in research and development expenditures from FY18 - FY21. The company's above-average performance on our solar low-carbon patent score indicated that the company had protected some of its intellectual property in solar technology.

Company to watch | Havells India Limited

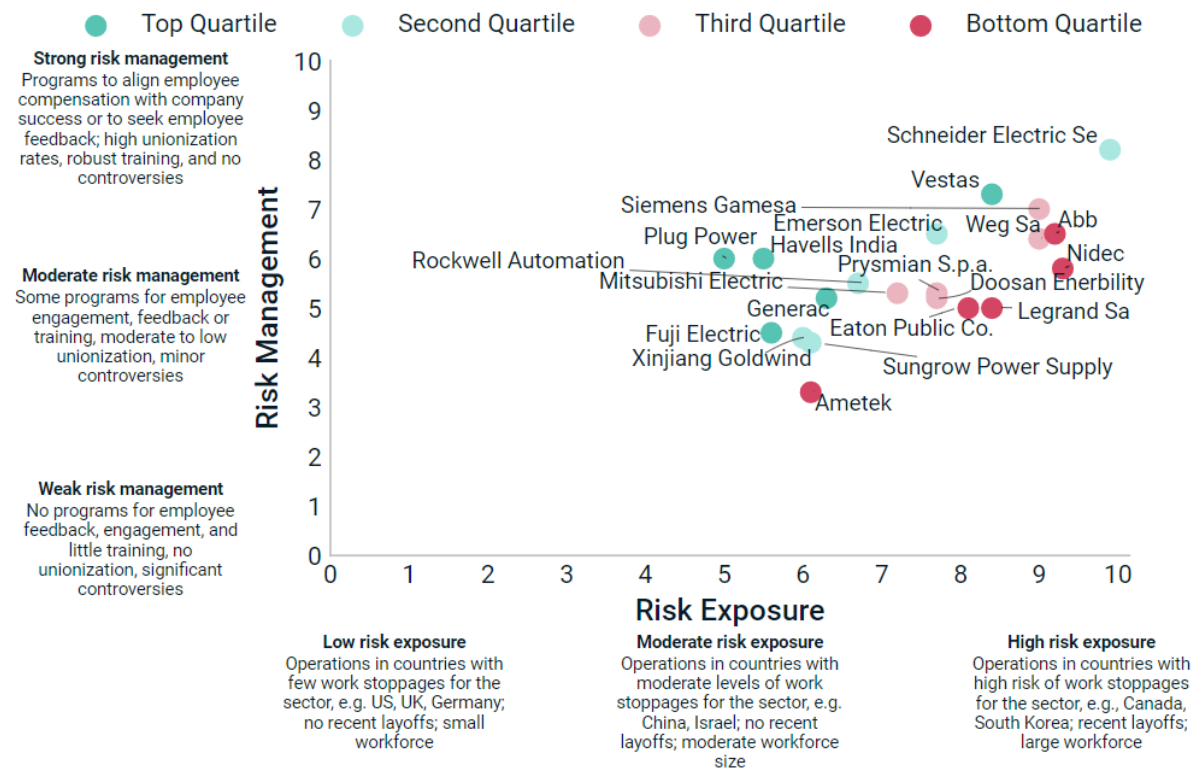
Havells India Limited's product offering included a wide variety of consumer and industrial electric equipment. We estimated that 1% of FY 2021 revenues are derived from alternative energy (solar) products and 5% from energy efficient (lighting) products; however, most business lines did not appear to be involved in clean technology products. The company also lagged its industry peers in its FY21 ratio of R&D-to-sales (as of Nov 2022).

Source: MSCI ESG Research LLC, as of November 07, 2022.

Note: Only 5 or fewer largest companies per quartile by market cap are included.

Labor Management: Performance Overview

Description: The x-axis indicates company's exposure to operations and labor issues (e.g. propensity for strikes, layoffs). The y-axis indicates our scoring of labor management practices, based on benefits, collective bargaining representation, employee training and development, and implication in workforce-related controversies.



Company to watch | Schneider Electric

Schneider Electric had industry leading employee management initiatives including extensive stock option grants, talent development programs, and strong performance-based pay that covers all employees (as of July 2022). The company has also demonstrated strong commitment towards human rights protection.

Company to watch | Ametek

Ametek showed no evidence of employee stock ownership plans, or employee engagement channels (as of May 2022). This may limit the company's ability to manage potential workforce integration challenges tied to its recent acquisitions of Alphasense (November 2021) and Abaco (April 2021).

Source: MSCI ESG Research LLC, as of November 07, 2022.

Note: Only 5 or fewer largest companies per quartile by market cap are included.

Appendices & Scores

Appendix I | Company Performance on Key Issues

Description: The table below indicates ratings and key issue rankings for the **Electrical Components & Equipment** sub-industry. Ratings, quartiles and company scores were correct as of **November 04, 2022**, and may since have changed due to frequent updates. In cases of discrepancies between the company report and industry report, the company report should be considered definitive.

Company	ENVIRONMENT		SOCIAL	GOVERNANCE		Company-specific Key Issue	ESG rating and trend	Rating action date
	Toxic Emissions & Waste	Opportunities in Clean Tech	Labor Management	Corruption & Instability	Corporate Governance			
	13%	19%	24%	44%				
Schneider Electric Se	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AAA ↔	07/Jul/22
Abb Ltd	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AA ↔	28/Jul/22
Fuji Electric Co., Ltd.	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>		AA ↑	20/Oct/22
Prysmian S.P.A.	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AA ↑	20/Aug/21
Legrand Sa	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AA ↔	05/Aug/21
Rockwell Automation, Inc.	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>		A ↔	25/Aug/22
Generac Holdings Inc.	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↔	20/Sep/22
Voltronic Power Technology Corp	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		A new	20/Jan/22
Plug Power Inc.	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>		A ↑	23/Sep/21
Sungrow Power Supply Co., Ltd.	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↓	08/Sep/22
Emerson Electric Co.	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↑	28/Jul/22
Havells India Limited	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		A ↑	21/Oct/21
Eaton Corporation	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		BBB ↔	23/Sep/21
Enphase Energy, Inc.	—	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		BBB ↑	03/Jun/21
Weg Sa	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		BBB ↔	28/Mar/22

QUARTILE KEY: ● Bottom Quartile; ●● Third Quartile; ●●● Second Quartile; ●●●● Top Quartile

RATING TREND KEY: ↔ maintain ↑ upgrade ↑↑ two or more notch upgrade ↓ downgrade ↓↓ two or more notch downgrade

Appendix I | Company Performance on Key Issues (continued)

Description: The table below indicates ratings and key issue rankings for the **Electrical Components & Equipment** sub-industry. Ratings, quartiles and company scores were correct as of **November 04, 2022**, and may since have changed due to frequent updates. In cases of discrepancies between the company report and industry report, the company report should be considered definitive.

Company	ENVIRONMENT		SOCIAL	GOVERNANCE		Company-specific Key Issue	ESG rating and trend	Rating action date
	Toxic Emissions & Waste	Opportunities in Clean Tech	Labor Management	Corruption & Instability	Corporate Governance			
	13%	19%	24%	44%				
Sensata Technologies	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		BBB ↔	16/Sep/21
Nidec Corporation	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		BBB ↔	28/Mar/22
Gotion High-Tech Co.,Ltd.	<div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>		BB ↔	23/Sep/21
Ametek, Inc.	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		BB ↑	26/May/22
Jiangsu Zhongtian Technology Co.,	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>		BB ↔	27/Aug/21
Zhejiang Chint Electrics Co.,	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>		BB ↔	27/Sep/22
Pylon Technologies Co Ltd	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>		BB new	26/Oct/22
Lg Energy Solution, Ltd.	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>		BB new	27/Apr/22
Beijing Easpring Material	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	*WS;*CS;	BB new	26/Oct/21
Eve Energy Co., Ltd.	<div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>		B ↓	22/Sep/22
Sunwoda Electronic Co., Ltd	<div><div></div></div>	<div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>		B ↔	19/Aug/21
Walsin Lihwa Corporation	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>		B ↓	23/Jun/22
Jiangxi Special Electric	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>		B new	31/Jan/22
Suzhou Maxwell Technologies Co	<div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>		B ↔	04/Oct/22
Sieyuan Electric Co., Ltd.	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div></div>		B new	28/Jan/22

QUARTILE KEY: ● Bottom Quartile; ●● Third Quartile; ●●● Second Quartile; ●●●● Top Quartile

RATING TREND KEY: ↔ maintain ↑ upgrade ↑↑ two or more notch upgrade ↓ downgrade ↓↓ two or more notch downgrade

Appendix I | Company Performance on Key Issues (continued)

Description: The table below indicates ratings and key issue rankings for the **Heavy Electrical Equipment** sub-industry. Ratings, quartiles and company scores were correct as of **November 04, 2022**, and may since have changed due to frequent updates. In cases of discrepancies between the company report and industry report, the company report should be considered definitive.

Company	ENVIRONMENT		SOCIAL	GOVERNANCE		Company-specific Key Issue	ESG rating and trend	Rating action date
	Toxic Emissions & Waste	Opportunities in Clean Tech	Labor Management	Corruption & Instability	Corporate Governance			
	12%	23%	23%	41%				
Vestas Wind Systems A/S	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AAA ↔	26/May/22
Siemens Gamesa Renewable Energy, S.A.	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		AA ↑	26/Sep/22
Xinjiang Goldwind Science & Technology Co., Ltd	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↓	16/Sep/22
Shanghai Electric Group Company Limited	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↑	03/Nov/22
Mitsubishi Electric Corporation	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>		A ↑	11/Aug/22
Siemens Energy AG	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>		A ↑	26/May/22
Ming Yang Smart Energy Group Limited	<div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div></div>		BBB ↔	08/Sep/22
Titan Wind Energy (Suzhou) Co., Ltd.	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div></div>		BBB new	28/Jan/22
NARI Technology Co., Ltd.	<div><div></div><div></div><div></div><div></div></div>	<div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>		B ↓	27/Oct/21
Doosan Enerbility Co., Ltd.	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div></div>		B ↔	29/Aug/22
Zhefu Holding Group Co., Ltd.	<div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div></div>	<div><div></div></div>	<div><div></div></div>		B ↔	04/Oct/22

*Indicates company-specific Key Issues and/or Weights *BEF= Business Ethics & Fraud, PSQ = Product Safety and Quality

QUARTILE KEY: ● Bottom Quartile; ●● Third Quartile; ●●● Second Quartile; ●●●● Top Quartile

RATING TREND KEY: ↔ maintain ↑ upgrade ↑↑ two or more notch upgrade ↓ downgrade ↓↓ two or more notch downgrade

Appendix II | Corporate Governance Performance

Description: The table below shows the Corporate Governance performance of **Electrical Equipment industry** peers as of **November 04, 2022**.

Company	Home Market	Corporate Governance Assessment								Corporate Governance Score
		Board Performance		Pay Performance		Ownership & Control Performance		Accounting Performance		
		vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	
Prysmian	IT	Best In Class	Best In Class	Best In Class	Best In Class	Average	Average	Best In Class	Best In Class	9.1
Legrand	FR	Average	Above Average	Best In Class	Best In Class	Above Average	Above Average	Best In Class	Best In Class	8.5
Vestas	DK	Average	Above Average	Average	Above Average	Average	Above Average	Above Average	Above Average	8.2
Sensata Technologies	GB	Average	Average	Average	Average	Best In Class	Average	Best In Class	Best In Class	7.9
Nidec	JP	Above Average	Average	Best In Class	Best In Class	Average	Average	Average	Average	7.7
Schneider Electric	FR	Average	Average	Average	Above Average	Average	Average	Best In Class	Best In Class	7.5
Voltronic Power Technology	TW	Above Average	Above Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	7.3
ABB	CH	Average	Average	Below Average	Average	Best In Class	Best In Class	Best In Class	Best In Class	7.3
Enphase Energy	US	Average	Above Average	Average	Above Average	Average	Average	Best In Class	Best In Class	7.1
Siemens Gamesa	ES	Average	Average	Best In Class	Best In Class	Below Average	Average	Best In Class	Best In Class	7.0
Havells India	IN	Average	Average	Average	Average	Best In Class	Average	Best In Class	Best In Class	7.0
Eaton	IE	Average	Average	Average	Average	Best In Class	Above Average	Below Average	Below Average	7.0
Siemens Energy		Below Average	Average	Above Average	Above Average	Average	Average	Best In Class	Best In Class	6.8
Goldwind	CN	Average	Below Average	Best In Class	Above Average	Best In Class	Above Average	Best In Class	Best In Class	6.6
Titan Wind Energy (Suzhou)	CN	Above Average	Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	6.6
Shanghai Electric	CN	Average	Average	Above Average	Average	Average	Average	Best In Class	Best In Class	6.6
Jiangxi Special Electric	CN	Above Average	Average	Worst In Class	Worst In Class	Average	Above Average	Best In Class	Best In Class	6.4
WEG	BR	Average	Average	Average	Below Average	Average	Average	Best In Class	Best In Class	6.3
Suzhou Maxwell	CN	Above Average	Average	Average	Below Average	Average	Above Average	Best In Class	Best In Class	6.3
Mitsubishi Electric	JP	Average	Average	Above Average	Average	Average	Average	Average	Average	6.3

Appendix II | Corporate Governance Performance (continued)

Description: The table below shows the Corporate Governance performance of **Electrical Equipment industry** peers as of **November 04, 2022**.

Company	Home Market	Corporate Governance Assessment								Corporate Governance Score
		Board Performance		Pay Performance		Ownership & Control Performance		Accounting Performance		
		vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	vs. Home Market Peers	vs. Global Peers	
Beijing Easpring	CN	Best In Class	Above Average	Worst In Class	Worst In Class	Best In Class	Above Average	Best In Class	Best In Class	6.3
Ametek	US	Average	Average	Average	Average	Average	Below Average	Below Average	Below Average	6.3
Sungrow Power Supply	CN	Average	Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	6.2
Generac	US	Average	Average	Above Average	Above Average	Average	Below Average	Best In Class	Best In Class	6.1
Emerson	US	Average	Average	Average	Average	Below Average	Below Average	Below Average	Below Average	6.0
Sieyuan Electric	CN	Average	Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	5.9
Sunwoda Electronic	CN	Average	Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	5.9
Ginlong Technologies	CN	Average	Average	Average	Below Average	Best In Class	Above Average	Above Average	Above Average	5.8
Zhongtian Technology	CN	Average	Average	Average	Below Average	Best In Class	Best In Class	Best In Class	Best In Class	5.6
Hongfa	CN	Average	Average	Average	Below Average	Best In Class	Above Average	Best In Class	Best In Class	5.6
Fuji Electric (Fuji)	JP	Average	Average	Above Average	Average	Below Average	Average	Below Average	Below Average	5.5
Zhejiang HangKe		Above Average	Average	Average	Below Average	Average	Average	Best In Class	Best In Class	5.4
Pylon Technologies		Average	Below Average	Average	Average	Best In Class	Above Average	Best In Class	Best In Class	5.4
Rockwell Automation	US	Average	Average	Below Average	Average	Below Average	Below Average	Below Average	Below Average	5.3
Hengtong Optic-Electric	CN	Average	Below Average	Average	Below Average	Best In Class	Above Average	Above Average	Above Average	5.3
EVE Energy	CN	Average	Average	Average	Below Average	Average	Average	Best In Class	Best In Class	5.3
TBEA	CN	Average	Average	Worst In Class	Worst In Class	Best In Class	Above Average	Best In Class	Best In Class	5.2
LG Energy Solution		Average	Below Average	Above Average	Average	Below Average	Below Average	Best In Class	Best In Class	5.1
Orient Cable	CN	Average	Average	Average	Below Average	Average	Average	Best In Class	Best In Class	5.0
Fangda Carbon	CN	Average	Below Average	Above Average	Average	Average	Average	Best In Class	Best In Class	5.0
Chint Electrics	CN	Average	Below Average	Average	Below Average	Best In Class	Above Average	Below Average	Average	4.9

Appendix III | Issuer Communications Overview

ESG Issuer Communications is the central point of contact for all companies assessed by MSCI ESG Research across its entire ESG product suite. This dedicated team oversees a standardized and systematic ESG data review process for corporate issuers, and is tasked with addressing any questions issuers may have about their ESG data or assessments. The ESG Issuer Communications team also maintains a record of all issuer interactions, a summary of which can be found in its MSCI ESG Rating report.

Description: The table below shows the most active companies among the Electrical Equipment peers as of November 07, 2022. Data is based on interactions occurring within the previous 24 months.

Most Active Companies for Issuer Communication

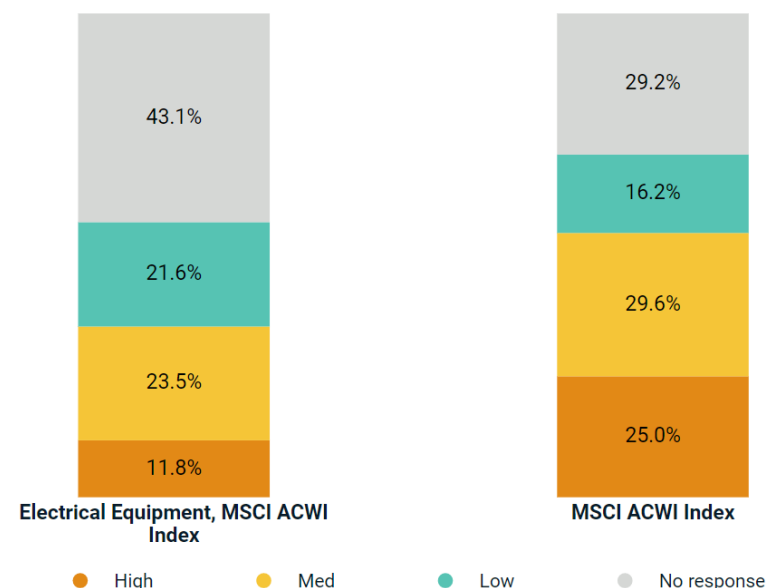
	Number of Interactions
Siemens Energy Ag	26
Ametek	22
Nidec	16
Eaton Public Company	13
Xinjiang Goldwind Science & Technology	12
Abb	11
Siemens Gamesa Renewable Energy	8
Doosan Enerbility	8
Shanghai Electric Group Company	8
Sungrow Power Supply	7

Statistical period is from November 06, 2020 to November 07, 2022

Source: MSCI ESG Research LLC, as of November 07, 2022

Description: The chart below shows the frequency of interactions with issuers in the previous 12 months.

Issuer Communication Frequency, Electrical Equipment, MSCI ACWI Index (n=51)



Statistical period is from November 06, 2020 to November 07, 2022. Source: MSCI ESG Research LLC, as of November 07, 2022

Frequency of interactions represents interactions over the past 24 months:

- High = Ten or more interactions;
- Medium = Between three and nine interactions;
- Low = Between one and two interactions

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