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Extent of ESG disclosure for energy sector companies: ESG reporting guide 2.0 Nasdaq

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ABSTRACT

Purpose: The aim of this research is to assess the extent to which energy sector companies have disclosed ESG-related information in their annual reports in 2021 and 2022.

Methodology/approach: This research uses secondary data obtained from company annual reports accessed via the Indonesia Stock Exchange (BEI) website and the official websites of related companies. ESG is measured using indicators from Nasdaq's ESG Reporting Guide 2.0, which consists of a total of 30 measurement indicators.

Findings: The research results show that energy sector companies listed on the IDX in 2021 and 2022 have implemented extensive ESG disclosures to the public.

Practical and Theoretical contribution/Originality: ESG-related information can be used as additional analysis material for investors before deciding to invest in the company. In this way, investors can understand the impacts and efforts made by the company as a result of operational activities that can have an impact on the environment. The findings of this research can also provide a reference for the government in formulating policies regarding the impact of energy sector company activities on environmental sustainability. Meanwhile, for academics, this research can be used as a reference and reference for similar research in the future.

Research Limitation: This research has limitations in the level of subjectivity when searching for information in annual reports. This subjectivity is caused by the use of keywords used by each researcher which can be different. Future research could use other sector areas to assess the extent of ESG disclosure in company annual reports.

KEYWORDS: Energy; Environmental, Social, Governance (ESG); Sustainability; Reporting.



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INTRODUCTION

Environmental, Social, and Governance (ESG) is a form of disclosure regarding companies' non-financial performance. Companies use ESG to communicate their non-financial performance related to environmental, social, and corporate governance aspects to stakeholders. ESG is an extension of voluntary disclosure information companies provide, which investors can use to evaluate corporate performance ([Roestanto et al., 2022](#)).

ESG factors influence company evaluations and positive perceptions of companies. This can potentially have a positive impact on stock prices. Moreover, ESG disclosure positively affects corporate performance metrics ([Lee et al., 2024](#)). The ESG score is one of the foundations for investors' decisions about a company. ESG disclosure has the potential to enhance a company's reputation by providing information about environmental, social, and governance responsibilities to the public. The United Nations Sustainability expects that by 2030, all listed companies will disclose ESG reports as part of their contribution to environmental preservation ([Safriani & Utomo, 2020](#)).

The high quality of ESG disclosure is crucial, as a high ESG rating can make companies targets for socially responsible investment (SRI) funds. In this context, simply adopting sustainable practices will not be sufficient if companies cannot provide credible evidence through adequate public sustainability disclosures ([D'apice et al., 2020](#)). For companies, ESG represents responsibility towards the environment and society regarding the operational activities that often disturb the surrounding environment. A good company will have a high ESG score, reflecting a robust environmental concern ([Putra & Adrianto, 2019](#)).

ESG information complements financial reports by sending positive signals about the company and building a good reputation among stakeholders. Compared to mandatory financial details, company management has more flexibility in preparing ESG information and more discretion in disclosing ESG reports ([Chen et al., 2024](#)). ESG reporting does not have standardized accounting guidelines and is generally voluntary, which can lead to inconsistencies in content and raise doubts about the quality and accuracy of the information disclosed ([Darnall et al., 2022](#)).

ESG guidelines significantly impact the analysis of companies in the energy sector. These guidelines encourage energy companies to adopt more environmentally friendly and socially responsible practices and push them to integrate renewable energy into power systems ([Li et al., 2024](#)). The Indonesia Stock Exchange (IDX) strongly supports ESG disclosure by listed companies. This is because ESG disclosure is a form of corporate commitment to stakeholders, allowing them to understand the company's condition ([Septiana & Puspawati, 2022](#)).

Managers should focus on improving ESG performance, as it can potentially enhance company value, attract investments, promote sustainability, control risks, impact revenues, and influence ownership structures. Additionally, managers need to consider the importance of strong ESG performance in mitigating the negative effects of external crises ([Mendez et al., 2024](#)). There are increasing demands from capital market participants, regulators, and other stakeholders worldwide for the measurement and disclosure of information related to ESG risks and opportunities that have financial impacts transparently ([Lokuwaduge et al., 2022](#)). ESG disclosure should reduce adverse selection and improve liquidity in secondary markets ([Starks, 2023](#)).

Investor's non-financial preferences are crucial in influencing the capital market effects of ESG disclosure ([Leuz et al., 2021](#)). The implementation of ESG has a positive impact, as it

can add value to companies by strengthening their value proposition. Companies can apply ESG to expand markets, thereby boosting profitability ([Ghazali & Zulmaita, 2020](#)). Implementing ESG across all governance aspects requires gradual investment in every element of ESG, such as acquiring environmental protection equipment. This reduces the company's operating cash flow, posing a problematic choice for companies facing poor operational performance ([Jun et al., 2022](#)).

Research on the impact of corporate governance mechanisms on ESG is still very limited. Previous studies have focused on the relationship between corporate governance mechanisms and risk disclosure ([Haj Salem et al., 2019](#)). Without a connection between sustainability efforts and core activities that create company value, stakeholders are limited by their ability to manage the high cognitive complexity in ESG reporting ([Barnett et al., 2020](#)). Corporate governance mechanisms can impact the presentation and disclosure of ESG, as strong corporate governance can influence decision-making related to company policies concerning ESG disclosure practices ([Albitar, 2020](#)).

The novelty of this study is to see the extent to which ESG disclosures made by energy sector companies are fascinating to study. Many companies in the energy sector have been involved in environmental pollution cases due to their operational activities, most of which operate in the mining sector. Mining often pollutes the surrounding environment, so companies must be wise in making decisions related to ESG policies. In addition to polluting the environment, local communities are often disturbed by the operational activities of these companies.

In addition, the ESG assessment in this study uses the ESG Reporting Guide 2.0 Nasdaq. The ESG Reporting Guide 2.0 Nasdaq is chosen because this measurement standard is relevant. Additionally, using the ESG Reporting Guide 2.0 Nasdaq is a novelty for this research. The ESG Reporting Guide 2.0 was published in May 2019 by Nasdaq in the United States. The ESG Reporting Guide 2.0 from Nasdaq has several advantages, including its comprehensive nature, promotion of transparency and accountability, meeting the needs of various stakeholders, enhancing risk management, and supporting responsible investment decisions.

Companies adhering to ESG principles have been shown to possess superior governance, demonstrate more significant concern for the environment and sustainable development, experience lower earnings volatility, and can access funding at lower costs, as per research by [Kumar](#) (2020). The United Nations recommends that companies disclose their ESG practices by 2030. Stakeholders generally rely on third-party assessments of companies' ESG performance to inform their decisions ([Bronszini et al., 2024](#)).

The link between ESG governance mechanisms and prospective disclosures or the outcomes of such disclosures and the characteristics of how information is conveyed ([Fisher et al., 2019](#)). Research on the influence of corporate governance mechanisms on the breadth of disclosure has significant limitations, especially in studies focused on ESG disclosure ([Marquez-Illescas et al., 2019](#)). Detailed and complex sustainability or ESG reports can result in an information surplus for stakeholders, making them valuable additional information ([Wu & Pupovac, 2019](#)).

The impact of ESG disclosure on stakeholder responses to corporate performance remains debatable. Previous empirical research has reported inconsistencies in the relationship between ESG disclosure and a company's competitive advantage ([Zhao et al., 2019](#)). ESG considerations are increasingly gaining attention in investment decision-making processes. However, investors often express concerns that the availability and quality of ESG

disclosures at the corporate level are insufficient to support investment decisions ([Ilhan et al., 2023](#)).

Research conducted by [Jasni et al.](#) (2020) shows that ESG disclosure in the telecommunications industry in Malaysia can provide companies with a competitive advantage when facing their competitors. Companies tend to report ESG issues that align with regulatory requirements and those that can enhance their reputation. In line with this, [Putra et al.](#) (2019) argue that the primary goal of ESG disclosure is to improve the company's acceptance and reputation in the eyes of investors. Moreover, some companies use ESG disclosure to reduce regulatory restrictions that may affect their investment portfolios.

Shareholders tend to evaluate voluntary environmental disclosures by companies in industries with significant environmental concerns negatively. Companies in industries sensitive to ESG face greater challenges in the capital markets than non-ESG companies in gaining recognition for their environmental disclosures ([Radhouane et al., 2020](#)). ESG reports are typically disclosed in sustainability reports, public non-financial reports, or integrated reports. Sustainability reporting is directly related to management reporting systems, enabling reporting entities to understand and manage sustainability better ([Cepeda, 2024](#)).

The application of ESG criteria in companies results in better financial outcomes. The primary motivation for companies to use ESG information, in order of importance, is for investment returns, customer demand, product strategy, and ethical considerations ([Gorrotxategi et al., 2024](#)). Differences in ESG ratings have a positive influence on corporate ecological innovation. Increased ESG performance significantly stimulates green discoveries, especially in countries with weaker green innovation potential ([Kong et al., 2024](#)).

Factors influencing ESG performance consist of external and internal company characteristics. External ESG characteristics focus on analyzing the impact of external stakeholders, such as governments, creditors, media, and consumers. In contrast, internal characteristics focus on managerial traits, such as personality factors like family status or experience, and investors' investment decisions ([Wang & Hou, 2024](#)).

Standard Chartered, one of the central banks in the UK, stopped funding PT Adaro Indonesia Tbk (ADRO) due to significant criticism from environmental activists. ADRO has received heavy criticism from environmental activists due to its poor environmental and social management record ([betahita.id](#)). There is also another case where the area surrounding a coal mine has experienced significant environmental pollution. Moreover, people living near the mines are vulnerable to health problems ([kompas.id](#)).

Residents of Marunda Village, Cilincing, North Jakarta, complained about the dust pollution contaminating the environment and making it difficult to breathe. Dust pollution is suspected to come from the Marunda Port coal deposits ([beritasatu.com](#)).

PT Bayan Resources, Tbk (BYAN) has faced scrutiny regarding how it uses Corporate Social Responsibility (CSR) funds donated to three universities in Java. This has been questioned because the company operates in East Kalimantan but donates CSR funds to universities in Java ([ogindonesia.com](#)).

PT Indominco Mandiri (PT IMM), a subsidiary of PT Indo Tambangraya Megah Tbk (ITMG), has been sued for polluting the Santan River in East Kalimantan. Residents of Santan Village have requested that investors reconsider their investment policies in ITMG due to the environmental damage caused by its subsidiary ([betahita.id](#)).

In 2021, PT Bukit Asam Tbk (PTBA), through its subsidiary PLTU in Tanjung Enim, Muara Enim Regency, received a red proper rating from the Ministry of Environment and Forestry. The Ministry also imposed administrative sanctions on PTBA due to its activities, which were considered to have polluted the Kiahaan River in Tanjung Enim ([rmolsumsel](#)).

PT Perusahaan Gas Negara Tbk (PGAS) faced protests from residents due to mining activities in the Pondok Makmur housing complex, Block F11 RT 007/08, Kuta Baru Village, Pasar Kemis District, Tangerang Regency. The protests arose because PGAS did not clean up and restore the environment after completing the pipeline installation ([javarabanten.com](#)).

Table 1 shows the data on the number of villages or urban areas in Indonesia affected by environmental pollution. Environmental pollution consists of water pollution, land pollution, and air pollution. Table 1 shows that from 2014 to 2021, there have been changes in ecological pollution data in villages/urban areas in Indonesia. In 2021, Central Java became the province with the most water and soil pollution, while the Riau Islands had the fewest cases. Air pollution in 2021 was most prevalent in Central Java and least occurred in Bali.

Table 1 also shows that stakeholder theory and corporate ESG report disclosure are closely related. Stakeholder theory explains that companies are responsible to shareholders and various other stakeholders, such as employees, customers, suppliers, communities, and the environment. The disclosure of ESG reports is one way for companies to meet the expectations and interests of stakeholders, particularly those related to environmental aspects. ESG reports provide information about the impact of a company's activities on the environment, such as greenhouse gas emissions, the use of natural resources, and environmental pollution. Companies that want to build strong relationships with their stakeholders and achieve long-term success must consider disclosing information about their environmental performance.

This research aims to determine the extent of ESG disclosure carried out by energy sector companies using annual reports from 2021 and 2022. This research contributes to investors by allowing them to assess companies' extent of ESG disclosure before deciding to invest in them. It also benefits the government by providing insights into how the activities of energy sector companies impact the environment and surrounding communities. For academics, this research can serve as a reference for future studies related to ESG.

Stakeholder theory states that every organization will always strive to acquire and increase revenue and company value to meet its stakeholders' expectations. This is done by identifying, assessing, and evaluating stakeholders who can bring benefits and positively impact the company's business activities ([Freeman, 1984](#)).

Stakeholder theory discusses the company's relationship management with its stakeholders. Stakeholders demand that companies provide benefits, whether through business policies or as a result of operational activities. The term stakeholders refer to shareholders and all parties interested in the company. Stakeholders anticipate disclosing financial and non-financial information because such disclosures allow insight into the company's condition. Therefore, disclosing financial and non-financial reports becomes crucial for maintaining relationships between the company and its stakeholders and enhancing the company's reputation ([Safriani & Utomo, 2020](#)).

Province	Air pollution			Water pollution			Land Pollution		
	2014	2018	2021	2014	2018	2021	2014	2018	2021
Aceh	713	642	481	350	729	350	63	52	23
Sumatera Utara	2076	806	339	449	1205	673	65	371	72
Sumatera Barat	674	160	60	144	319	193	19	50	21
Riau	1537	248	148	318	454	250	17	32	9
Jambi	379	153	37	384	614	390	24	30	16
Sumatera Selatan	218	305	229	279	673	440	44	48	73
Bengkulu	98	136	71	189	286	163	9	7	8
Lampung	248	270	210	222	572	308	17	27	23
Kep. Bangka Belitung	33	49	35	152	159	100	55	47	26
Kep. Riau	51	38	22	28	55	16	4	2	4
DKI Jakarta	17	42	42	54	126	78	2	10	10
Jawa Barat	833	869	556	1131	1890	1217	118	144	129
Jawa Tengah	1123	1336	781	932	1900	1310	183	380	224
DI Yogyakarta	415	75	41	44	99	76	4	19	8
Jawa Timur	1589	1174	777	759	1643	1152	104	184	154
Banten	239	326	197	251	513	257	43	51	40
Bali	55	136	15	82	130	82	5	12	5
Nusa Tenggara Barat	79	97	79	122	282	152	27	40	18
Nusa Tenggara Timur	89	147	199	53	122	79	14	30	35
Kalimantan Barat	217	370	155	717	915	715	100	136	121
Kalimantan Tengah	167	161	91	523	782	610	51	110	125
Kalimantan Selatan	220	175	140	445	714	396	60	66	39
Kalimantan Timur	131	123	89	249	318	227	45	42	26
Kalimantan Utara	27	61	47	59	139	99	4	25	31
Sulawesi Utara	116	163	85	140	327	161	12	62	27
Sulawesi Tengah	57	93	60	125	303	126	21	26	25
Sulawesi Selatan	233	265	229	176	400	308	25	51	39
Sulawesi Tenggara	113	153	162	73	227	140	29	31	23
Gorontalo	41	52	27	72	111	62	64	9	7
Sulawesi Barat	43	63	46	22	115	98	6	11	10
Maluku	26	32	25	57	105	53	13	20	5
Maluku Utara	67	89	63	46	216	71	15	31	15
Papua Barat	26	37	16	31	155	39	8	7	13
Papua	48	36	90	108	249	292	31	37	95

Source: www.bps.go.id

METHOD

This research uses secondary data obtained from the company's annual reports. The secondary data comes from annual reports that have been publicly released. The data collection technique was carried out through document analysis and academic literature. After collecting the data, the next step is to evaluate the quality and map the data using qualitative techniques. By using comprehensive secondary data analysis techniques, this

Table 1.
List of
Provinces
According to
Type of
Environment
al Pollution

research provides valuable insights into the extent of companies' ESG disclosure and aids in developing more sustainable strategies.

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The annual report data was obtained from the Indonesia Stock Exchange (IDX) website at www.idx.co.id and the official websites of the respective companies. The population of this research includes companies listed on the IDX. The research sample consists of companies in the energy sector listed on the IDX in 2021 and 2022 and is on the primary listing board. Data for the research was collected until March 31, 2023, as this is the final deadline for companies to submit their financial statements and annual reports.

ESG is measured using the indicators from Nasdaq's ESG Reporting Guide 2.0. Nasdaq published this ESG measurement standard in May 2019. The ESG Reporting Guide 2.0 by Nasdaq contains 30 measurement indicators, with ten indicators each for environmental, social, and governance factors. The data analysis technique used in this research is content analysis. This technique is used to identify patterns or concepts in the company's published reports related to ESG.

RESULTS AND DISCUSSION

Based on the results of data processing in Table 2, out of 30 ESG Reporting Guide 2.0 Nasdaq measurement indicators, energy sector companies have disclosed ESG-related reporting extensively. The ESG Reporting Guide 2.0 Nasdaq measurement indicators consist of 10 measurement indicators each on the environmental, social, and corporate governance aspects.

Table 3 shows that out of 68 research samples, two companies reported ESG disclosures with a disclosure extent of 16 indicators. A disclosure extent of 16 indicators represents the smallest value in this study, while the total disclosure extent of 2s is the largest. 2 companies reported their ESG practices in their annual reports. This is very positive as it enhances the company's image by showing concern for the natural and social environments, indicating that it does not prioritize profits alone but also considers other aspects.

Among the 68 companies sampled in the study, two companies disclosed 16 indicators based on the ESG assessment in accordance with the ESG Reporting Guide 2.0 by Nasdaq. Two companies disclosed 17 indicators, six companies disclosed 19 indicators, ten companies disclosed 20 indicators, eight companies disclosed 21 indicators, 12 companies disclosed 22 indicators, six companies disclosed 23 indicators, eight companies disclosed 24 indicators, four companies disclosed 25 indicators, eight companies disclosed 26 indicators, and two companies disclosed 27 indicators.

Table 4 and table 5 shows that all 68 research data sets were valid. The mean value in this study is 22.12, with a median value of 22. The standard deviation is 2.663, with a total score of 1504 from all companies reporting ESG activities in their annual reports. The broader the company's ESG disclosure, the more attractive it becomes to investors. This is because, in addition to conducting business activities to earn profits, companies also show care for the environment.

The results of this study indicate that most energy sector companies have broadly disclosed ESG information in their annual reports. However, some companies still have not yet. The broader the disclosure of ESG reports, the better the company's public perception. Companies that are concerned about the environment contribute to the preservation of nature. Companies can utilize natural resources while maintaining sustainability through actions that restore nature's potential after the company has extracted its benefits.

The following is a list of the names of energy sector companies that were used as samples in this study:

Company Code	Company Name
ADRO	Adaro Energy Indonesia Tbk.
AKRA	AKR Corporindo Tbk.
APEX	Apexindo Pratama Duta Tbk.
BBRM	Pelayaran Nasional Bina Buana
BUMI	Bumi Resources Tbk.
BYAN	Bayan Resources Tbk.
DEWA	Darma Henwa Tbk
DOID	Delta Dunia Makmur Tbk.
DSSA	Dian Swastatika Sentosa Tbk
ELSA	Elnusa Tbk.
ENRG	Energi Mega Persada Tbk.
GEMS	Golden Energy Mines Tbk.
HITS	Humpuss Intermoda Transportasi
HRUM	Harum Energy Tbk.
INDY	Indika Energy Tbk.
ITMG	Indo Tambangraya Megah Tbk.
KKGI	Resource Alam Indonesia Tbk.
LEAD	Logindo Samudramakmur Tbk.
MBSS	Mitrabahtera Segara Sejati Tbk
MEDC	Medco Energi Internasional Tbk
MYOH	Samindo Resources Tbk.
PGAS	Perusahaan Gas Negara Tbk.
PTBA	Bukit Asam Tbk.
PTIS	Indo Straits Tbk.
PTRO	Petrosea Tbk.
RAJA	Rukun Raharja Tbk.
SOCI	Soechi Lines Tbk.
TOBA	TBS Energi Utama Tbk.
WINS	Wintermar Offshore Marine Tbk.
SHIP	Sillo Maritime Perdana Tbk.
PSSI	Pelita Samudera Shipping Tbk.
TEBE	Dana Brata Luhur Tbk.
UNIQ	Ulima Nitra Tbk.
MCOL	Prima Andalan Mandiri Tbk.
GTSI	GTS Internasional Tbk.
RMKE	RMK Energy Tbk.

Table 2.
Sample
companies

Source: Data processing output, 2023

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Total Disclosure	Frequency	Percent	Valid Percent	Cumulative Percent
16	2	2,9	2,9	2,9
17	2	2,9	2,9	5,9
19	6	8,8	8,8	14,7
20	10	14,7	14,7	29,4
21	8	11,8	11,8	41,2
22	12	17,6	17,6	58,8
23	6	8,8	8,8	67,6
24	8	11,8	11,8	79,4
25	4	5,9	5,9	85,3
26	8	11,8	11,8	97,1
27	2	2,9	2,9	100
Total	68	100	100	

Table 3.
ESG
Disclosure

Source: Data processing output, 2023

	Valid	68
N	Missing	0
Mean		22,12
Median		22
Sum		1504

Table 4.
ESG
Disclosure
Statistics

Source: Data processing output, 20 23

	N	Minimum	Maximum	Mean	Std. Deviation
Pengungkapan_ESG	68	16	27	22,12	2,663
Valid N (listwise)	68				

Table 5.
Descriptive
Statistics

Source: Data processing output, 2023

Stakeholder Theory suggests that companies are not only responsible to shareholders but also to other stakeholders such as employees, customers, suppliers, society, and the environment. ESG disclosure is one way for companies to meet the expectations and interests of stakeholders, particularly concerning environmental aspects. ESG reports provide information about the impact of a company's activities on the environment, including greenhouse gas emissions, resource use, and pollution. Companies striving to build strong relationships with stakeholders and achieve long-term success must consider disclosing their environmental performance.

The availability of ESG information plays a crucial role and significantly influences investment decisions (Ahmadin et al., 2023). Additionally, ESG scores can affect stock prices. This shows that investors consider financial and non-financial aspects such as ESG in their investment decisions (Purnomo et al., 2024). Companies with high ESG risk tend to lower their value, while low ESG risk can increase the company's value (Fachrezi et al., 2024). Investors avoid companies with high ESG risks due to the potential long-term negative impact on financial performance. Furthermore, ESG also positively influences company

value (Arofah, 2023). The practical implementation of ESG strategies can serve as a tool to enhance company value by reducing ESG-related risks. Therefore, extensive ESG disclosure is highly beneficial for companies.

CONCLUSION

This study found that energy sector companies listed on the Indonesia Stock Exchange (IDX) in 2021 and 2022 have extensively disclosed their ESG information to the public. This can be observed through the companies' annual reports, which provide detailed explanations of the environmental impacts of their operational activities. Additionally, these reports outline the control measures or efforts to minimize the resulting impacts through various activities such as replanting trees, treating soil to restore fertility, filtering groundwater, and more. Companies also frequently engage in community empowerment initiatives, either through training or by providing direct financial assistance.

Investors can utilize the ESG reports of energy sector companies as additional analysis before making investment decisions. They can assess the environmental impacts and the efforts companies undertake to mitigate damage caused by their operations, which often harm the natural environment. This study's findings have implications as a reference for investors, providing additional information to support investment decisions in energy sector companies.

For the government, the findings of this study can serve as a basis for policy-making, particularly concerning the environmental impact of energy sector companies' activities. Although the study only focuses on the extent of ESG disclosures, the government can use this information as a foundation to develop policies that encourage transparency, accountability, and sustainability. By setting disclosure standards, offering incentives and penalties, and using disclosure data to evaluate impacts, the government can create an environment that supports responsible business practices across environmental, social, and governance aspects.

For academics, this research can serve as a reference and source for conducting similar studies. The limitation of this study lies in the level of subjectivity when gathering information from annual reports. This subjectivity arises because the keywords used by each researcher may vary. Future studies could explore other sectors to assess the extent of ESG disclosures in company annual reports.

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