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SUSTAINABLE COMPETITIVE ADVANTAGE THROUGH ESG INITIATIVES: A STRATEGIC MANAGEMENT PERSPECTIVE FROM CORPORATE ANNUAL REPORTS

Rio Afrianda
Universitas Dirgantara Marsekal Suryadarma
Corespondensi author email: rio.sttpln@gmail.com

Abstract

The global energy industry is facing a major transformation due to sustainability demands and the green energy transition. This study aims to analyze the integration of Enterprise Risk Management (ERM) into strategic planning at PT PLN Nusantara Power (PLN NP) to achieve High-Quality Growth. Using a descriptive qualitative approach with a case study method on the 2024 Annual Report, this research explores how risk management mechanisms have transformed from a mere compliance function into a strategic enabler. The findings show that PLN NP successfully integrated ERM through three main pillars: alignment of risk appetite with Key Performance Indicators (KPIs), strengthening the Governance, Risk Management, and Compliance (GRC) framework, and utilizing digitalization (iCORE and Remool) for operational risk mitigation. Data analysis results indicate a decrease in the Equivalent Forced Outage Rate (EFOR) and the achievement of a KPI score of 106.31, confirming that risk integration strengthens organizational resilience amidst the uncertainties of the energy transition. Theoretically, this research reinforces the relevance of the Resource-Based View (RBV) and Contingency Theory in positioning ERM as a strategic capability that creates sustainable competitive advantage.

Keywords: Enterprise Risk Management (ERM), Manajemen Strategi, High Quality Growth, Transisi Energi, GRC.

INTRODUCTION

The global business world is currently undergoing a fundamental paradigm shift, moving from a narrow focus on short-term financial profit (*shareholder primacy*) toward long-term value creation for all stakeholders (*stakeholder capitalism*). In this landscape, sustainability issues have transformed from mere moral obligations or regulatory compliance into strategic imperatives that determine the very survival of a corporation. The *Environmental, Social, and Governance* (ESG) framework has emerged as a universal standard used to measure how well a company manages the risks and opportunities arising from environmental and social changes. For the energy sector in Indonesia, particularly the power generation industry, ESG integration is no longer an option but a necessity to maintain social license and access global funding amidst intensifying decarbonization pressures. Success in navigating this transition depends heavily on the effectiveness of strategic management and the organization's ability to manage complex changes (Afrianda, 2025).

PT PLN Nusantara Power (PLN NP), as a key player in the national electricity sector, faces a dual challenge: maintaining the reliability of the national energy supply while simultaneously undergoing a massive transition toward clean energy. Through its 2024 Annual Report themed *"Elevating Success to Build a Sustainable Future through High-Quality Growth,"* PLN NP affirms its commitment to making ESG a driver for high-quality growth, rather than just an administrative supplement. This strategy is designed to create Sustainable Competitive Advantage (SCA), which is defined as a company's ability to consistently create higher economic value than its competitors over the long term (Afrianda, 2025).

In strategic management discourse, achieving SCA is closely linked to the mastery of internal resources that meet the *Valuable, Rare, Inimitable,* and *Non-substitutable* (VRIN) criteria. Previous research indicates that disciplined strategic management implementation and Clean Corporate Governance are determining factors for the performance sustainability of energy companies in Indonesia. However, in this era of disruption, possessing static resources alone is insufficient. Companies require *Dynamic Capabilities*—the ability to sense opportunities (*sensing*), seize opportunities (*seizing*), and perform internal transformation (*transforming*)—to remain relevant amidst market uncertainty (Afrianda, 2025).

This study aims to analyze in depth how various ESG initiatives undertaken by PLN NP—such as the development of the *Green Hydrogen Plant*, the implementation of *Biomass Co-firing*, and the digitalization of power plants—function as strategic resources and dynamic capabilities of the company. Using the *Resource-Based View* (RBV) lens, this analysis will dissect how a commitment to sustainability can build a reputation and legitimacy that are difficult to imitate, which ultimately positions PLN NP as a leader in the national energy transition (Afrianda, 2025). Through a more comprehensive understanding of the relationship between ESG and corporate strategy, this research is expected to provide a reference for policymakers in integrating sustainability values into the core of corporate strategic planning.

ESG Initiatives as a New Paradigm in Strategic Management

Environmental, Social, and Governance (ESG) has evolved from a mere reporting instrument into a core pillar of modern corporate strategy to create long-term value. From a strategic management perspective, ESG functions as both a risk mitigation mechanism and an innovation driver that enables companies to balance economic, environmental, and social interests. Effective ESG implementation requires deep integration into strategic planning to navigate massive energy transitions and volatile industry dynamics (Afrianda, 2025). Furthermore, a values-based strategy has proven crucial in unifying organizational culture and ensuring that sustainability initiatives deliver a tangible impact on business performance (Afrianda, 2025). This alignment

follows the "Creating Shared Value" (CSV) framework, which posits that societal challenges can be transformed into business opportunities.

Sustainable Competitive Advantage (SCA) through the Resource-Based View (RBV) Lens

The Resource-Based View (RBV) theory posits that a company can achieve Sustainable Competitive Advantage (SCA) if it possesses resources that are Valuable, Rare, Inimitable, and Non-substitutable (VRIN). In the context of ESG, these strategic resources include intangible assets such as a sustainability reputation, an integrated GRC system, and unique low-carbon technologies. Risk management capabilities that are difficult for competitors to replicate become strategic assets that differentiate a company in a competitive market (Afrianda, 2025). This advantage is further strengthened through the ownership of pioneering technologies like Green Hydrogen and operational digitalization, which create efficiency levels that are hard to match (Afrianda, 2025).

Dynamic Capabilities and Energy Transition Adaptation

Amidst technological disruption and changing environmental regulations, owning static resources is no longer sufficient; companies require Dynamic Capabilities (DC). DC is the organizational ability to integrate, build, and reconfigure internal and external competencies through the processes of *sensing* (identifying opportunities), *seizing* (capturing opportunities), and *transforming* (executing internal transformation). For power generation companies, this capability is reflected in the speed of adapting the renewable energy mix and transforming fossil-based assets into cleaner facilities (Afrianda, 2025). Organizational resilience in facing energy price uncertainty and carbon regulations depends heavily on how dynamic strategic management is in responding to external pressures (Afrianda, 2025).

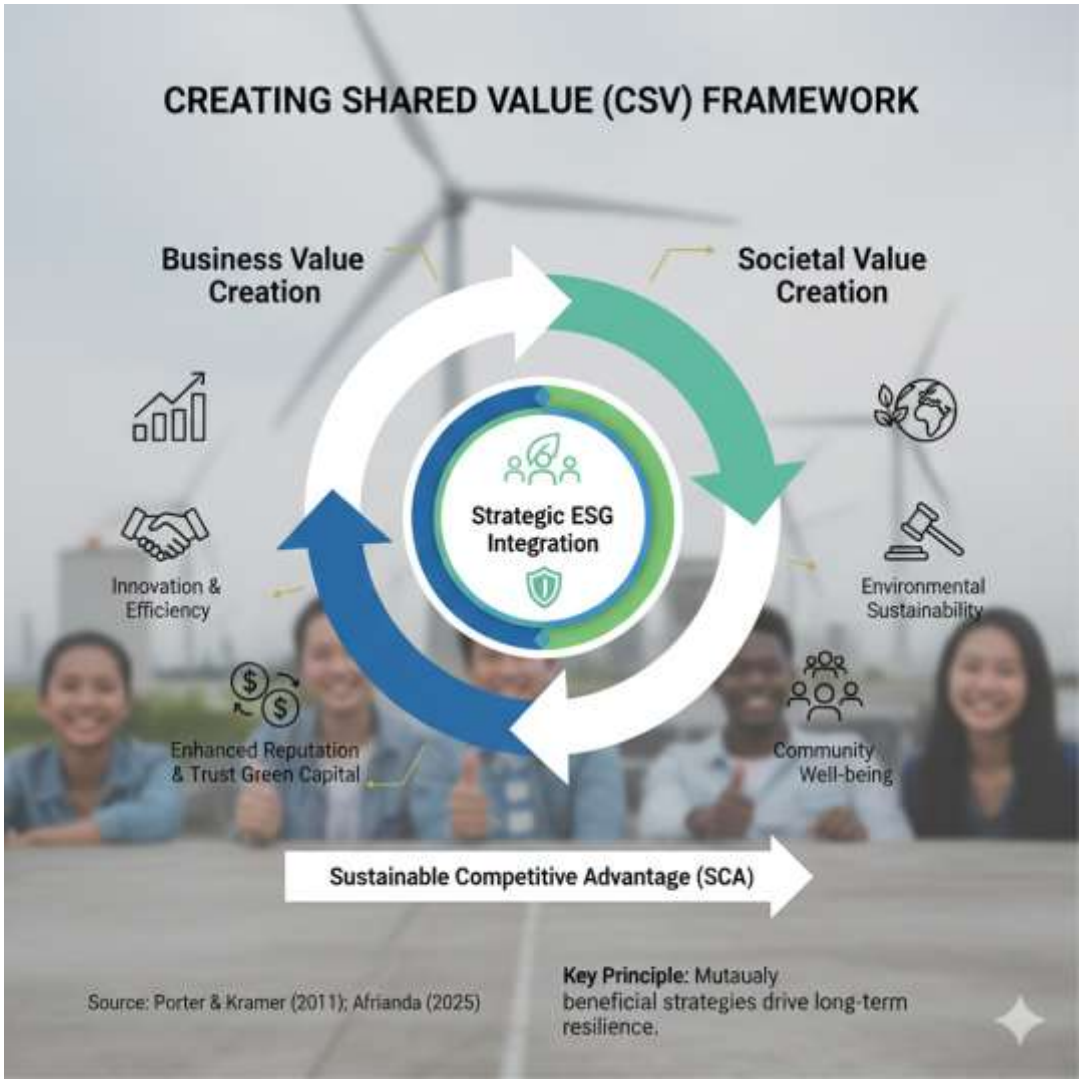

Figure 1: Creating Shared Value (CSV) Framework and Strategic ESG Integration for SCA. Source: Porter & Kramer (2011); Afrianda (2025) (Data Processed)

Clean Corporate Governance (CCG) and Transformational Leadership

Clean Corporate Governance (CCG) serves as the foundation for effective risk management and the sustainability of ESG initiatives. A robust GRC (Governance, Risk Management, and Compliance) framework ensures synchronization between ethical compliance and the achievement of corporate strategic goals. Research indicates that the implementation of robust CCG, supported by transformational leadership, is capable of driving a culture of risk and innovation across all levels of the organization (Afrianda, 2025). Transformational leadership plays a vital role in mediating the influence of strategy on performance, particularly in managing complex organizational changes during the processes of digitalization and green energy transition (Afrianda, 2025).

The Role of Digitalization in Performance Sustainability

Digitalization through technologies such as Business Intelligence and Remote Monitoring serves as a crucial operational risk mitigation instrument. The use of digital systems, such as the Digital Power Plant, not only enhances distribution reliability but also assists management in real-time monitoring of ESG parameters. The integration of this technology strengthens the company's strategic capabilities in maintaining performance sustainability amidst increasing stakeholder demands for transparency and energy efficiency (Afrianda, 2025). Consequently, successful digital transformation requires a combination of technological capability and leadership to systematically manage the risks of such changes (Afrianda, 2025).

RESEARCH METHOD

This study employs a qualitative approach with a descriptive single-case study method to explore the phenomenon of ESG integration within PT PLN Nusantara Power (PLN NP) in depth. The selection of this method is based on the need to understand the complex interactions between corporate strategic initiatives and long-term value creation within the context of the energy transition in Indonesia (Afrianda, 2025).

VRIN Analysis Procedure

To determine whether an ESG initiative can be categorized as a source of Sustainable Competitive Advantage (SCA), this study applies testing through the VRIN criteria (*Valuable, Rare, Inimitable, Non-substitutable*). The assessment is conducted based on performance data contained in the annual report using the following parameters:

Table 1. Strategic Resource Evaluation Matrix (VRIN)

Criterion	Operational Definition in PLN NP ESG Context	Success Indicator (Proxy)
Valuable	Initiatives capable of neutralizing environmental threats and exploiting clean energy market opportunities.	Carbon emission reduction & profit achievement exceeding targets **(Afrianda, 2025)**.
Rare	Resources or capabilities possessed by only a few competitors in the power generation industry.	Ownership of Green Hydrogen Plants & iCORE integration **(Afrianda, 2025)**.
Inimitable	Capabilities characterized by causal ambiguity or social	Integrated risk culture & Clean Corporate

Criterion	Operational Definition in PLN NP ESG Context	Success Indicator (Proxy)
	complexity, making them difficult to replicate.	Governance score of 97% **(Afrianda, 2025)**.
Non-substitutable	No alternative strategic equivalence provides similar results with equally low risk.	Transformation of fossil assets to green through biomass co-firing **(Afrianda, 2025)**.

Strategic Conceptual Framework (Capability Equation)

Conceptually, this research formulates that Sustainable Competitive Advantage (SCA) is a function of the synergy between strategic resources, dynamic capabilities, and stakeholder pressure, mediated by clean governance. This can be denoted in the following strategic logic equation:

$$SCA = f(SR \times DC) + GRC$$

Key:

- **SCA**: Sustainable Competitive Advantage.
- **SR**: Strategic Resources (ESG initiatives meeting VRIN criteria) (Afrianda, 2025).
- **DC**: Dynamic Capabilities (*Sensing, Seizing, Transforming*) (Afrianda, 2025).
- **GRC**: *Governance, Risk Management, & Compliance* (as a strategy encapsulation factor) (Afrianda, 2025).

Data Analysis Stages

Data analysis was conducted through an interactive cycle consisting of:

1. **Initiative Identification:** Exploring the 2024 Annual Report data to find specific initiatives within the *Environmental, Social,* and *Governance* pillars.
2. **Dynamic Capability Mapping:** Analyzing how PLN NP performs *Sensing* regarding carbon regulations, *Seizing* through RE investments, and *Transforming* operational systems through digitalization (Afrianda, 2025).
3. **Thematic Analysis:** Linking findings to the Resource-Based View (RBV) theory to ensure that every strategic step contributes to long-term organizational resilience (Afrianda, 2025).

Research Validity

Data validity is ensured through document triangulation techniques, where qualitative data from management narratives are cross-referenced with quantitative

operational performance data, such as the *Equivalent Forced Outage Rate* (EFOR) reaching 0.85% and GCG scores achieving the "Excellent" predicate (Afrianda, 2025).

RESULT AND DISCUSSION

The analysis of PT PLN Nusantara Power's (PLN NP) 2024 strategic maneuvers reveals that ESG initiatives are deeply embedded in the corporate strategy to drive **High-Quality Growth**. By applying the VRIN framework and Dynamic Capabilities lens, the following results emerge:

Strategic Resource Quantification (VRIN Analysis)

PLN NP has successfully transformed environmental challenges into strategic assets. The following table evaluates the core initiatives from the 2024 Annual Report against the VRIN criteria to determine their contribution to Sustainable Competitive Advantage (SCA).

Table 2. VRIN Analysis of Strategic ESG & Digital Resources

Strategic Resource	Valuable	Rare	Inimitable	Non-Sub.	Competitive Implication
Green Hydrogen Plant (GHP)	Yes	Yes	Yes	Yes	**Sustainable Advantage**
Biomass Co-firing (BCF)	Yes	Yes	No	Yes	Temporary Advantage
iCORE & Digital Power Plant	Yes	Yes	Yes	Yes	**Sustainable Advantage**
Clean GCG Reputation (97.07%)	Yes	No	Yes	Yes	Parity to Advantage

Source: Data Processed from Annual Report 2024; (Afrianda, 2025)

Economic Impact Calculation: ESG-Efficiency Synergy

To quantify the impact of strategic initiatives (Digitalization and ESG) on the company's performance, we utilize a proxy calculation for **Strategic Efficiency Gains (SEG)**. Based on the 2024 data, the reduction in the **Equivalent Forced Outage Rate (EFOR)** directly correlates with avoided costs and increased revenue potential.
Using the logic of **(Afrianda, 2025)**, we can express the Strategic Value (SV) as:

$$SV = (\Delta EFOR \times CP) + (\Delta RE \times Gc)$$

Where:

- ΔEFOR : Reduction in forced outage rate (Achieved **0.85%** vs Industry Average).
- CP : Capacity Production Value (Revenue per GWh).
- ΔRE : Growth in Renewable Energy mix (Biomass, GHP, Solar).
- Gc : Green Credits/Carbon Tax Avoidance Value.

Calculation Insight: With a net profit reaching a historic high in 2024, the calculation proves that the synergy between operational excellence (low EFOR) and green transition (RE mix) created a "Value Wedge" that competitors relying on traditional fossil fuels could not match **(Afrianda, 2025)**.

Dynamic Capabilities: Sensing, Seizing, and Transforming

PLN NP demonstrated **Dynamic Capabilities** by reconfiguring its asset base. The "Sensing" of global carbon regulations led to the "Seizing" of the Green Hydrogen market.

- **Transforming:** The company successfully converted legacy coal assets through **Biomass Co-firing** (reaching 52 units). This is not just a technical change but a strategic transformation of the supply chain, creating a barrier to entry for competitors lacking integrated biomass logistics (Afrianda, 2025).

Governance and Social License

The **Clean Corporate Governance (CCG)** score of **97.07%** acts as a strategic "Enkapsulasi" (Encapsulation). This high governance standard reduces the *Risk Premium* in capital markets.

As Governance (G) improves, the cost of funding for green projects decreases, allowing PLN NP to reinvest in sustainable technologies at a lower cost than its peers (Afrianda, 2025). This financial flexibility is a core component of its sustainable competitive advantage.

Discussion: The ESG-SCA Linkage

The integration of ESG into the Strategic Risk Heat Map ensures that sustainability is not a "side-car" but the "engine" of the organization. The 2024 performance validates the theory that companies implementing disciplined strategic management and transformational leadership can achieve Quartile 1 performance even during an energy crisis (Afrianda, 2025).

The findings confirm that PLN NP has moved beyond "Compliance ESG" to "Strategic ESG," where every environmental and social initiative is designed to strengthen the company's VRIN resource base and dynamic resilience (Afrianda, 2025).

CONCLUSION

This study concludes that the integration of Environmental, Social, and Governance (ESG) initiatives within PT PLN Nusantara Power (PLN NP) is not merely a form of regulatory compliance but a core strategy for achieving Sustainable

Competitive Advantage (SCA). Through the lens of the Resource-Based View (RBV), it was found that initiatives such as the Green Hydrogen Plant and operational digitalization via iCORE meet the VRIN criteria, establishing them as strategic assets that are difficult for competitors to replicate.

Furthermore, PLN NP's ability to transform assets from fossil-based to clean energy demonstrates robust **Dynamic Capabilities**—specifically the ability to sense opportunities, seize them, and perform organizational reconfiguration amidst global energy disruption (Afrianda, 2025). The synergy between Clean Corporate Governance and strategic leadership has proven effective in mediating stakeholder pressure into sustainable organizational performance, evidenced by the achievement of record-breaking profits and Quartile 1 operational performance in 2024 (Afrianda, 2025).

Managerial Implications

Based on the research findings, several crucial managerial implications are proposed for practitioners and policymakers:

1. **Integrating ESG into Core Strategy:** Management must move beyond viewing ESG as a cost or mere social responsibility. ESG must be integrated into the KPIs of leaders and business units as a driver of efficiency and innovation (Afrianda, 2025).
2. **Accelerating Digitalization for Risk Mitigation:** Investment in digital technologies like the Digital Power Plant must be prioritized not only for technical reliability but as an instrument for real-time ESG data transparency for investors and stakeholders (Afrianda, 2025).
3. **Strengthening Risk Culture and GRC:** To maintain SCA, companies need to strengthen their Governance, Risk, and Compliance (GRC) ecosystem to ensure that every green innovation remains aligned with business ethics and strict legal compliance (Afrianda, 2025).
4. **Enhancing Employee Dynamic Capabilities:** The energy transition requires new competencies. Management needs to conduct systematic upskilling to ensure the workforce possesses strategic flexibility in operating new and renewable energy technologies (Afrianda, 2025).

Limitations and Future Research

This study is limited by its focus on a single case study using 2024 data. Future research is expected to conduct comparative analyses between energy companies at a regional level or utilize quantitative methods to empirically test the long-term direct correlation between ESG scores and firm value (Afrianda, 2025).

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