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GEOPOLITICS, MARKET CONTESTABILITY, AND INDONESIA'S STRATEGIC POSITION IN THE GLOBAL ENERGY TRANSITION

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Abstract.

Energy markets around the world are undergoing major shifts, driven by climate pressures, geopolitical competition, and rapid technological change. Tensions between the United States and Iran have driven up oil prices recently, underscoring how closely politics and market forces and economic stability are connected. Using a content analysis of qualitative data, the study analyses the strategic position of the most populous Muslim-majority state, Indonesia, in the changing world's energy scene using game theory and contestable market theory. The results indicate that high oil prices constitute an impetus towards renewables, but also that revenues from fossil-fuel extraction are an important aspect of financing the transition. Meanwhile, the battle between the United States and China over semiconductor supply chains and renewable technologies has heightened the search for strategic partners. Indonesia is in a strong position with the nations geothermal, nickel, and geopolitical factors. But the country is still using and losing a great deal of energy, and has some big challenges to overcome, including regulatory complexity, technological readiness and market uncertainty. In the end, Indonesia's success will rely on the nation's ability to adapt to a new wave of coalition shifts, leverage natural advantage, and develop coordinated policies that maintain quotas for its reliance on fossil fuels alongside the ambitious expansion of renewables to build both energy and economic security.

Keywords: energy transition; game theory; geopolitics; renewable energy

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Introduction

The Middle East turmoil has generated a turbulent environment for global oil supplies, the prices swing toward USD 80 per barrel before collapsing abruptly (1–4). The turbulence demonstrate the intersection of geopolitics, energy markets, and economic stability (3,4). Beneath the surface of these action-forcing headlines, there's a tangled web of strategic decisions shaped by game theory, economic ties and climate change imperatives (5). International negotiations at COP and G20 have placed the establishment of reducing fossil fuel dependency on the energy portfolio on the urgent agenda and the rise of renewable energy has created both opportunities and threats to market actors (6). In this shifting terrain, Indonesia must navigate between the global power rivalry, the competitive space for market-contestability on energy, and its own national energy transition aspirations.

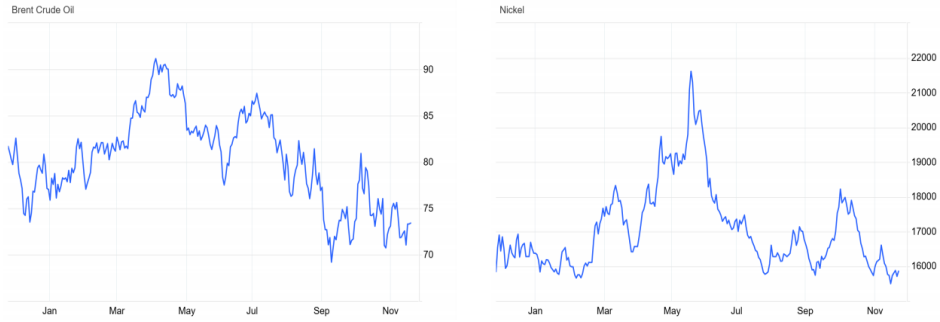

Figure 1. Game between Fossil versus Non-Fossil Energy
Source: Kuncoro (2025)

Literature Review

Theoretical Studies

The complex interplay of economic and political incentives that affect behaviour of lead players may be investigated from an applied game theory perspective (3–5). The idea of contestable markets is highly relevant in the context of the move to renewables. A time of high oil prices can lead to an increase with renewable energy competition but the fossil fuel producers are important driving forces as often have possession of financial assets that are able to be used for renewable development (3,4,7). The US-China trade war is an exemple of a high-stakes strategic game, in which technology dominance, notably in semiconductors and renewable technology supply chains, motivates political moves (8,9). This competition is part of a greater refashioning of globalization into new interlocks, not sockets. Strategic interdependence is still the name of the game, but for a multipolar world, the adjustment of

policies must go in accordance with changing alliances, technological capabilities and the conditions of the energy market.

Empirical Studies

Oil price data Oil prices usually settle into a range of USD 65-70 per barrel under balanced market conditions, but sudden geopolitical tensions can cause rapid price changes, for example, from USD 77 to USD 68 in 20 hours (10,11). Nickel prices are similarly in decline, driven by the adoption of renewable energy and electric vehicles (10–12). The importance in the global nickel output puts Indonesia geopolitically at the centre of the renewable energy supply chain. The development of the technology like Finland's sand and sodium-ion, indicate the rapid speed of the energy-storage technological advance. By contrast, both the US and China offer Indonesia research and development, exploration, recycling partnerships, underscoring the effort to build strategic partners in the energy transition. The historical direction of scientific and academic cooperation also focuses on a more symmetric model, where the priority is given to the internal exploitation of the benefits of the global networks.

Methods

The analysis uses qualitative content analysis to provide replicable and valid inferences from texts (13,14). The review of relevant literature covers the geopolitical tactics, market contestability factors, and technological development patterns that shape the transition of the energy system in Indonesia. Primary sources include government reports, multilateral agreements, and institutional reports, as well as peer-reviewed published academic literature. Criteria for selection prioritize activities designed to advance energy security, international power competition, the use of renewable technology and sustainable growth with a focus of the establishment of Indonesia in the fields of geothermal, nickel production chain and international strategic collaboration. The analysis unit revolves around state-level decisions, regulatory policies, and institutional changes under short-term oil market uncertainty and renewable market shock. Policy documents, economic indicators, expert views have been triangulated for data credibility, cross-checked with the reputable international energy databases.

Results and Discussion

The global energy transition has similarities to previous technology shifts, like the change from horse-drawn transport to steam power, that simultaneously altered global power relations. The competitive landscape of renewable energy technologies is formed under the US-China rivalry and semiconductor supply control (15). This situation provides opportunities for Indonesia in

utilizing their geothermal potential, nickel endowments and their strategic geopolitical positioning (16). Nonetheless, considerable challenges remain, which are the co-regulations, market ambiguities, technology maturity, and public acceptance (17). The competitive nature of the energy market suggests that disruptive breakthroughs in fossil fuel use and renewables could reduce costs, and by doing so alter revenue flows and investment patterns. Indonesia needs to align with but also carefully manage to avoid becoming overdependent on and retaining strategic autonomy (10,11).

Conclusion

The global energy landscape is experiencing a new wave of transformation with a new set of drivers, environmental imperatives, geopolitical tensions and rapid technological progress. Energy markets are becoming more contestable as oil and renewed power price are determined by strategic interactions between the major powers. Indonesia success relies in exploiting comparative natural advantages in geothermal and mineral resources, deepening research and innovation capacity, and in playing the game irreverent of shifting alliances but retaining autonomy. Such policies, reform and partnerships will be needed, both to ensure that the shift from fossil fuels to renewables enhances national security and competitiveness.

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