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Challenges and Prospects of the Energy Transition in the Philippines

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EXECUTIVE SUMMARY

The Philippines faces a critical challenge in meeting its energy transition targets while balancing economic, geopolitical, and environmental realities. The country has pledged to cut greenhouse gas emissions by 75% by 2030 (dependent on international support) and aims to raise renewables' share in its energy mix to 35% by 2030 and 50% by 2040. However, these goals are undermined by the continued dominance of fossil fuels, with coal and natural gas still supplying over 75% of the nation's energy.

Despite a 2020 moratorium on new coal plants, ongoing and planned projects signal a prolonged reliance on coal. Meanwhile, the depletion of the Malampaya Gas-to-Power Project raises concerns over energy security, prompting investments in liquefied natural gas (LNG) infrastructure. These projects, however, divert critical financing and policy support away from renewables while posing significant environmental and economic risks.

The energy sector remains deeply entrenched in the country's oligarchic economic and political structures. The Electric Power Industry Reform Act (EPIRA) of 2001 has reinforced monopolies and oligopolies, with powerful business conglomerates dominating energy investments. This concentration of control weakens policy enforcement and hinders sectoral reform.

To navigate these challenges, a comprehensive strategy is essential. Key priorities include countering policy capture, strengthening energy governance, enhancing the financial attractiveness of renewable energy, and mobilizing broad support for an accelerated transition to renewable energy. Australia can play a crucial role in this transition by leveraging its technological innovations, regulatory expertise, and academic networks to support evidence-based policy solutions and institutional reforms.

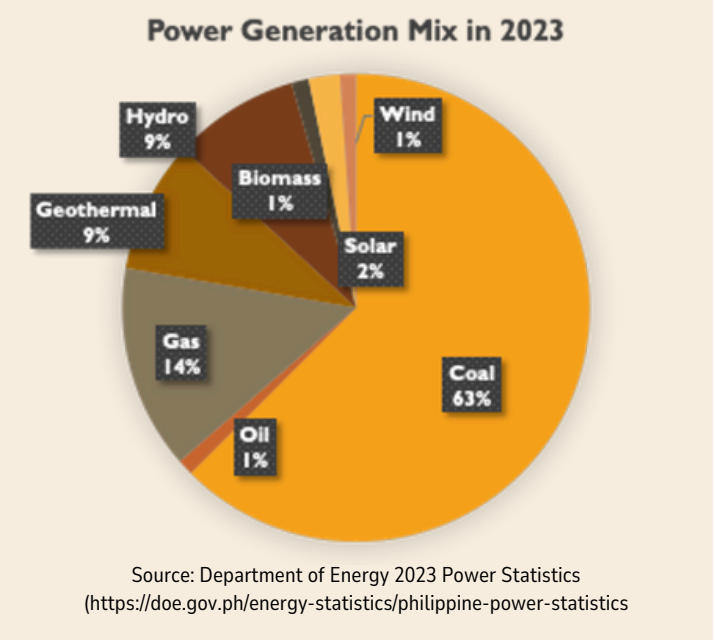
THE PHILIPPINE ENERGY LANDSCAPE

The Philippines stands at a crossroads in its energy policy. On one hand, the country has set ambitious climate goals, including reducing greenhouse gas emissions by 75% by 2030 and significantly increasing the share of renewable energy (RE) in its power mix. On the other, fossil fuels—particularly coal and natural gas—continue to dominate the energy landscape. This policy brief explores the challenges impeding the energy transition in the Philippines, evaluates the prospects for change, and suggests strategic approaches to accelerate the country's shift to a low-carbon economy.

The Philippines' energy demand is projected to rise significantly, driven by economic growth, population expansion, and rapid urbanization. The Department of Energy (DOE) forecasts a 4–5% annual increase in electricity demand, with total power consumption expected to double by 2040 under the Philippine Energy Plan (PEP).
Currently, the country's energy mix remains heavily reliant on fossil fuels. In 2023, gas and coal accounted for approximately 75% of total energy supply (see Figure 1), with coal alone contributing over 50% of national power consumption. Despite a moratorium on new coal-fired power plants introduced in 2020, the DOE has allowed previously approved projects to proceed, adding an estimated 2.255 gigawatts (GW) of coal-fired capacity by 2028.

Meanwhile, the natural gas sector is facing an impending crisis. The Malampaya Gas-to-Power Project, which supplies 10–20% of the country's electricity, is expected to be depleted by the late 2020s. Plans to develop offshore reserves, such as the Reed Bank, remain stalled due to legal and geopolitical disputes with China. To address this challenge, the Philippines is ramping up investments in liquefied natural gas (LNG) infrastructure, positioning itself as a potential regional LNG hub. However, LNG's long-term viability remains contested, with concerns over sustainability, high costs, and environmental risks, particularly in Batangas and the Verde Island Passage.

Figure 1: Power Generation Energy Mix in the Philippines by Installed Capacity, 2023



Source: Department of Energy 2023 Power Statistics (https://doe.gov.ph/energy-statistics/philippine-power-statistics

To expand domestic energy sources, the 2024 Philippine Energy Bid Round (PEBR) has opened eight areas for exploration, covering coal, petroleum, and hydrogen. Notably, East Palawan and the Sulu Sea are emerging as key energy hotspots, with significant governance implications for the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM).

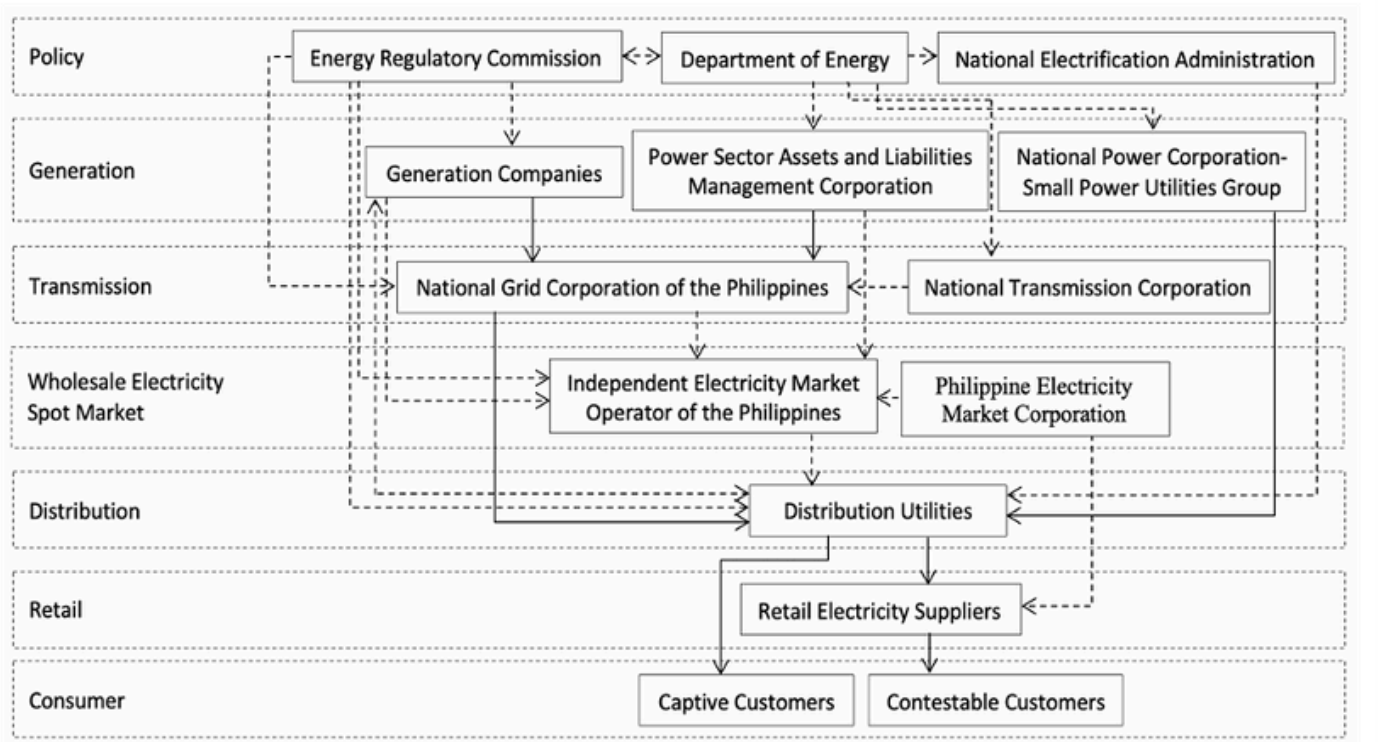
NATIONAL POLICY SETTING: AMBITION VS. REALITY

Government efforts in the energy sector are guided by the Philippine Energy Plans (PEP) 2020-2040 and 2023-2050, the second comprehensive energy blueprint supporting the government's long-term vision known as Ambisyon Natin 2040, and sectoral roadmaps such as the Upstream Oil and Gas Roadmap 2017-2040 , the Coal Roadmap 2017-2040 and the Renewable Energy Roadmap 2017-2040.

Several key laws and regulations provide the legal foundation for energy governance, such as Presidential Decree No. 87 (1972) – The Oil Exploration and Development Act, Presidential Decree No. 972 (1976) – The Coal Development Act, Republic Act 9513 (2008) – The Renewable Energy Act, and Republic Act 12120 (2025) – The Philippine Natural Gas Industry Development Act.

Historically, the National Power Corporation (NPC) operated as a vertically integrated monopoly, controlling both power generation and transmission to ensure stable electricity supply. However, persistent inefficiencies led to industry-wide restructuring under Republic Act 9136 (2001), also known as the Electric Power Industry Reform Act (EPIRA). This reform unbundled generation and transmission, ending NPC's monopoly, privatized the transmission sector by transferring operations to the National Grid Corporation of the Philippines (NGCP) under a concession agreement, and opened the generation market to competition, allowing private sector participation- resulting in a complex regulatory landscape (figure 2).

Figure 2: The electric power industry in the Philippines



Notes: The dashed boxes refer to the subsectors. The solid boxes refer to the entities. The dashed lines refer to the institutional relationships. The solid lines refer to the physical flows of energy.

Source: Navarro, Adoracion M.; Camara, Jethro El L. (2023) : Mapping the energy sector issues in the Philippines, PIDS Discussion Paper Series, No. 2023-50, Philippine Institute for Development Studies (PIDS), Quezon City

However, while these reforms aimed to enhance efficiency, they have also resulted in an energy landscape where competition is uneven and energy governance remains influenced by entrenched economic and political interests. For one, the Philippine power sector continues to suffer from structural shortcomings, such as a monopoly in the transmission sector held by the National Grid Corporation of the Philippines (NCGP), an oligopoly in power generation by a few energy producers who control regional grids, and local monopolies in distribution that further restrict competition and innovation.

Beyond these structural challenges, the power sector remains deeply intertwined with the country's political and economic elite (see appendix 1). Oligarchic families, through their vast business conglomerates and close ties to policymakers, have seized on these structural inefficiencies to dictate energy investments and policy decisions, often prioritizing corporate interests over public welfare. As highlighted in a recent study:

> *"Generation is now practically dominated by 11 families, which control 74.23% of the installed capacity. Transmission assets are no longer in state hands, with 40% of the NGCP owned by the State Grid Corporation of China (SGCC), 30% by Sy's OneTaipan, and 30% by Coyuito's Pacifica 21. [...] While Electric Cooperatives (ECs) still handle a majority of captive connections (56.59%), Private Distribution Utilities (PDUs) dominate distribution in terms of sales (70.69%). There is intense cross-ownership between generation and distribution: 11 families (not necessarily the same 11) controlling 43.5% of installed generation capacity also hold 40.55% of DU captive connections and 67.85% of DU sales. Several families that own DUs and GenCos also operate in the supply sector. [...] 89% of contestable consumers are served by groups also engaged in generation or distribution."*
> (EPIRA 20 Years After, Friedrich Ebert Foundation, 2024, p. 15)

These oligarchic interests pose a major barrier to meaningful energy reform. The concentration of power, coupled with weak regulatory institutions and policy capture, undermines efforts to transition to renewable energy. For instance, the continued profitability of coal, gas and oil power plants in power generation hinders the shift to renewable energy, which is often seen by conglomerates as a riskier and more uncertain investment. Anecdotal evidence also suggests that private interests are often able to influence policy developments in both the legislative and executive branches of the government through lobbying and appointments in key energy positions. The size of the conglomerates may thwart efforts at the local level for local energy solutions via energy co-operatives and redirect finances to large infrastructure projects at the expense of smaller renewables projects.

POLICY IMPLICATIONS

As a result of this political economy context, the Philippines has some of the highest electricity prices in Southeast Asia—and even globally—for consumers. Meanwhile, the transition from fossil fuels to renewables remains sluggish, despite the country being ranked as the second most attractive emerging market for renewable energy investments in 2024 (after India), according to BloombergNEF's Climatescope 2024 report.

Recent attention has focused on the LNG sector as a 'clean' transition fuel, bolstered by the 2025 Philippine Natural Gas Industry Development Act. In principle, the law aims to prioritize domestic natural gas development to reduce reliance on imports. However, critics argue that this approach may undermine the "least-cost" principle, a safeguard against excessive electricity prices, while also locking the country into long-term dependence on fossil gas imports and infrastructure. This, in turn, could impose significant costs on both the environment and consumers—especially given the lack of a clear transition timeline.

Moreover, large-scale investments in LNG—often backed by bilateral donors like Japan and Korea—further jeopardize the transition to renewable energy. The renewable sector already faces significant hurdles, including lengthy and complex permitting processes that delay critical investments, unfavorable financing conditions from lenders, and backlogs in system impact studies for new projects. Additionally, challenges with the National Grid Corporation and delays in the commercial operation of the renewable energy market have further stalled progress.

Notably, the trading of Renewable Energy Certificates (RECs) only began in December 2023, highlighting the slow pace of reforms needed to accelerate the shift toward sustainable energy.

Not surprisingly, many NGOs advocating for a just energy transition argue that the Philippines is unlikely to meet its renewable energy targets due to weak regulatory enforcement, entrenched fossil fuel interests, and systemic barriers to renewable energy development. Additionally, the government lacks the capacity to effectively regulate the environmental, social, and political consequences of continued fossil fuel dependence.

STRENGTHENING AUSTRALIA-PHILIPPINES COOPERATION IN THE ENERGY TRANSITION

Australia's energy transition has seen both successes and challenges. While the country has rapidly expanded renewable energy—now generating over 30% of its electricity from solar and wind (up from 7% in 2006)—this shift has strained its aging electricity grid, requiring major investments in storage and transmission infrastructure. Policy inconsistency at the federal and state levels has also created uncertainty for investors, slowing progress. Meanwhile, Australia remains one of the world's largest coal and gas exporters, making the transition both politically and economically complex.

Despite these challenges, Australia has made notable strides, including the deployment of large-scale battery storage projects like the Tesla "Big Battery" and Snowy 2.0. Coal plant closures and emissions reductions have accelerated, driven by policy reforms such as Renewable Energy Zones and green hydrogen investments.

The Philippines, while facing its own challenges, also offers valuable lessons for Australia. Its experience with off-grid and microgrid solutions for remote communities could inform Australia's efforts to develop decentralized energy systems. Additionally, as one of the world's top geothermal energy producers, the Philippines can offer insights into tapping this underdeveloped resource in Australia. The country's policy initiatives—such as the Renewable Energy Act and Feed-in Tariff system—also provide useful models for improving Australia's regulatory framework.

Given these complementarities, there is strong potential to expand Australia-Philippines cooperation in the energy sector. We see four key areas where Australia's engagement could be particularly effective:

- **Strengthening Renewable Energy Governance and Regulation**

Australia can support the Philippines' Energy Regulatory Commission (ERC) in curbing monopolistic practices, improving grid management, and streamlining permitting processes for renewable projects—one of the biggest barriers to investment. By sharing best practices from its National Electricity Market (NEM), Australia can help the Philippines enhance competition and transparency in its power sector.

- **Enhancing Renewable Energy Financing and Investment**

Australia can leverage its partnerships with multilateral banks (e.g., ADB, AIIB) and Philippine financial institutions to help de-risk renewable energy investments. Expanding green bonds and climate finance mechanisms will make solar, wind, and battery projects more attractive. Supporting public-private partnerships (PPPs) can also reduce reliance on fossil fuel-linked conglomerates, fostering a more competitive renewable energy market.

- **Expanding Technology Transfer and Capacity Building**

Australia's expertise in off-grid electrification, energy storage, and grid resilience can be shared through university and industry collaborations. Joint research initiatives, vocational training programs, and policy advisory support can help the Philippines build local capacity in clean energy technologies. Australian universities can also assist with energy modelling to support data-driven policy decisions at the Department of Energy.

- **Supporting Regional Energy Connectivity and Market Development**

Australia can work with the Philippines to strengthen ASEAN's regional power grid initiative, which could improve energy security and affordability. Additionally, Australia's experience in carbon markets can support the development of the Philippines' Renewable Energy Certificate (REC) trading system, which only launched in December 2023.

CONCLUSION

Australia and the Philippines share common energy challenges, including the need to balance security, affordability, and sustainability while addressing their vulnerability to climate change. Both countries also face structural barriers—whether in the form of aging infrastructure in Australia or regulatory bottlenecks and entrenched oligarchic interests in the Philippines. However, Australia's expertise in renewable energy, policy reform, and capacity building presents valuable opportunities to support the Philippines' transition to a low-carbon economy.

By strengthening governance, expanding financing options, facilitating technology transfer, and enhancing regional cooperation, Australia can help break down barriers to energy sector reform in the Philippines. Targeted engagement in these areas will not only improve energy security and sustainability but also deepen bilateral ties. A strategic partnership in clean energy can foster long-term innovation and economic resilience, benefiting both countries as they navigate the global energy transition.

APPENDIX 1: KEY OLIGARCHIC FAMILIES AND THEIR OIL AND GAS INVESTMENTS

FAMILY	KEY COMPANY IN ENERGY SECTOR	TYPE OF INVESTMENT
The Ang and Cojuangco Families	San Miguel Corporation (Petron Corporation; San Miguel Global Power Holdings Corp.)	Ramon Ang, the head of San Miguel Corporation, controls Petron, the largest oil refining and marketing company in the Philippines. Petron operates a refinery in Bataan and has an extensive retail network, making the Ang family a dominant force in the downstream sector. San Miguel Global Power Holdings Corp., a subsidiary of SMC, is the largest power generation company in the Philippines (21% national market share), with investments primarily in fossil fuels such as coal (62% of installed capacity) and natural gas (25%). SMGP accounts for much of the expected gas expansion in the country and is one of the largest gas players in Southeast Asia.
The Aboitiz Family	Aboitiz Power Corporation	AboitizPower is the Philippines' second largest power generation company (18% market share) and has stakes in coal- and oil-fired power plants, making the Aboitiz family a significant player in the broader energy landscape. Nearly 80% of AboitizPower's generation portfolio comes from non-renewable sources, with hydroelectric, geothermal and wind investments comprising its expanding renewable energy portfolio.
The Lopez Family	First Gen Corporation (subsidiary of First Philippine Holdings Corporation)	The Lopezes are primarily focused on power generation, mainly through natural gas plants. They own and operate several natural gas facilities in Batangas, leveraging gas as a transition fuel while also investing in renewables. First Gen, the third largest power generation company, held a 14% market share in through its natural gas facilities (57% of its portfolio) and renewable energy investments.
The Ayala Family	ACEN, Enex Energy Corp., Bank of the Philippine Islands (BPI)	The Ayala Group's energy subsidiary ACEN is devoted primarily to renewable energy, with more than 90% of its portfolio coming from solar and wind investments. However, Bank of the Philippine Islands remains as the largest financier of coal projects in the Philippines. ACEN subsidiary Enex Energy Corp is also investing in a natural gas power plant in Batangas.
The Pangilinan Group (MVP Group/ Metro Pacific Investment Corporation)	Meralco Power Gen (MGen), PXP Energy Corporation (formerly Philex Petroleum), SP New Energy Corporation	The group, led by Manuel V. Pangilinan, has been active in oil and gas exploration, including service contracts in the South China Sea and other Philippine territories. PXP Energy has pursued partnerships for joint exploration activities, particularly in disputed areas. Meralco Power Gen (MGen) is co-investing with Aboitiz Power in two SMGP gas-fired power plants, and with SMGP in an LNG import and regasification plant in Batangas.
The Villars	Prime Energy Resources Development Corp	In 2022, the Villar family entered the oil and gas sector by acquiring a controlling stake in the Malampaya gas field from Dennis Uy's Udenna Corporation. This move marked their diversification into energy after establishing dominance in real estate, retail, and water utilities.

APPENDIX 1: KEY OLIGARCHIC FAMILIES AND THEIR OIL AND GAS INVESTMENTS (CONT)

The Consunji Family	DMCI Holdings, through Semirara Mining and Power Corporation	While primarily involved in coal mining, the Consunjis have explored investments in oil and gas, particularly through partnerships and resource exploration projects.
The Sy Family	SM Investments Corporation, Banco De Oro (BDO)	While not directly operating in oil and gas, the Sy family has indirect interests through investments in logistics and infrastructure that support the energy sector. They may expand into the sector as part of diversification strategies. Banco De Oro is the leading domestic bank financing natural gas.
The Uy Family	Udenna Corporation and Phoenix Petroleum	Dennis Uy, a Davao-based tycoon, aggressively expanded into oil and gas by acquiring stakes in Malampaya and operating Phoenix Petroleum, one of the country's largest independent fuel retailers. However, financial challenges led to the sale of key assets, including Malampaya, to the Villar family.
The Razon Family	Prime Infrastructure Holdings, Inc.	Enrique Razon has made recent moves into the energy sector, particularly through investments in renewable energy and water utilities. His acquisition of Shell's stake in Malampaya signaled his entry into natural gas.