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Renewable Energy Transition in the Philippines: Trends, Opportunities, Challenges

Grendell Vie Magoncia, Diogenes Alexander Xernan Lee, and Renz Torillos (APD)

SIP/2026/005

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on November 6, 2025. This paper is also published separately as IMF Country Report No 25/334.

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Authorized for distribution by Elif Arbatli Saxegaard
January 2026

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ABSTRACT: The Philippines is actively pursuing a renewable energy (RE) transition to meet its NDC targets and the COP28 pledge to triple global RE capacity. Under the Philippine Energy Plan 2023–2050, the government aims to raise the RE share to 50 percent by 2050, supporting energy security and the balance of payments amid heavy import dependence. Reforms such as liberalized RE ownership, EVOSS, and Green Lanes have boosted investor confidence and record investments. However, major constraints remain, including weak grid infrastructure, high capital costs, regional energy access gaps, land acquisition issues, and skills shortages. Meeting the projected PHP 10.7 trillion investment requirement for 2029–2050 will require timely and comprehensive policy solutions.

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SELECTED ISSUES PAPERS

Renewable Energy Transition in the Philippines: Trends, Opportunities, Challenges

Philippines

Prepared by Grendell Vie Magoncia, Diogenes Alexander Xernan Lee, and Renz Torillos[1]

[1] The author(s) would like to thank the Board of Investments (Department of Trade and Industry), the Renewable Energy Management Bureau (Department of Energy), the Department of Economy, Planning and Development, and the Department of Finance for their valuable insights, data sharing, and constructive feedback. The author(s) also thank Adoracion Navarro of the Philippine Institute for Development Studies for sharing her key insights, as well as Dennis Botman and Elif Arbatli Saxegaard of the IMF – APD for their guidance.

INTERNATIONAL MONETARY FUND

PHILIPPINES

SELECTED ISSUES

November 6, 2025

Approved By
Asia and Pacific Department

Prepared By Diogenes Alexander Xernan Lee, Grendell Vie Magoncia, and Renz Torillos (all APD)

CONTENTS

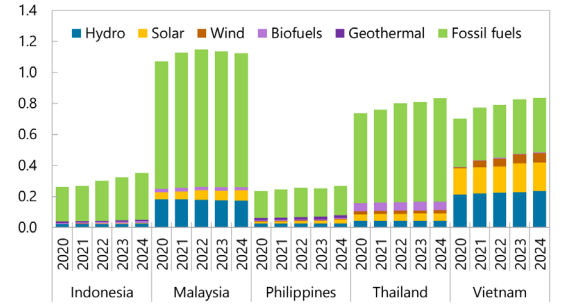
RENEWABLE ENERGY TRANSITION IN THE PHILIPPINES: TRENDS, OPPORTUNITIES, CHALLENGES[1]

The Philippines is actively pursuing a renewable energy (RE) transition plan to meet its Nationally Determined Contribution (NDC) targets, alongside the COP28 pledge to triple global RE capacity. Under the Philippine Energy Plan 2023–2050, the government has committed to increasing the RE share to 50 percent by 2050. The RE transition is also a priority for energy security and the balance of payments given the Philippines' reliance on imported energy. Recent reforms such as liberalizing the RE sector (i.e. 100 percent foreign ownership for certain RE sources), Energy Virtual One Shared System (EVOSS), and Green Lanes for Strategic Investments have increased investor confidence leading to record high RE investments. However, critical barriers persist, including limited grid infrastructure, high capital costs, disparities in energy access gaps across regions, and complex land acquisition. While the RE expansion also brought in new opportunities for job creation, there is also a shortage in the skilled RE workforce. Achieving the authorities' projected PHP 10.7 trillion total investment requirement from 2029-2050—about 2 percent of 2024 GDP per annum —and the clean energy targets will require prompt and comprehensive solutions to address such challenges.

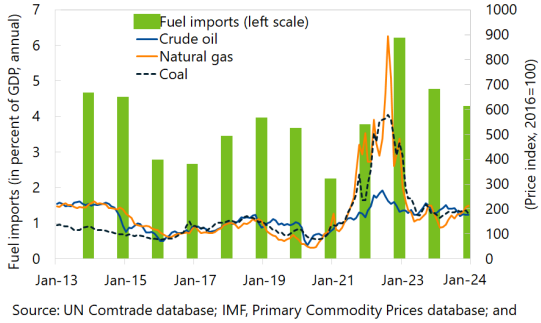
A. Background

1. The Philippines has one of the lowest installed energy capacities in the ASEAN region and remains heavily reliant on imported fossil fuels. Electricity generation across ASEAN has grown rapidly over the past two decades, driven primarily by the continued dominance of fossil fuel-based power generation, alongside a growing diversification into renewable energy (RE) sources, particularly solar and wind. As of 2024, Indonesia is the largest electricity producer in the region, followed by Vietnam, which has overtaken Malaysia and Thailand to become the second largest producer. In contrast, the Philippines' energy supply remains constrained, exhibiting one of the lowest installed capacities in the ASEAN in absolute terms, as a percentage of GDP, and on a per capita basis. In addition, the country's dependence on fossil fuel imports is substantial, accounting for approximately 6.1 percent of GDP in 2022 and comprising 50.6 percent of the country's total primary energy supply in the same year. Baseline projections indicate this reliance could increase to 61.1 percent by 2050, exposing the economy to global commodity price volatility and posing risks to trade balance and overall macroeconomic stability.

[1] This chapter was prepared by Diogenes Alexander Xernan Lee, Grendell Vie Magoncia, and Renz Torillos (all local economists from the IMF Office in the Philippines). Special thanks to Agnes Isnawangsih and Patricia Tanesco for excellent research and editorial assistance. The authors additionally thank the Philippine authorities and IMF colleagues from SPR and FAD for constructive comments and suggestions. Any remaining errors are those of the authors alone.

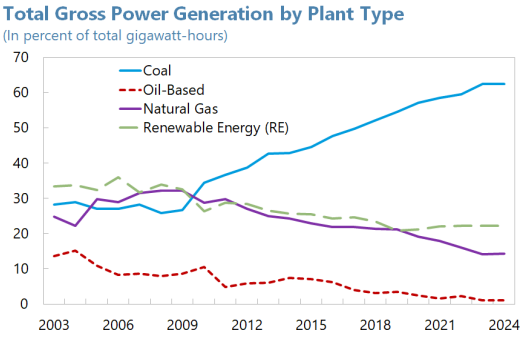


Source: IRENASTAT, International Renewable Energy Agency (IRENA), World Bank development indicators database, and IMF staff calculations.



Source: UN Comtrade database; IMF, Primary Commodity Prices database; and IMF staff calculations.

2. The Philippines possesses substantial potential for renewable energy (RE) development. The combined potential of -open field solar, rooftop solar, offshore, and onshore wind energy in the Philippines could generate approximately 1,200 gigawatts of power (Climate Analytics 2023). Additionally, the country's wet season and diverse terrain provide several opportunities for hydropower development through dams, rivers, and waterfalls with an estimated untapped potential of 13.097 GW (Department of Energy). Furthermore, the Philippines is the third largest producer of geothermal energy next to the United States and Indonesia and has an estimated potential capacity of 4.064 GW (Energy Tracker Asia). Despite these abundant cost-effective renewable resources, the Philippines currently has an installed renewable energy capacity of only around 9.5 gigawatts (2024), which is relatively low compared to its short- and long-term clean energy targets. However, with the ongoing proactive efforts of both the public and the private sector, the government remains optimistic about achieving its RE targets of 30.5 gigawatts of installed generating capacity by 2030 and 115.2 gigawatts by 2050, under the Clean Energy Scenario 2.

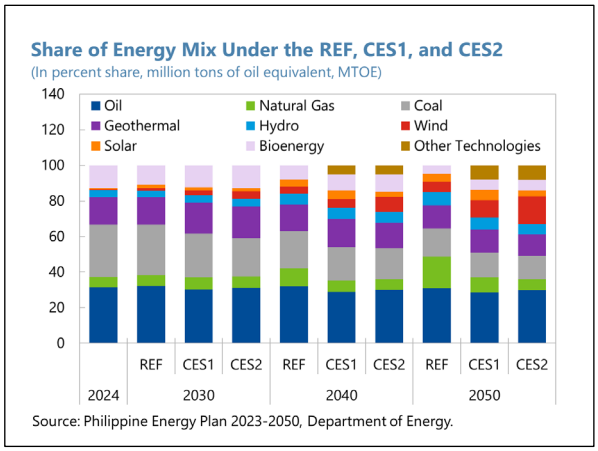


Source: Key Energy Statistics and Power Statistics, Department of Energy.

3. Notwithstanding the RE sector's potential, coal remains the dominant source of gross power generation. Peak electricity demand is projected to increase threefold from 16.6 GW in 2022 to 68.5 GW by 2050. The government aims to meet this demand through a combination of maximizing RE potential and utilizing natural gas as a transition fuel. As of 2024, fossil fuels comprise 78 percent of total power generation, while renewable energy contributes 22 percent. Coal remains the primary source within fossil fuels, making up 63 percent of power generation, followed by natural gas at 14.2 percent. This reliance comes at a heavy cost, as electricity generation accounts for 89 percent of the country's total greenhouse gas emissions (GHG) in 2023 and 6.1 percent of GDP of imports. This trend poses challenges to the country's commitments under the NDC 2020-30, which targets 2.71 percent unconditional and 72.29 percent conditional reduction of business as usual (BAU) total emissions.

4. The RE supply and electricity -demand gap persists at the national and local levels. Transitioning to renewable energy sources is critical amid growing energy demand. However, the sector hasn't fully developed and its penetration varies across regions. The country's archipelagic geography also constrained the development of a centralized national grid creating regional disparities in electrification. While this also highlights the viability of decentralized RE-based hybrid grid systems, high upfront capital costs of renewable energy hinder wider deployment on islands though this is expected to change with the declining costs of RE and related technologies including solar PV and batter storage (Bertheau and Cader 2019). Luzon primarily depends on hydropower, with increasing contributions from solar power over time. The Visayas region relies heavily on one of the world's biggest geothermal sources located in Tongonan, Ormoc City. Electricity generation in Mindanao primarily relies on hydropower with the Agus and Pulangi Power Plant Complexes supplying more than 50 percent of the island's total electricity requirements.

5. Increasing the share of RE in the power generation mix has the potential to lower energy costs over time. The Philippines currently records some of the highest electricity prices in the ASEAN region which remain a significant barrier for the manufacturing sector. Recent developments, however, show a marked decline in prices. According to the Independent Electricity Market Operator of the Philippines (IEMOP), average annual electricity prices has declined in the first half of 2025 to PHP 4.14 per kWh, from PHP 5.58 per kWh in 2024—driven in part by the growing renewable energy investments. Successful rounds of the Green Energy Auction Program could further lower average electricity prices by about 32 percent to approximately PHP 3.36 per kWh in Luzon by 2029, with similar reductions projected in the Visayas and Mindanao grids (IEMOP 2025). If sustained, and coupled with the continued decline in the cost of RE technologies relative to their levelized cost of energy, this trend could reduce energy costs further and support the country's long-term growth strategy.



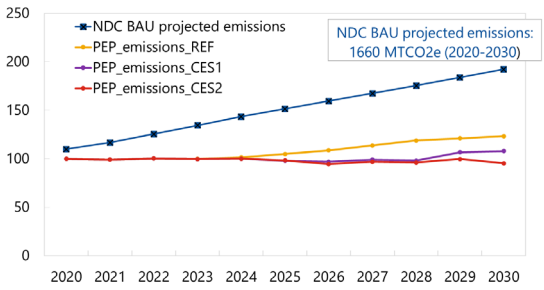
Source: Philippine Energy Plan 2023-2050, Department of Energy.

6. The government aims to increase the share of RE to 50 percent by 2050. The COP28 Global Renewable and Energy Efficiency Pledge calls for tripling global renewable energy capacity by 2030.-As a signatory, the Philippines launched the Philippine Energy Plan (PEP) 2023–2050 and its Energy Transition Program to increase the share of RE in the power generation mix to 35 percent by 2030 and 50 percent by 2050. Between now and 2030, significant efforts are required for the country to achieve its clean energy targets. Under the Reference Scenario (REF) of the PEP, the share of RE is projected to reach only 35.5 percent by 2050. In contrast, the two Clean Energy Scenarios (CES1 and CES2) in the PEP present more ambitious RE targets. CES1, which envisions the adoption of offshore

wind (OSW), nuclear power, and improved efficiency in new power plants, projects an increase in the RE share to 50 percent by 2050. CES2 further scales up OSW capacity from 19 GW to 50 GW increasing the RE share to more than 50 percent. These clean energy scenarios are more closely aligned with the Philippines' COP28 commitments. However, despite these ambitions, fossil fuels supply is expected to increase by an estimated 110 percent by 2050 under the REF, 54 percent under CES1 and 43 percent under CES2.

Projected Emissions: NDC BAU vs. REF, CES1 and CES2 of the PEP 2023-2050

(In million metric tons of CO2 equivalent, MTCO2e)



Source: Philippine Biennial Transparency Report 2025, Climate Change Commission.

7. The authorities expect GHG emissions in the energy sector to remain on track with the Philippines's NDC targets. Estimates from the Philippine's Biennial Transparency Report (BTR) 2025 show that through the combined efforts for the energy sector to achieve its clean energy transition, GHG emissions in the sector have been substantially reduced and will continue to decline. Estimates from the PEP 2023-2050 indicate that since 2020, GHG emissions in the energy sector have significantly declined relative to the NDC business-as-usual scenarios. The NDC accumulated target reduction between 2020 and 2030 is estimated at 587 mtCO2e and the sector is expected to reach this target as early as 2033 under CES 2 and by 2037 under CES 1. While the REF scenario does not fully achieve this result, it is projected to reduce energy emissions by more than half.

B. Recent Progress in the Philippine Renewable Energy Transition

Policies and Measures

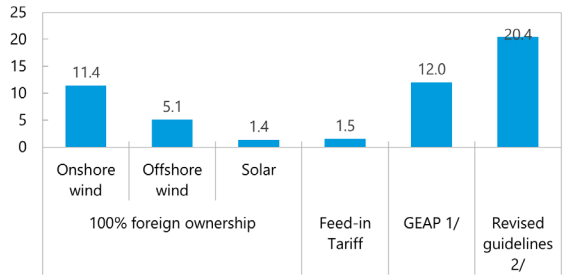
8. The private sector is expected to lead the sustained RE expansion in the Philippines, with support from the government's enabling reforms and policies.

- The Philippine government has recently actively promoted investor-friendly policies, with the enactment of a law allowing 100 percent foreign ownership of renewable energy projects in 2022. This has led to the awarding of 65 RE contracts, totaling 17.84 GW, to fully foreign-owned companies for offshore and onshore wind, and solar projects.

- In addition, the Green Energy Auction Program (GEAP) which consists of (i) the Green Energy Auction (GEA), which facilitates the determination of eligible renewable energy facilities through online bidding and (ii) the Green Energy Tariff (GET), which sets the price resulting from

Projected Installed Capacity from Recent RE Reforms and Measures

(In gigawatts)



Source: Renewable Energy Management Bureau, Department of Energy.
1/ Green Energy Auction Program, 2/ Revised Omnibus Guidelines Governing the Award of RE Contracts and Registration of RE Developers.

the conduct of each GEA. Three successful rounds of the GEAP have been conducted, providing a combined total of 12GW RE capacities, which are expected to provide RE generation from 2025-2035.[2] Finally, under the revised omnibus guidelines governing the award and administration of RE contracts, developers are now allowed to commence permit processing, conduct survey and other feasibility activities before the official 25-year contract terms begins. As of May 2025, the DOE has issued 104 certificate of authority (COA), with a total potential capacity of 20.42 GW.

- Concurrently, the government is developing essential energy transition infrastructure. This includes the integration of ICT through advanced smart grid technologies, and port infrastructure to support offshore wind power. Local banks are issuing green finance instruments while multilateral institutions are actively supporting RE and grid-related infrastructure through concessional lending and project development assistance. The listing of renewables developers and operators on the stock exchange has also helped, with higher valuation premiums for pure play renewables companies as evidenced by their higher price-to-book (P/B) ratios, stronger market valuation of installed capacity, and stock performance in recent years (IEEFA 2023) [3]

- The government also continues to strengthen the Energy Virtual One-Stop Shop (EVOSS) to ensure faster approval of permits. These proactive approaches have positioned the Philippines as a significant global RE investment hub. Bloomberg's 2024 Climate scope ranked the Philippines as the second most attractive market for clean power investments among Emerging Markets and within the Asia and the Pacific region, a substantial improvement from its 30th rank in 2021. Table 1 provides a summary of recent governmental reforms and measures supporting RE expansion.

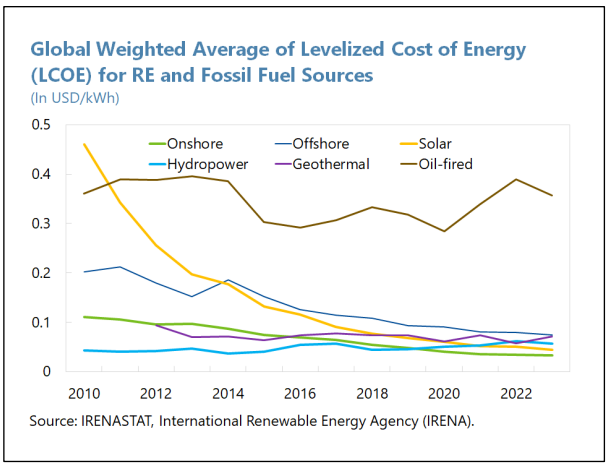
- The government is also addressing high capital costs and financing barriers. The Bangko Sentral ng Pilipinas (BSP) increased the Single Borrower's Limit (SBL) for financing green or sustainable projects by 15 percent and is gradually reducing the applicable reserve requirement for sustainable bonds from the current 3 percent to 0 percent over a two-year period. These measures allow banks to expand financing for sustainable energy projects. Furthermore, the BSP has adopted the *Philippine Sustainable Finance Taxonomy Guidelines (SFTG),* which provide high-level guidance in determining the greenness of investments and aims to expand access to green finance. It is worth noting that, as of end-July 2025, the Philippines ranked as the second-largest issuer of ASEAN-labelled Green, Social, Sustainability and Sustainability-Linked (GSS+) Bonds, with the majority of issuers coming from the banking sector and publicly listed companies (SEC 2025).

9. Global factors complemented domestic policies supporting the green transition in the Philippines. One of the most decisive enablers of the energy transition in the country is the global decline in the cost of RE technologies, particularly solar photovoltaics (PV), and onshore and

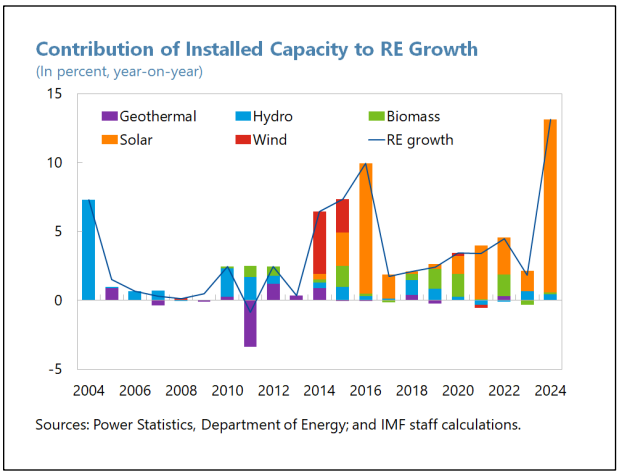
[2] The three green energy auctions (GEA) and their total expected generation capacity are: GEA 1 in June 2022 - 1.9 GW, GEA 2 in July 2023 – 3.4GW and GEA 3 in February 2025 - 6.7GW.

[3] The term "pure play" refers to renewable energy companies whose portfolios are exclusively

offshore wind power generation.[4] In terms of levelized cost of energy, solar PV is estimated at 0.044 (2023 USD/kWh, onshore wind at 0.033 and offshore wind at 0.075. Meanwhile, the LCOE for oil-fired power is at 0.3568 2023 USD/kWh. Utility-scale solar PV and onshore wind are now more cost-competitive than fossil fuels in many countries including countries in Asia and the Pacific such as Indonesia, India, Philippines and Vietnam.[5] In addition, global green foreign direct investment (FDI) inflows rose from approximately USD 40 billion in 2014 to USD 200 billion in 2022 (IMF 2024), boosting capital availability and technology transfer.



10. RE expansion gained momentum showing notable growth in 2024. The period from 2014 to 2024 marked substantial growth, particularly in solar and wind power. Wind power has proven to be a reliable RE source, consistently providing 427 megawatts of installed capacity from 2015 through 2024. Solar power has overtaken geothermal energy as the second-largest source of RE. Its growth began in 2014, initially through installations in large commercial malls, and gained momentum with the commissioning of the Calatagan Solar Farm in 2016. The country has continued to scale up deployment of solar farms, and by 2024, the share of solar power surpassed geothermal, making it the second-largest source of RE after hydropower. This rapid growth is expected to continue with the upcoming Terra Solar Park in Central Luzon—the world's largest solar project—scheduled for completion in 2026.



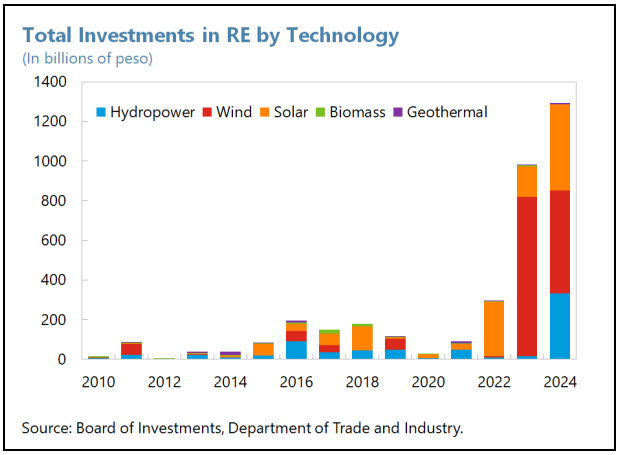
Private Investments in Renewable Energy

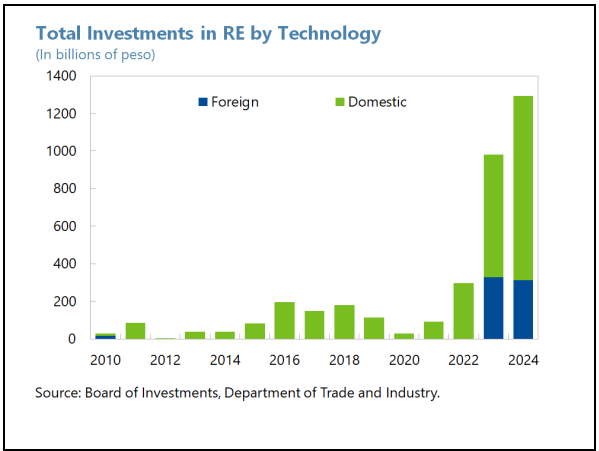
11. From 2022 to 2024, the Philippines achieved an average annual growth rate of 163 percent in total investments in RE. Increasing investor confidence in the Philippines' RE sector and supportive policy environment has driven significant investment growth. Data from the Board of Investments (BOI) of the Department of Trade and Industry (DTI) indicate a surge in RE investments in the Philippines starting in 2022, with total investments growing by 225 percent from 2021 to

[4] Levelized cost of electricity/energy is a standard metric to estimate the average total cost to build and operate a power plant over its lifetime, divided by the total amount of electricity it produces over that same lifetime.

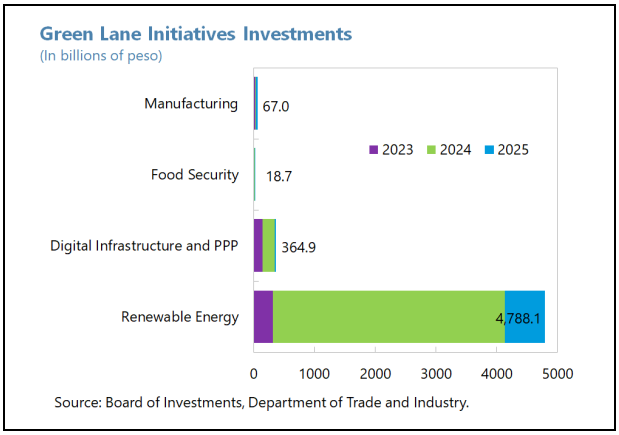
[5] Based on IRENASTAT's competitiveness metric, which is equivalent to the LCOE for RE minus the LCOE for fossil fuels.

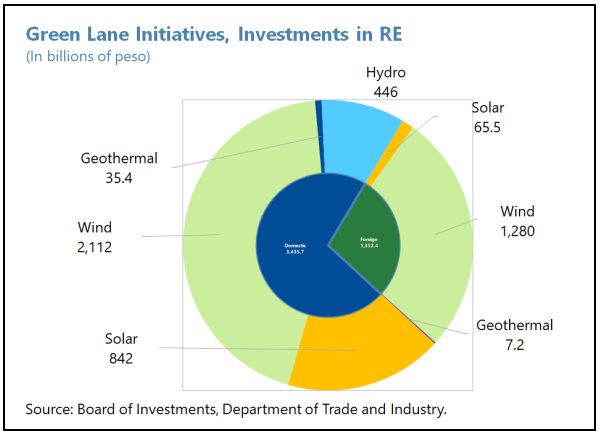
2022, primarily driven by solar power projects. In 2023, RE investments reached PHP 987.12 billion (4.1 percent of GDP) or 231 percent growth, driven by substantial foreign and domestic investments in wind farms totaling PHP 804 billion (3.3 percent of GDP). In 2024, the Philippines sustained investments in solar and wind energy, with additional investments in hydropower, bringing total RE investments to PHP 1.38 trillion. Additionally, a breakdown of investments by source reveals that domestic investors continued to dominate the sector, especially in wind and solar development, accumulating a total of PHP 651 billion (2.7 percent of GDP) in 2023. By 2024, domestic investments expanded to wind, solar, and hydropower, totaling 3.7 percent of GDP. At the same time, the entry of multinational energy firms has brought in fresh capital, technology, and expertise. Multinational partnerships—often through joint ventures and strategic partnerships with local developers—also drove substantial foreign investments in wind farms, reaching PHP 330 billion in 2023 and PHP 314 billion in 2024. Additionally, investments in solar farms in the Philippines reached PHP 462 million in 2024 and are projected to reach PHP 905 million in 2025, reinforcing the country's position as a leading RE investment hub.



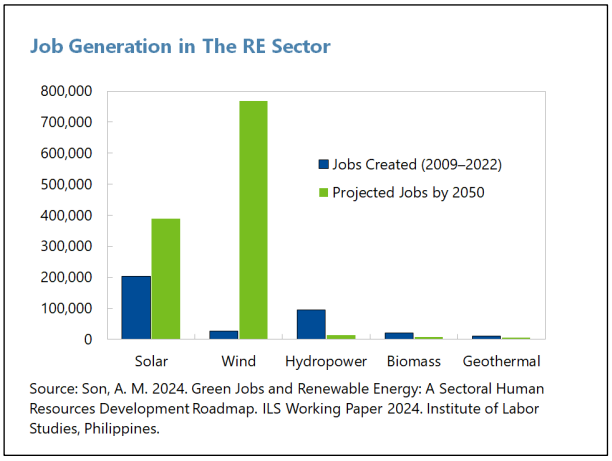


12. Enhanced ease of doing business through the Green Lane initiative brought in even more substantial RE investments. The Green Lane for Strategic Investments launched by the Department of Trade and Industry through Executive Order No. 18 is a government-wide response to enhance the Ease of Doing Business through the streamlining and automation of government processes focused on renewable energy, food security, manufacturing, and digital infrastructure and public--private partnerships (PPPs). Since its launch in February 2023, the Green Lane initiative has facilitated total investments amounting to PHP 5.93 trillion (**22.4** percent of GDP), with RE accounting for the largest share—PHP **5.07** trillion, or 85.5 percent of the total. Domestic investments comprise the majority of RE investments under the initiative, totaling PHP 3.43 trillion, or 71.7 percent. Among these, wind farm projects dominate, followed by solar farm projects. Meanwhile, foreign investments represent 28.2 percent of the total, equivalent to PHP 1.35 trillion.



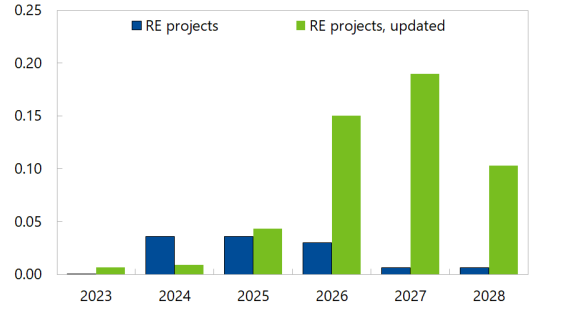


13. RE expansion has brought new opportunities for job creation in clean energy. The DOE estimates that every USD 1 million invested in renewables leads to an average of 4,862 job-years created from project development to the construction stage (ILS -DOLE 2024). Since the enactment of the Renewable Energy Act of 2008, the study also cites that the RE sector has generated approximately 357,000 jobs from 2009 to 2022, with solar contributing an estimated 203,378 jobs, hydropower - 94,835 jobs, wind - 27,340 jobs, biomass - 21,495 jobs, and geothermal - 10,261 jobs. Based on RE targets and investments by 2050, workforce projections will reach up to 388,600 jobs in solar, 767,300 in wind, 13,300 in hydropower, 6,100 in geothermal, and 8,700 in biomass (ILS -DOLE 2024).

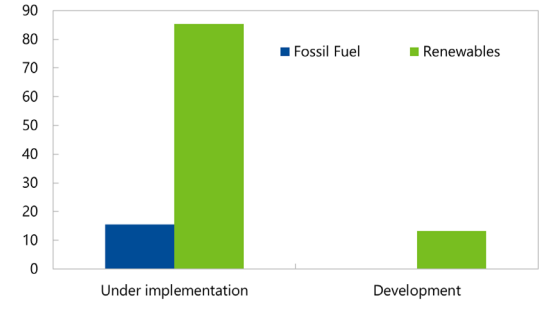


Investments in Government-Backed Projects

14. In terms of public investments, the government has significantly increased its medium-term budget for RE projects. Under the updated Public Investment Program (PIP) 2023-2028, the allocation for small-scale renewable energy projects rose substantially. This significant budget expansion reflects the government's intensified efforts to implement more RE projects in missionary and underserved areas, in line with the Department of Energy's (DOE) Missionary Electrification Development Plan (MEDP) 2024–2028. In addition, under the Department of Environment and Natural Resources' (DENR) Integrated Water Resources Management Plan 2024, the National Irrigation Administration's (NIA) water rights have been converted to multipurpose use which effectively paves the way for the development of bulk water supply and hydropower projects using existing NIA facilities. Table 2 of the Annex presents a summary of recent measures supporting the expansion of the RE sector through government-financed projects.

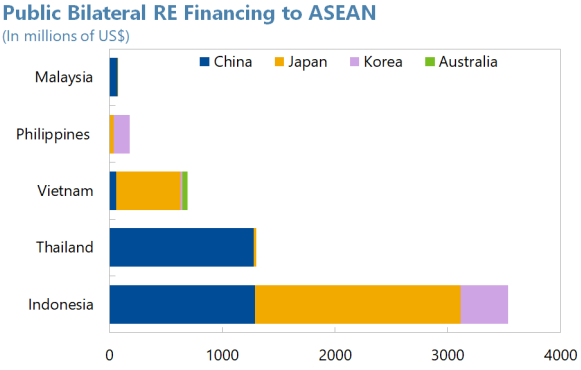


Source: Philippine Public Investment Program 2023-2028 from the Department of Economy, Planning and Development and IMF Staff estimates.

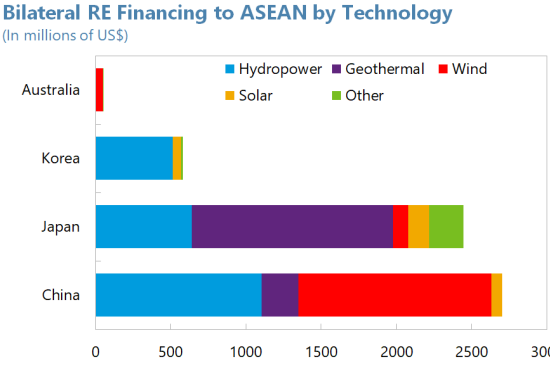


Sources: PPP Projects Dashboard from the Public-Private Partnership Center of the Philippines; and IMF Staff estimates.

15. Though still at their nascent stage, PPPs on RE projects are starting to gain momentum. The PPP Center of the Philippines has proactively fostered strategic dialogue and multi-stakeholder collaboration to advance the country's transition to clean energy. As of October 2025, there are 251 PPP projects in the pipeline with an estimated total cost of approximately PHP 2.61 trillion (9.9 percent of GDP). PPPs for RE projects account for PHP 98.5 billion, or 3.8 percent of the total cost for both under development and under implementation, reflecting a modest but growing share. Most projects primarily support the MEDP 2024-2028 and are brownfield in nature, involving the redevelopment of public land for RE use or the rehabilitation and maintenance of existing RE plants. A key government project that will be largely financed through PPPs is the Smart and Green Grid Plan (SGGP) which is a priority under the Philippine Energy Plan (PEP) 2023–2050. The SGGP will anchor the rollout of transmission facilities by the National Transmission Corporation (TransCo) for RE projects within the Philippines' restructured power sector. The DOE is collaborating with the Philippine Ports Authority and the PPP Center for the repurposing and modernization of port infrastructure to handle the installation, commissioning, and operations of offshore wind projects through PPPs.



Source: Zero Carbon Analytics. 2025. The race to invest in Southeast Asia's green economy.



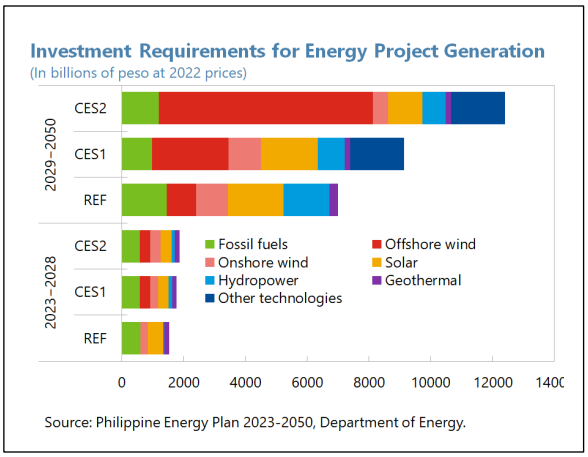
Source: Zero Carbon Analytics. 2025. The Race to Invest in Southeast Asia's Green Economy.

16. The Philippines receives a marginal share of public bilateral investments in RE from within Asia. The number of international public investments in RE from within Asia to selected ASEAN destinations has increased by an average of 15 percent per year (Zero Analytics 2025). China has recorded the highest total public investment—USD 2.7 billion. Between 2013 and 2023,

Indonesia received the largest share of public bilateral investment at USD 3.54 billion, followed by Thailand, Vietnam, and the Philippines. A breakdown by renewable energy type shows Japan as the region's largest public investor in geothermal energy while China leads in hydro and wind power.

Challenges in Achieving the Philippines' Renewable Energy Targets

17. The investment requirements to achieve the country's energy transformation are substantial, estimated at PHP 10.67 trillion (40 percent of 2024 GDP) during 2029-2050. Investment requirements for RE projects are projected to rise significantly between 2023 and 2050 under all three scenarios of the PEP. By 2029-2050, investment requirements escalate sharply—reaching PHP 7.39 trillion (28 percent of GDP) under CES1 and PHP 10.67 trillion (40 percent of 2024 GDP) under CES2 driven largely by offshore wind, followed by solar, hydropower and emerging technologies. Meeting these targets requires strong public and private participation, particularly in capital-intensive industries. This will necessitate prompt and comprehensive solutions to key barriers that currently impede project implementation and investor confidence. These include limited grid infrastructure, delays in land acquisition, high capital costs, and a severe deficit in skilled workers, among others.



Source: Philippine Energy Plan 2023-2050, Department of Energy.

18. There is limited capacity and coverage of the national transmission and distribution system. The DOE and BOI cite the inadequate capacity of the current grid infrastructure to integrate RE sources such as solar and wind power. The Philippine grid, managed primarily by the National Grid Corporation of the Philippines (NGCP), is not yet fully equipped to oversee intermittent generation or to transmit electricity from remote renewable resource areas (e.g., offshore wind sites or upland solar farms) to demand centers. According to the DOE, the energy sector requires a transmission system that can provide automated control, which can quickly respond to changes in the condition of the grid and assist in maintaining its integrity and reliability. Furthermore, the Department of Economy, Planning and Development emphasizes the importance of locating abundant resources, which may be situated in remote or protected areas not covered by existing transmission networks. These circumstances must be considered in upgrading the national transmission and distribution network.

19. The sector continues to grapple with high capital costs and limited access to innovative financing mechanisms. Renewable energy (RE) development requires extensive exploration and site-specific assessments to determine the availability of indigenous resources and the adequacy of existing infrastructure. These factors contribute to high upfront capital costs and longer investment horizons posing challenges to private sector financing. The Department of Finance notes that the current state of the Philippines' financial system and weak investor confidence, among other factors, leads to the underutilization of the capital market and continued

reliance on debt in bridging the RE financing gap. Financing instruments such as sustainable bonds and blended financing are still at their nascent stage with less uptake by most small and local players. Power generation markets in the Philippines are also considered oligopolistic with approximately 53 percent of the market share dominated by three private firms (PIDS 2023). In addition, the lack of RE manufacturing means that the sector remains vulnerable to changes in prices of imported technologies such as solar panels, batteries, inverters and critical components for offshore wind such as turbine blades, subsea cables, and specialized installation vessels—all of which are essential for scaling up clean energy deployment at scale. The BOI also highlights how offtake mechanisms for RE remain limited. While GEAP and GEOP are implemented, ceiling prices under GEAP are considered too low by some developers, especially for solar and offshore wind. Challenges remain in ensuring viable, long-term power purchase agreements (PPA).

20. Land acquisition for RE projects remains slow, complex and contentious. Land-related issues represent a major barrier which cause delays and reduce the scale of large RE projects such as solar farms and onshore wind developments. Land use in the country is characterized by fragmented and multiple systems granting legislative authority to carve out public land for specific uses, which often leads to conflicts. For one, the existing mechanisms for reserving land specific uses include Presidential proclamations and sector-specific laws (PIDS). On the other hand, land zoning, land reclassification and land use conversion are the ambit of local government units under the Local Government Code of 1991 (PIDS 2023). While the National Land Use Committee (NLUC) exists to facilitate national level discussions and conflict resolutions, the agency has no enforcement power and no authority to impose sanctions or penalties to parties (PIDS 2023). The recently enacted Republic Act (RA) 12289, or the *Accelerated and Reformed Right-of-Way Act (ARROW),* aims to expedite the acquisition of property for infrastructure projects through streamlined procedures, including faster issuance of writs of possession and clearer timelines. The impact of this measure in mitigating delays and accelerating project implementation is yet to be observed. The DOE and the DENR also signed a Memorandum of Agreement granting rights to use offshore areas covered by offshore wind energy service contracts, including auxiliary areas to accelerate the development of offshore wind projects.

21. The Philippines faces a deficit in skilled workers to support its growing RE pipeline. While the Philippines has the largest RE development pipeline in the region, there is currently a substantial gap in the skilled RE workforce (ILO 2025). A survey carried out by DOLE ILS cites that 75 percent of RE company representatives find it difficult to hire qualified candidates for vacant technical positions, especially in the higher-skilled category followed by technicians and associate professionals. Managers also face a notable shortage which is also linked to the high demand for both technical knowledge and soft skills such as leadership and project management (DOLE ILS 2024). The ILO also flagged the absence of formal apprenticeships and systems for forecasting future skill needs as major constraints often impacting RE project quality. To meet the growing demand, the government is intensifying its national efforts to upskill and reskill the workforce, addressing gaps in sectors such as RE. These initiatives include the *UNFCCC Just Transition Work Program* and the DOE-ILO collaboration on *Green Jobs and Just Transition Framework for the Philippines*. The DOE and DOLE also launched the Right-Skilling the Philippine Workforce initiative to

support the global energy transition, focusing on providing global certifications for local workers in the RE sector. Another DOE initiative with state universities and colleges (SUCs), the Affiliated Renewable Energy Centers (ARECs) program, aims to develop specialized hubs for renewable energy technologies, aligned with local resources and academic strengths.

Annex I. Summary of Government Initiatives Supporting Renewable Energy Transition

Table I.1. Philippines: Summary of Government Initiatives Supporting the RE Expansion for Businesses

Policies / Measures	Year	Objective
Amendments to the RE Act of 2008	2022	100% foreign ownership in solar, wind, and tidal projects
CREATE MORE Act	2024	Alternative incentives from those under the RE Act: such as income tax holiday, duty-free imports, VAT exemption, among others
Renewable Portfolio Standards (RPS)	2025	Started in 2017 but in 2023, increased the minimum RPS annual percentage increment from 1.0 to 2.52% for grid-connected areas. In 2025, mandated entities are required to source at least 13.9% of their supply portfolio from renewables, with an annual increase of 2.52%.
Energy Virtual One-Stop Shop (EVOSS) Act	2019	Centralized online platform for the coordinated processing and approval of permits for new power generation, transmission, or distribution
Green Energy Auction Program (GEAP)	2020	Provide additional market for RE through a competitive electronic bidding of RE capacities for hydro, biomass, solar, and wind
Green Energy Option Program (GEOP)	2018	Allows electricity end-users with 100kW and above demand to source their electricity supply from RE sources through RE Suppliers
Energy Efficiency and Conservation Act	2019	Includes provisions to promote and encourage the development and utilization of efficient RE technologies and systems
Executive Order No. 18, Green Lanes for Strategic Investments	2023	Enhances ease of doing business by facilitating faster permitting for large-scale and strategic RE projects through the Board of Investments
Executive Order No. 21	2021	Establishment of the Policy and Administrative Framework for Offshore Wind Development which supports the aggressive development of OSW potential
Microgrid Systems Act	2022	Microgrid systems are put in place in areas declared to be unserved and underserved.
Preferential Dispatch of All RE-Generating Plants	2022	All RE generating units are given preference in the Wholesale Electricity Spot Market (WESM) dispatch schedule.
Expanded Roof-Mounted Solar Program	2023	Covers for all roof-mounted solar energy generating facilities with a capacity of above one hundred-kilowatt peak (100 kWp)
Revised Omnibus Guidelines Governing the Award of RE Contracts and Registration of RE Developers	2024	Developers are now allowed to commence permit processing, conduct survey and other feasibility activities before the official 25-year contract terms begins.
Philippine Renewable Energy Market (REM)	2024	Renewable Energy Certificate (REC) trading system will fully return to a market-driven mechanism
BSP Circular No. 1149, s. 2022	2022	Guidelines on the integration of sustainability principles in the investment activities of banks, including the issuance of sustainable bonds.

Table I.1. Philippines: Summary of Government Initiatives Supporting the RE Expansion for Businesses (Concluded)

Policies / Measures	Year	Objective
BSP Circular No. 1185, s. 2023	2023	Sustainable Central Banking (SCB) Strategy: Banks are allowed to extend loans for eligible green or sustainable projects or activities with a top-up 15 percent Single Borrower's Limit (SBL). Banks' reserve requirement rate (RRR) against sustainable bonds was also reduced from 3 percent to 1 percent starting January 6 2024, and to 0 percent starting 6 January 2025 until January 6, 2026.
BSP Circular No.1187 Series of 2024	2024	Adoption of the Philippine Sustainable Finance Taxonomy Guidelines (SFTG) providing high level guidance in determining the greenness of an investment.
Securities and Exchange Commission and Energy Regulatory Commission	2025	Securing and Expanding Capital for PowerGen Operators and Wholesale Electricity and Retail Services (SEC POWERS)
DENR Administrative Order No. 2024-02	2024	Providing Interim Guidelines for Environment Compliance Certificate (ECC) Under the Philippine Environmental Impact Statement System (PEISS) for Offshore Wind (OSW) Energy Projects.
DENR Administrative Order No. 2023-08	2023	Established comprehensive guidelines for floating photovoltaic projects, particularly for the 2,000-hectare pilot project in Laguna de Bay
DOE and DENR Memorandum of Agreement (MOA)	2024	Granting rights to use offshore areas covered by offshore wind energy service contracts, including auxiliary areas to accelerate the exploration, utilization and development of offshore wind projects.
DOE Circular No. DC2020-02-0005	2020	Guidelines on the Duty-Free Importation and Monitoring of the Utilization of RE Machinery, Equipment, Materials, and Spare Parts and their Transfer and Other Disposition
DOE Circular No. DC2022-02-0002	2022	Waste to energy: Prescribing the policies and programs to promote and enhance the development of biomass waste to energy facilities
DOE Order No. DO2022-02-0003	2022	Creation of a Philippine Steering Committee (PSC) and Technical Working Groups (TWG) for Renewable Energy (RE) and Energy Efficiency and Conservation (EE&C) Under the Clean Energy Finance and Investment Mobilization (CEFIM)
DOE Circular No. DC2022-03-0004	2022	Guidelines for the Endorsement of Energy Efficiency Strategic Investments to the Board of Investments for Fiscal Incentives
DOE Circular No. DC2024-06-0020	2024	Establishment of the Center for Affiliated Renewable Energy and Energy Efficiency and Conservation (CARE)

Table I.2. Philippines: Summary of Government Initiatives Supporting RE Expansion in Government - Financed Projects (2023-2025)

Plans / Programs	Department	Objective	Outcome
Missionary Electrification Development Plan (MEDP) 2024-2028	DOE	Achieve universal, sustainable, and inclusive energy access in off-grid and underserved areas	Increase in small-scale RE projects in missionary areas
Integrated Water Resources Management Plan 2024	DENR	Guide the efficient utilization of funds and investments for water supply, sanitation, and water resource management	Increase in RE projects (hydropower, floating solar) lined up with NIA water rights
Transmission Development Plan (TDP) 2025-2050 ***(for publication)***	National Grid Corporation of the Philippines	Realigning its targets with the updated RES targets and integration of smart grid technologies	Approx. 5,145 km of transmission lines and 63,625 MVA of transformation capacity
Smart and Green Grid Plan (SGGP)	DOE	Enhance grid reliability and resilience and enable the seamless integration of large-scale RE, including up to 50 gigawatts of offshore wind	Modernize the grid to meet the 2050 peak demand, enable over 50% RE share by 2040
PPP Code of the Philippines (RA 11966)	PPP Center of the Philippines	Streamline the evaluation, approval, and monitoring of RE and energy efficiency PPP projects	New RE projects and related infrastructure projects in the PPP pipeline for development
DOE and the Philippine Ports Authority (PPA) collaboration	DOE and PPA	Strategic repurposing and modernization of port infrastructure to handle the installation, commissioning, and operations of OSW projects	Support high-potential offshore wind energy service contracts totaling 56 as of 2024

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