

POLICY PAPER

THE GRID: OBSTACLE OR PATH TO PRO-PEOPLE RENEWABLES?





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The electricity grid is the country's power highway. It transports electricity from power plants to distribution utilities and electric cooperatives before it reaches homes, schools, hospitals, farms, businesses, and communities. Without the grid, electricity generated in one place cannot reach consumers elsewhere.

Because of this, the grid plays a critical role in the Philippines' renewable energy (RE) transition. It can help connect more renewable energy projects, improve energy security, and reduce the country's dependence on imported fossil fuels. At the same time, however, the way the grid is owned, operated, and expanded can either accelerate—or hinder—a just and people-centered renewable energy transition.

Ownership and operation. The country's transmission network is a natural monopoly, meaning it is most efficiently operated as a single nationwide system rather than by competing companies.

The transmission assets remain publicly owned through the National Transmission Corporation (TransCo). However, under the Electric Power Industry Reform Act of 2001 (EPIRA), the operation, maintenance, and expansion of the transmission grid were privatized. Since 2009, these functions have been undertaken by the National Grid Corporation of the Philippines (NGCP) under a long-term concession agreement with the government.

NGCP is owned by Filipino corporations together with the State Grid Corporation of China (SGCC), which holds a 40% ownership stake in the company. As the country's sole transmission operator, NGCP's decisions on grid planning, expansion, maintenance, and interconnection have significant implications for electricity prices, energy security, and the pace of renewable energy development.





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The grid and renewable energy. A modern and reliable grid is essential to expanding renewable energy.

It allows electricity generated from solar, wind, geothermal, hydropower, and biomass facilities to reach consumers across the country. A stronger grid also makes it easier to balance electricity supply and demand as more variable renewable energy sources are introduced.

The grid can also support distributed renewable energy by allowing households, businesses, electric cooperatives, and communities with rooftop solar and other renewable energy systems to connect to the network through programs such as net metering. This helps improve electricity reliability, reduce dependence on imported fuels, and strengthen the country's long-term energy security.

Becoming a bottleneck. While the grid is essential for renewable energy, it is also one of the country's biggest constraints.

The Philippine transmission system was largely developed around large, centralized power plants. Today, however, renewable energy is increasingly produced by many smaller and geographically dispersed facilities. Integrating these sources requires additional transmission capacity, modern control systems, energy storage, and more flexible grid operations.

The Philippines also has separate Luzon, Visayas, and Mindanao grids, along with many isolated island systems. This fragmentation makes it more difficult to balance electricity supply across regions and connect renewable energy projects in remote areas.

Many renewable energy developers also experience delays due to limited transmission capacity, lengthy System Impact Studies, and complex interconnection requirements. These bottlenecks can postpone projects that are otherwise ready to supply clean electricity.

Modernizing the grid is therefore necessary—but it also raises an important question: Who should bear the costs? If grid expansion is financed mainly through charges passed on to consumers, households and small businesses may shoulder a significant part of the transition's costs.

Who benefits, who loses. The way the grid is currently planned and operated influences who can participate in the renewable energy transition.

Large, well-capitalized developers are generally better positioned to meet technical requirements, finance lengthy project development, and absorb delays in securing grid connections. In contrast, smaller developers, electric cooperatives, local governments, and community-based renewable energy initiatives often face greater financial and administrative barriers to connecting their projects.

At the same time, large transmission and renewable energy projects can affect forests, agricultural lands, mangroves, ancestral domains, fishing grounds, and local livelihoods if they are implemented without adequate environmental safeguards, meaningful consultation, and respect for the rights of affected communities.

Renewable energy should not come at the expense of people or nature. A just transition means ensuring that renewable energy projects respect communities, protect ecosystems, and fairly share the benefits of clean energy.

Grid for pro-people renewables. The solution is not to abandon the national grid. The Philippines needs a modern, reliable, and resilient transmission system to support a growing share of renewable energy.

But the grid should be planned and governed in the public interest. This means investing in grid modernization, energy storage, and smarter transmission technologies while simplifying interconnection procedures for smaller renewable energy projects. It also means supporting distributed renewable energy, community-owned energy systems, microgrids, and off-grid renewable energy solutions, particularly in islands and underserved communities where extending transmission infrastructure may be difficult or costly.

Most importantly, energy planning should ensure that the benefits of the renewable energy transition are shared broadly. Consumers, workers, farmers, fisherfolk, Indigenous Peoples, and local communities should be among its primary beneficiaries—not merely spectators in an energy system shaped by commercial investment decisions.



Challenges

The Philippine grid is an essential public infrastructure whose design, operation, and governance shape who benefits from the country's energy transition.

Studies by institutions such as the World Bank, the International Monetary Fund (IMF), and the U.S. National Renewable Energy Laboratory (NREL) show that the Philippine power system is technically capable of integrating much higher shares of renewable energy. Achieving the country's renewable energy targets is therefore not primarily a question of technical feasibility, but of whether the necessary investments, planning, and reforms are put in place.

Under the current configuration of the power sector, however, several structural challenges remain.

First, the transmission system remains a major bottleneck. Limited transmission capacity, interconnection delays, lengthy System Impact Studies, and right-of-way issues continue to slow the connection of new renewable energy projects, even when investments and government incentives are already in place.

Second, the grid was largely designed around large, centralized power plants. As renewable energy increasingly comes from geographically dispersed solar, wind, and community-based projects, the transmission system requires greater flexibility, stronger regional interconnections, energy storage, and smarter grid management.

Third, the country's electricity sector remains highly concentrated. While transmission is operated under the NGCP concession, generation and distribution are likewise dominated by a relatively small number of large private groups. This concentration can influence investment priorities, slow reforms, and make it more difficult for smaller developers, electric cooperatives, and community-based renewable energy initiatives to participate on equal footing.

Finally, the costs of modernizing the grid must be carefully managed. Investments in new transmission lines, substations, storage, and smart-grid technologies are necessary, but consumers should not disproportionately bear the costs through higher electricity rates while receiving only limited benefits from the transition.

Ultimately, the challenge is ensuring that the grid is planned, regulated, and operated in ways that support affordable electricity, accelerate renewable energy deployment, and serve the public interest.

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Ways forward

Building a pro-people renewable energy system requires both a stronger grid and better governance of the electricity sector.

A first priority is to modernize the transmission system by expanding transmission capacity, strengthening regional interconnections, deploying smart-grid technologies, improving digital monitoring systems, and investing in energy storage to better accommodate variable renewable energy such as solar and wind.

Grid planning should also be more closely coordinated with renewable energy development so that new transmission infrastructure is built where renewable energy resources are abundant and where communities can benefit most. Streamlining interconnection procedures and reducing delays in System Impact Studies would help bring renewable energy projects online more quickly.

At the same time, regulatory oversight should be strengthened to ensure that transmission planning and operation serve the public interest and are aligned with the country's renewable energy and energy security goals. Decisions affecting the grid should promote transparency, accountability, and long-term national development rather than being driven solely by commercial considerations.

The renewable energy transition should likewise support more decentralized energy systems. Community-owned renewable energy projects, electric cooperatives, rooftop solar, microgrids, and hybrid renewable energy systems can complement the national grid, particularly in islands and underserved communities where extending transmission infrastructure is difficult or costly. These localized solutions can improve electricity access, strengthen resilience, and allow communities to share more directly in the benefits of clean energy.

Finally, reforms should promote a more competitive, transparent, and consumer-oriented electricity sector. Strengthening governance that prevents anti-competitive practices and excessive market concentration, and ensuring meaningful public participation in energy planning can help create an electricity system that is more responsive to consumers and better equipped to achieve a just renewable energy transition.

A modern grid should do more than transmit electricity. It should help deliver the benefits of renewable energy to all Filipinos by making electricity more affordable, reliable, accessible, and sustainable while enabling consumers, communities, and future generations to participate in shaping the country's energy future.

