

Green Energy Option Program Lessons Learned: Transactions Lead to Cost-savings, but Renewable Energy Supply Hinders Retail Market Growth

Highlights:

- Power rates offered under the Green Energy Option Program (GEOP) are **5-12% lower than the prevailing generation rate of distribution utilities (DUs)** and provide **at least 10% cost savings to end-users**.
- **A major concern is that the renewable energy (RE) supply does not meet the current and growing demand.** There is an increasing number of companies targeting net-zero and 100% RE utilization. The private sector is estimated to require a peak demand of **48,742** gigawatt-hours (GWh), but currently the RE supply is only **23,770** GWh. As of January 2023, only 213 end-users have shifted to GEOP with a peak demand of 62 megawatts (MW), but RE suppliers are already turning away potential customers due to lack of supply.
- Another concern arising from the implementation of the GEOP is that **companies cannot claim the renewable energy certificate (RECs) from its use of RE under the GEOP** as this does not comply with RE100 standards. In its current state, the RECs are attributed to the DUs.
- **The collective voices of the private sector can enhance the GEOP policy and the expansion of retail choice to make more impactful policies for an enabling RE ecosystem and increase the country's RE supply to easily attract end-users to shift to utilizing renewable energy sources.**

Current state of energy retail choice opportunities in the Philippines

Electricity rates in the Philippines are among the highest in Asia, driven by its overdependence on imported fossil fuels that are exposed to volatile fluctuations in the global market. Exacerbated by geopolitical conflicts and global inflation trends, the prices of fossil fuels combined with a weakened Philippine Peso have pushed electricity rates even higher, raising electricity prices by 33% compared with the same quarter last year. These price hikes are unfortunately being passed on to energy consumers.

An increasing number of companies in the Philippines and worldwide have set internal targets to work toward a net-zero emission value chain and procure 100% RE to demonstrate climate-related business leadership, save on operational expenses, and act on climate change. Philippines conglomerates such as the Ayala corporation (the country's oldest conglomerate) and the Lopez group (one of the country's largest conglomerates) have set net-zero commitments. Internationally, the RE100 coalition alone has over 370 global businesses as members that collectively have a demand of 385 terawatt-hours per year

of renewable electricity or over 5 times the annual electricity consumption of the Philippines. 73 of these RE100 companies are currently operating in the Philippines. Collectively, these companies represent a total demand of 748 gigawatt-hours (GWh), equivalent to over 500 MW of RE demand. These companies can play a crucial role in increasing the share of RE in the country's energy mix.

The recently implemented and long awaited GEOP provides opportunities for these companies to purchase 100% RE to fulfill their power needs directly from RE sources and is currently available to all electricity end-users with an average peak demand of 100 kilowatts (kW) over the past 12 months. The GEOP expands the power of choice to a wider set of consumers beyond those covered by the Retail Competition and Open Access (RCOA) with over 500 kW of demand allowing consumers to potentially benefit from electricity cost savings while unlocking brand reputation gains derived from the associated sustainability claims. Interviews with various stakeholders conducted by the Clean Energy Investment Accelerator (CEIA), a public-private partnership supporting the acceleration of the corporate clean energy transition in key emerging markets, reveal that power rates offered under the GEOP are 5-12% lower than the prevailing generation rates of DUs.

Unfortunately, the GEOP is beset by two main challenges:

1. Low uptake of GEOP as of January 2023

As of January 2023, only 213 end-users have shifted to GEOP with a peak demand of 62 MW. Based on data from the [Independent Electricity Market Operator of the Philippines](#) (IEMOP), the RCOA and GEOP have only met 44% of the country's commercial and industrial electricity demand.

2. Demand for GEOP is overtaking the available RE supply

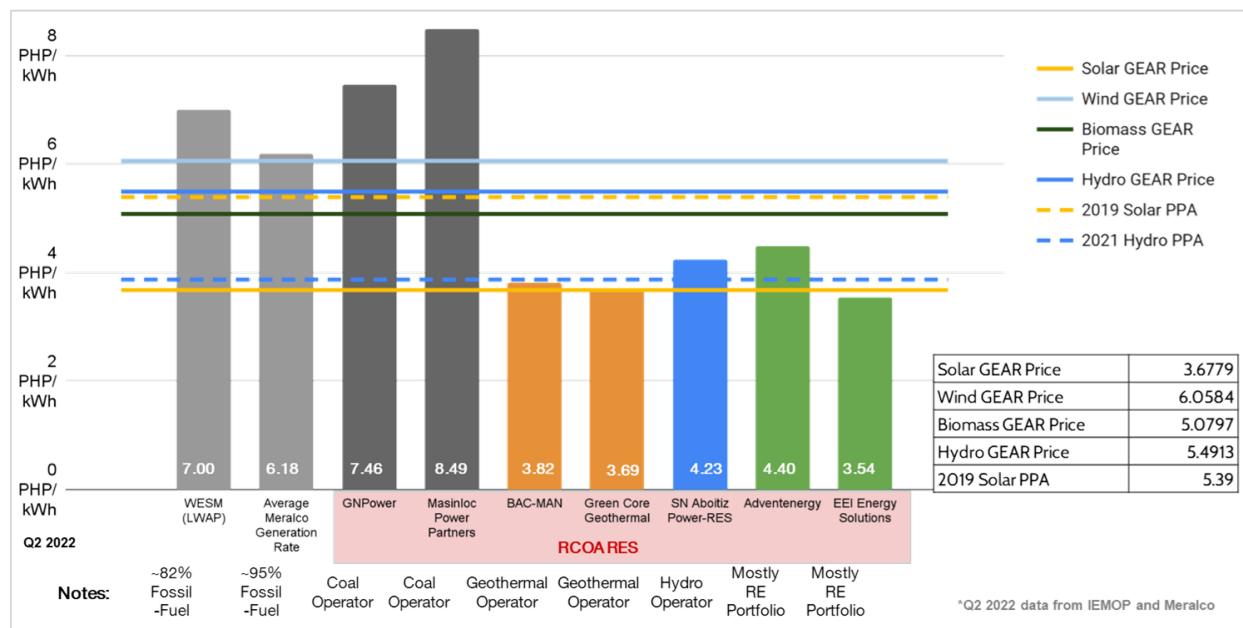
RE suppliers (RES) under the GEOP have indicated that they lack the RE supply to service more customers.

Addressing these two challenges will entail enhancing the current GEOP rules while increasing the country's RE supply. As a result, more end-users will benefit from RE.

GEOP offers cost-savings to eligible end-users

Achieving RE targets is not only about decarbonization goals, but also about cost savings. Since 2010, the cost of RE technologies such as solar and wind have been significantly declining globally. In the Philippines, **RE is already cost-competitive, if not more affordable, compared to other sources of energy, including fossil fuel-based energy;** based on data comparing electricity prices (see Figure 1 below) of Meralco, the Wholesale Electricity Spot Market (WESM), and RES with a significant RE portfolio during the second quarter of 2022. In general, the use of RE has become an economically attractive and convenient option in the country.

Figure 1. Comparison of 2022 Q2 electricity prices: WESM, Meralco, and RCOA RES



Lower retail rates, in combination with the opportunity to contractually lock-in fixed energy rates or fixed discounts such as what is available through the GEOP program, allows customers to acquire immediate cost savings by switching to RE. This aligns with the experience of Vita Tropic Ice Company, Inc., one of the first companies to switch to the GEOP who shared information about the immediate and current cost savings they have been observing by switching to the GEOP due to the rising cost of fossil fuels. Through CEIA’s direct engagement with a number of the RES, they have confirmed that they are able to offer generation rates lower than those charged by DUs, which allows customers to achieve cost savings from the moment they switch to RE under the GEOP. The payment models offered by RES are described below.

- 1. Fixed energy rate for the duration of the contract:** RE suppliers can offer a fixed rate for customers with 24/7 energy utilization that is steady, predictable, and cost-effective.
- 2. Fixed discount from the rate of the DU:** RE suppliers can offer a rate with a fixed discount from the monthly rate of the DU. The discounted rates could potentially be 5-12% lower than the DU’s generation rate.
- 3. Market based pricing:** Customers can also explore pegging their rate to the price of generation in the spot market.

There is growing concern that the lack of RE supply among the RES are leading to higher GEOP contract prices. A potential GEOP applicant based in Visayas shared that a RES they were negotiating with rescinded an initial offer and came back with a contract with a higher rate. This RES has later indicated that its RE supply has been fully contracted and would not be able to cater the GEOP applicant.

Addressing the limited energy retail market participation

The Department of Energy (DOE) and the Energy Regulatory Commission (ERC) have assured that various policies are being drafted, studied, and implemented to increase end-user choice. These include net-metering enhancements, allowing Distributed Energy Resources (DERs) to export energy, implementing retail aggregation, establishing green lease policies, and better monitoring of RES through RES Score Cards. DOE is also studying reducing the GEOP threshold with DUs as the procuring entities of the qualified micro, small and medium enterprises. In addition, the DOE's Renewable Energy Management Bureau, alongside the DOE's Energy Utilization Management Bureau, is looking into setting up policies to recognize green leases that would provide more options for facility tenants to access and benefit from RE. Another pressing issue with the current design of the GEOP is that RECs generated from facilities under GEOP contracts are attributed to the DUs, which poses double counting risks. As such, companies cannot claim the RECs from its use of RE under the GEOP because double counting does not comply with RE100 standards. **This double counting risk makes it hard for the end-user to certify their use of the green power.** This has led to global corporates hesitating to use GEOP in their carbon accounting. This may be addressed by allowing RECs to be controlled by the end-users. The DOE is planning to issue a policy opening the renewable energy market to voluntary participation, thus allowing corporates to trade RECs.

Additionally, the DOE agrees that the current uptake of the GEOP program is quite slow despite their continuous promotional efforts. They have credited this to the tedious registration requirements under the rules prescribed by the ERC. This is in line with the observation of the IEMOP, the central registration body for the GEOP, stating that some end-users are having difficulties completing the switching requirements. The DOE has stated that switching to GEOP takes at least four months. In comparison, switching to the RCOA only takes one to two months.

Addressing the limited RE supply

To ensure that GEOP remains an economical and viable choice for end-users, increasing the RE supply is critical in ensuring retail choice expansion and participation. Policy makers should ensure that there is sufficient RE supply to meet the growing demand for the program. This can be done by providing mechanisms for GEOP suppliers to better locate and reach out to qualified GEOP end-users, ultimately allowing GEOP suppliers to better plan their RE transition. The GEOP's 24/7 RE power requirement should also be reconsidered to open the program to more RE suppliers, specifically those developing and operating solar and wind power plants. This requirement has resulted in concentrated participation amongst 7 RES companies. Allowing non-renewables generation to address intermittency will increase market participation and increase competition. Additionally, to ensure that prices remain low, **renewable electricity sales under GEOP should not be subjected to 12% VAT as provided in the RE Law and Section 4 of the Revenue Regulations (RR) No. 7-2022.** This is currently not the case as the Bureau of Internal Revenue (BIR) ruling on VAT on RE only applies to DUs and generators.

The DOE is already reconsidering the 24/7 RE power requirement under the GEOP and is also exploring programs to increase RE supply, such as allowing aggregation models, promoting the use of rooftop solar, easing registration requirements for rooftop solar, and enabling peer-to-peer RE trading.

Recommendations

The CEIA has collected insights about the implementation of the GEOP since its launch in January 2022 and the broader energy retail market through dialogues with C&I customers, GEOP-licensed RES companies, and other stakeholders among the private sector, non-profits, and government officials. The following recommendations are the result of these findings:

- 1. Prioritize new RE capacity by facilitating the construction of new RE plants.** The Philippines should further accelerate the deployment of additional RE to ensure that there is adequate RE supply across the Philippines, including meeting the demand from global and local companies. Scaling the use of new technologies, such as battery energy storage systems, should also be prioritized to enhance reliability and address the intermittency of quick-to-deploy RE technologies like solar and wind. Government, public institutions and the private sector can work together to develop robust RE project pipelines to cover the energy demand.
- 2. Support innovations like green leases to expand possible participants of GEOP.** The CEIA, international trade associations like the Global Wind Energy Council, and associated civil society platforms can offer support to the DOE to develop a policy on green leases by providing insights from local private sector stakeholders and case studies on the implementation of similar schemes in other countries (e.g., Taiwan's green lease program enables landlords to procure bulk green electricity and allocate it amongst tenants under tri-party power purchase agreements). The existing retail choice framework in the Philippines currently limits companies' options to directly procure RE due to energy demand threshold limitations and facility ownership issues. A policy supporting green leases will allow multinational corporations with businesses in the Philippines that rent their facilities (like mall tenants and business process outsourcing centers) to be able to participate in the GEOP, thus expanding the GEOP customer pool in the country and accelerating the uptake of GEOP overall. Additionally, a policy on green leases will further incentivize facility owners, such as malls and offices, to shift to more sustainable operations to significantly reduce or eliminate the current barriers they face in achieving net zero or 100% RE targets by providing a formal route for their tenants to procure green energy through initiatives such as the GEOP.
- 3. Provide transparency in the GEOP market.** Giving public access to readily available data on the services offered by GEOP RES, including their price range, will increase the demand to participate in the retail renewable energy market. Concurrently, making the list of qualified GEOP end-users accessible to all suppliers will allow RES to reach out and offer their products and services, and strategize on expanding their business, ultimately leading to increased RE supply for the GEOP market.

About the Clean Energy Investment Accelerator (CEIA)

The [CEIA](#) is a public-private partnership that addresses barriers to clean energy deployment in the commercial and industrial sectors in emerging markets, which include Vietnam, Indonesia, and the Philippines. The CEIA is jointly led by the [World Resources Institute \(WRI\)](#), [Allotrope Partners](#), and the [U.S. National Renewable Energy Laboratory \(NREL\)](#). Each member brings a unique set of technical expertise to ensure successful country-based efforts, led by local and regional staff, which is all supported by a wider global team.

CEIA partners with large energy purchasers to send a strong demand signal and deploy clean energy and collaborates with governments to strengthen policy frameworks, to grow clean energy project pipelines.

CEIA acts as a bridge, translating international commitments into on-the-ground market transformation. As demonstrated here, high-level commitment platforms, target setting protocols, reporting methodologies, and business coalitions can benefit from CEIA's local presence and expertise, as CEIA brings together in-country coalitions of private sector, public sector, and utility partners to overcome barriers to clean energy procurement and investment among C&I energy users.