CLEAN ENERGY INVESTMENT ACCELERATOR

WHITE PAPER

Expanded Retail Choice for Renewable Energy Procurement in the Philippines

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Executive Summary

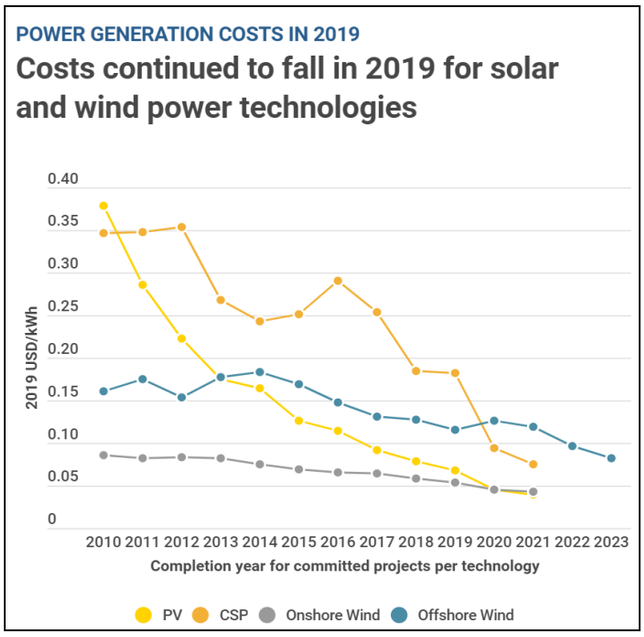
Electricity consumers in the Philippines, especially those in the commercial & industrial (C&I) sectors, are demonstrating strong demand for renewables as they set "science-based targets". This is a result of the declining cost of renewables especially in the context of a deregulated, liberalized market like the Philippines and as a response to calls towards corporate leadership to address climate change and pursue strong sustainability commitments. Increasingly environmentally-conscious customer base and potential investors, alongside internal management and employee expectations, drive action to fulfill these commitments. However, the existing retail choice framework in the Philippines currently limits companies' options to directly procure renewable energy (RE) due to energy demand threshold limitations and facility ownership issues. This White Paper provides insights on the opportunities and benefits as well as the potential concerns and impacts related to full implementation of expanded retail choice for relevant Philippine energy sector stakeholders and explores how retail choice can support the Philippines' clean energy transition. This paper also highlights case studies from other countries that have already embedded retail choice into their electricity procurement frameworks. This document seeks to encourage expanded thinking among consumers and regulators on the potential for retail choice to enable clean, diverse energy procurement opportunities in the Philippines and amplify feedback that the Clean Energy Investment Accelerator (CEIA) has gathered through various engagements with domestic and international companies.

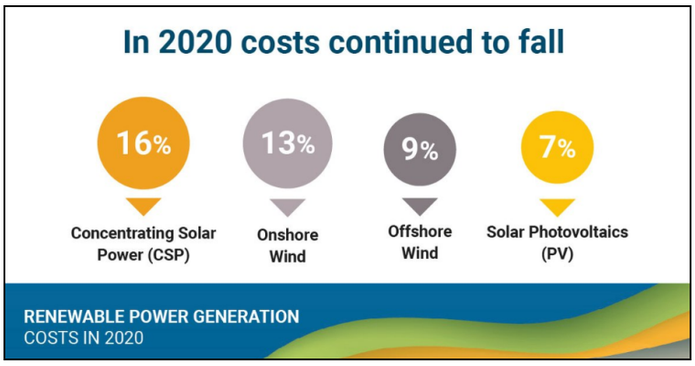
What is retail choice?

Underpinned by its two major legislative policies covering energy market deregulation[1] and RE deployment[2], the Philippines' energy industry has evolved in the last two decades in order to be able to power the needs of a constantly expanding economy. The country's unsubsidized electricity rates are among the highest in Asia (roughly PHP 10 per kilowatt-hour (/kWh) or US$0.20/kWh) and have resulted in expensive and unpredictable costs of electricity and naturally this is prompting businesses to explore more affordable options. RE globally has considerably reduced in costs from 2000 to 2020 (as seen in Figures 1 and 2 below) and in markets like the Philippines have actually become an affordable option. Figures 1 and 2 present the global trend in declining prices in solar and wind power technologies as measured by the levelized cost of electricity (LCOE) in dollars per kWh based on data released by IRENA.

[1]Electric Power Industry Reform Act (Republic Act No. 9136)
[2]Renewable Energy Act of 2007 (Republic Act No. 9513)

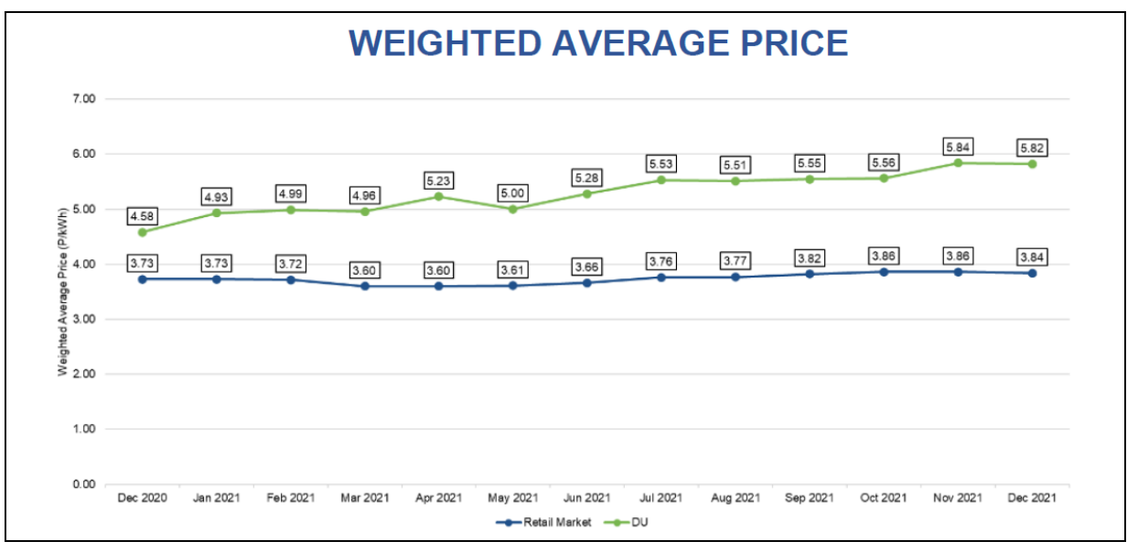
Figures 1 and 2. Declining Global RE generation costs[3]





In the Philippines setting, the retail market rate (as seen in Figure 3 below) is shown to be much lower than that of the generation rate of incumbent utilities. Based from Philippine Electricity Market Corporation (PEMC)'s *Annual Retail Market Assessment Report* for year 2021, the recorded weighted average contract price for the retail market ranged from PhP3.60/kWh to PhP3.86/kWh or with an average rate of around PhP3.74/kWh. On the other hand, the distribution utilities' (DUs) weighted average generation price to its captive customers ranges from PhP4.58/kWh to PhP5.84/kWh or with an average rate of around PhP5.29/kWh. In comparison, the weighted average retail rate is much lower at around 27%-51% than the DU's weighted average generation rate to its captive customer[4].

Figure 3. As of December 2021, the average retail market rate is considerably lower than the rates offered by DUs



[3]https://www.irena.org/news/pressreleases/2020/Jun/Renewables-Increasingly-Beat-Even-Cheapest-Coal-Competitors-on-Cost
[4]https://www.wesm.ph/market-outcomes/retail-market-assessment-reports/annual-retail-market-assessment-report

With Meralco, the largest electricity DU in the Philippines with up to 60% market share as an example, it must be noted that DUs' power generation mix is more than 90% fossil-based. While Retail Electricity Suppliers (RES) is a mix of fossil and RE-based sources, RES that supply RE-based sources are competitive and even lower to RES sourcing from fossil-based sources.

Figure 4: Meralco Generation Rates vs Fossil-based RES vs RE-based RES

2022 RCOA Rates vs Meralco Rates Analysis			
	Q1	**Q2**	**Q3**
Weighted Average Price of RCOA RES	4.05	5.63	6.49
Average Meralco Price	5.32	6.18	6.74
AC Energy	4.11	5.09	8.04
Adventenergy	3.91	4.49	6.02
Aboitiz Energy Solutions, Inc. (AESI)	5.03	5.54	6.84
Anda Power Corporation	3.71	3.67	3.66
Bac-Man Geothermal, Inc.	3.80	3.82	3.92
Citicore	4.49	4.34	4.16
Corenergy	4.02	4.28	4.94
Direct power	4.10	4.41	4.49
EEI Energy Solutions Corporation	3.71	3.54	3.62
First Gen Energy Solutions, Inc.	3.62	3.80	3.82
Green Core Geothermal, Inc.	3.73	3.69	3.84
GNPower	5.77	7.46	9.88
KEPCO SPC Power Corporation	3.90	3.80	6.79
Mabuahay Energy	3.61	3.71	3.88
Masinloc Power Partners Co. Ltd.	4.32	8.49	10.52
Prism Energy	4.72	4.12	4.12
SEM-Calaca Power RES Corporation	3.78	3.77	4.68
SNAP-RES	4.24	4.23	3.97
SNAP-MI	3.92	3.89	4.48
Solar Philippines Retail Electricity, Inc.	6.27	6.83	8.08

Retail choice has grown in the Philippines over the years since its enactment at a slow but steady pace. Data from the PEMC's *Quarterly Retail Market Assessment Report* for June-September 2022 shows that there are only close to 2,000 contestable customers (CCs) participating in the Retail Competition and Open Access (RCOA) scheme and 140 end-users participating in the Green Energy Option Program (GEOP) from the C&I sectors (in Luzon and Visayas only, as the RCOA and GEOP are only implemented in regions with Philippine Wholesale Electricity Spot Market operations).[5] These figures simply do not account for the vast majority of business enterprises in the Philippines or the general public.

Figure 5. As of September 2022, the number of C&I CCs participating in the RCOA (left graphics) and participating in the GEOP (right graphics)

[5]Philippine Electricity Market Corporation. "Market Surveillance Committee Quarterly Retail Market Assessment Report: 26 June 2022 – 25 September 2022." Market Surveillance Committee Quarterly Retail Market Assessment Report, November 2022, https://www.wesm.ph/market-outcomes/retail-market-assessment-reports/quarterly-retail-market-assessment-report. Accessed 5 January 2023.

With more companies setting net-zero objectives, science-based targets, and 100% RE goals (see Annex A), the demand for RE in a market like the Philippines is only expected to grow. As part of the government's initiatives to address this growing demand, various power procurement solutions were introduced to give consumers the "power of choice" to part ways with their incumbent DU and select their preferred source of electricity, which allows the opportunity to choose RE sources. Simply put, *retail choice* gives end-users the freedom to choose direct RE procurement and utilization, which will allow customers to benefit from lower generation rates and fixed electricity costs. Retail choice options include on-site solutions such as solar rooftops, off-site power wheeling, or a combination of both. This paper will focus on the current landscape of retail off-site power wheeling options.

Current status of retail choice in the Philippines

The Philippines now has two policy provisions available for off-site power wheeling. The original program is the **Retail Competition and Open Access (RCOA)**, which allows CCs (end-users that have a monthly peak-demand greater than 500 kilowatts [kW]) to directly transact with a RES to supply their electricity needs. This includes the option to purchase electricity from renewable sources. The second and newer power wheeling program is the **Green Energy Option Program (GEOP)**, which allows qualified customers (end-users with a monthly peak demand greater than 100 kW) to transact with licensed RES to source 100 percent RE. The main advantage of these two power wheeling options compared to purchasing electricity from the incumbent utility is the ability for customers to negotiate directly with the RES on the generation rate and other applicable charges, with the ultimate goal of securing more affordable electricity rates.

Although the objectives of the RCOA and GEOP are quite clear and should prove beneficial, gaps in the policies and the implementation of the programs are impeding the uptake of retail choice, especially in the C&I sector. In addition to the qualifying thresholds limiting the number of qualified customers, it seems that the current RCOA and GEOP frameworks suggest that only building and facility owners (i.e. those that have a metering arrangement with the utility) are allowed to participate based on the thresholds that have been set and are rather unclear about how lessors and tenants of their premises can participate. This presents a challenge for domestic and foreign corporates that mostly lease or rent facilities rather than own them; they include corporates running manufacturing, operations, business process outsourcing (BPO) services, and retail businesses, and as such they are impeded from participating in either RCOA and GEOP programs. This poses a hurdle to corporates in achieving net zero and/or 100% RE targets if they are not aligned with that of the building and/or facility owners.

Kickstarting conversations about expanded retail choice may provide additional help to corporates in meeting their decarbonization goals. Philippine-based companies and supply chains of multinationals have set net-zero and decarbonization goals (as seen in Annex A). However, especially in the manufacturing sector, a significant portion of the supply chains do not qualify with the two existing energy procurement options. It is worth exploring how additional mechanisms can be put in place to allow a wider set of corporates in the Philippines to be able to procure renewables.

Why should retail choice be expanded?

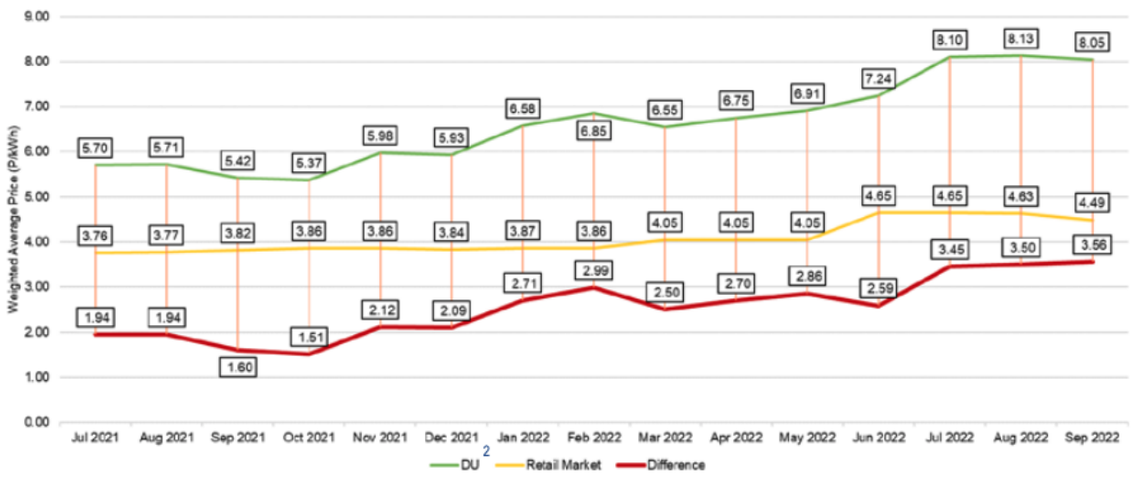
Expanded retail choice to a wider set of customers will enable several important benefits for energy end-users, including but not limited to, cost savings and minimizing risks from cost fluctuations and an increasing demand signal for new RE capacity to be added to the nation's energy mix. However, these benefits are currently limited to larger enterprises that have high

power consumption and their own facilities. Expanding retail choice would allow companies renting facilities, smaller businesses, and residents to also exploit the advantages.

Cost savings for more electricity consumers

Cost savings is one of the driving factors to expand retail choice. The levelized costs of electricity[6] from solar energy, wind energy, and other RE resources have dropped to levels that are well below utility retail rates, which means there is opportunity for Philippine companies and residents to purchase cheaper and clean electricity. The decreasing costs of RE is the result of several reasons, including declining solar photovoltaic and wind power system costs and increasing availability of experienced and competitively-priced local developers and service providers. In the PEMC's *Quarterly Retail Market Assessment Report* (July-September 2022), they reported the weighted average retail generation rates for participants engaged with a RES in the RCOA to be lower than the average DU generation rates by approximately 26 percent (see Figure 6 below).[7] The Competitive Retail Electricity Market Monthly Statistical Data as of September 2022 reports the weighted average price across all RES to have been 6.49 PHP/kWh for the quarter.[8] These lower weighted average prices indicate the potential for very large electricity savings in the Philippines.

Figure 6. Generation rates between DUs and the retail market (2022 Q3).



[2] MERALCO, VECO, BATELECII, DECORP

Lower risk from cost fluctuations through fixed energy rates is another key advantage from retail choice. 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, can allow customers to realize immediate cost savings by switching to RE. Through CEIA's direct engagement with a number of the RES, they have confirmed that they are able to offer lower generation rates and fixed payment models compared to local DUs, which allows customers to realize cost savings from the moment they switch to RE under the GEOP. There models 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.

[6] LCOE is a conventionally accepted metric. However, it does have some limitations that are being recognized by industry stakeholders. A better approach to assess on the ground costs is through agreed PPA rates and recorded auction prices: https://www.wri.org/insights/insider-not-all-electricity-equal-uses-and-misuses-levelized-cost-electricity-lcoe; https://www.sciencedirect.com/science/article/abs/pii/S1040619020300610; https://www.energyforgrowth.org/memo/lcoe-and-its-limitations/
[7] Philippine Electricity Market Corporation.
[8] Philippine Electricity Market Corporation.

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 to 12 percent 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.

Unfortunately, the current power wheeling options limit participation and excludes opportunities for all businesses and residents to participate in the programs. One limiting factor is the monthly peak demand thresholds—at least 100 kW to participate in the GEOP and at least 500 kW to participate in the RCOA.

According to the Philippines' preliminary results of the nationwide 2021 List of Establishments, micro enterprise businesses dominate the Philippines market comprising 90.5 percent of all enterprises.[9] But, eligibility in the current retail market is limited to CCs that reach the qualifying thresholds. If a majority of micro enterprises are not able to reach the threshold limits and are therefore not able to participate in these procurement opportunities, then the small businesses that dominate the Philippines market and could benefit the most from the savings are potentially stuck paying higher electricity costs from incumbent utilities relying mostly on traditional fossil fuel sources.

Increased RE demand from non-qualified electricity consumers

Today's consumers strongly support environmental initiatives, and according to Deloitte research, reducing carbon emissions is a "near universal priority". As consumers take part in more environmental issues, they also expect corporations to take part in climate change solutions and make environmentally-conscious decisions.[10] The evidence of this is in the growing number of science-based targets and net-zero initiatives made by companies around the world and here in the Philippines. As of late 2022, the Science Based Targets initiative (SBTi) reports that nearly 2,000 companies have established science-based targets that have been independently validated by the SBTi and over 1,500 companies have made net zero commitments.[11]

The CEIA has engaged with several **global companies** operating in the Philippines that are seeking pathways to achieve their climate-related commitments and RE targets. These corporates would like to take advantage of RE procurement opportunities offered through the RCOA and GEOP to help meet their RE targets in an accelerated manner but are unable to leverage them given the current structure of the policies, such as not reaching the power wheeling thresholds and not owning of their office buildings or facilities in the Philippines.

The residential sector is also eager for more opportunities to source cost-saving RE electricity, which was evident during the COVID-19 pandemic, in addition to the prospects of reducing their own carbon footprints. During the pandemic, rooftop solar adoption by households in the Philippines increased. With more family members staying home during the work day and working or attending school online throughout the day, household utility bills spiked significantly and families turned to installing solar for the immediate cost savings that can be

[9]Philippine Statistics Authority. "More than 1.08 million Establishments Operated in 2021 which Generated Total Employment of 8.57 million (2021 Updating of the List of Establishments Preliminary Results)." 6 January 2022, https://psa.gov.ph/content/more-108-million-establishments-operated-2021-which-generated-total-employment-857-million. Accessed 23 November 2022.
[10]Hutcheon, Mark, et al. "Consumers Expect Brands to Address Climate Change." Wall Street Journal, 20 April 2021, https://deloitte.wsj.com/articles/consumers-expect-brands-to-address-climate-change-01618945334. Accessed 28 November 2022.
[11]Science Based Targets. "Companies taking action." Science Based Targets, November 2022, https://sciencebasedtargets.org/companies-taking-action#table. Accessed 28 November 2022.

achieved.[12] Lowering the threshold for participation to include residences of all sizes to participate in GEOP would extend valuable energy cost savings throughout the residential sector, which would also have positive trickle-down impacts on the greater consumer economy. According to data from the Philippines Department of Energy (DOE), there is a total of 34,980,664 megawatt-hours (MWh) of residential electricity consumption across the Philippines as of December 2021. This reflects how large the potential demand for RE could be once expanded retail choice is fully implemented in the Philippines and more customers would be able to qualify for more RE procurement options.

Expanding the retail choice will create increased demand for RE capacity and support the country's energy goals. As of late 2022, the Philippines has not yet explicitly published a net zero target, but its National Renewable Energy Program (NREP) has previously set out plans to have a 35 percent share of renewables by 2030 and 50 percent by 2040.[13] The available supply of RE is also expected to increase as all DUs, electric cooperatives (ECs), and RES will be required to increase its RE mix by at least 2.52 percent of their electricity supply from RE sources annually. The combination of an expanded retail market for renewable electricity combined with the new higher minimum RE in the energy mix requirement should result in broad benefits across the C&I and residential sectors, but should also signal to the government that RE demand is healthy and supply needs to be available to meet the demand.

It is also worth recognizing that retail choice **by itself** is not a solution towards lower rates or more integration of RE sources into the electricity market. Simply put, it allows more customers to have multiple options in procuring electricity from the source that they prefer. Nevertheless, several examples of countries around the world that have embedded retail choice into their electricity procurement have also demonstrated some benefits that come with its implementation as described below.

Retail choice expanding to all power consumers in other countries has been proven to provide greater benefits for both consumers and the electricity markets.

Countries that have their electricity supply chain liberalized with full competition at the wholesale and retail levels have shown advantages for both consumers and power markets.

Singapore

Singapore is the first country in the Asia-Pacific region that liberalized its power industry with the reform starting in 1995 and continuing into the late 2010s. After corporatizing its state-owned utility[14] and launching the Singapore Electricity Pool[15], the Singapore government conducted a comprehensive review of the electricity market and decided in the year 2000 to continue with further deregulation to reap the benefits of full competition. Since then, the Energy Market Authority (EMA) was set up as the regulator and Singapore progressively reformed its electricity market to be fully liberalized by separating the ownership of contestable services (generation and retail) from non-contestable services (transmission and distribution). EMA opened the retail market to eligible consumers in five phases from large consumers in 2001 to all consumers in 2018 when the Open Electricity Market (OEM) marked the final phase

[12]Fernandez, Hannah Alcoseba. "As power bills surge amid Covid-19, will prosumers be the Philippines' next big energy trend?" Eco-Business.com, 7 July 2020, https://www.eco-business.com/news/as-power-bills-surge-amid-covid-19-will-prosumers-be-the-philippines-next-big-energy-trend/. Accessed 25 January 2023.

[13] Mercurio, Richard. "Philippines prodded on net zero commitment." *The Philippine Star*, 15 September 2022, https://www.philstar.com/business/2022/09/15/2209705/philippines-prodded-net-zero-commitment. Accessed 28 November 2022.

[14]Singapore started from corporatizing its state-owned Public Utilities Board (PUB), which had been responsible for the supply of electricity, piped gas and water for Singapore since 1963, and transferring PUB's electricity and gas units to Singapore Power, a holding company under Temasek Holdings which is the Singapore government's investment arm.

[15]The Singapore Electricity Pool was launched in 1998 and later replaced by the National Electricity Market of Singapore (NEMS) in 2003 which is operated by the Energy Market Company (EMC).

of the liberalization efforts.[16] Currently, households in Singapore have flexibility to choose suppliers either from Singapore Power Group at regulated tariff or retailers at preferred price plans; in addition to the two options, industrial consumers can source electricity from the Wholesale Electricity Market at half-hourly prices through SP Group.

The OEM enables market competition that could improve industry performance, efficiency and innovation, and allow consumers of all sizes to have more choices and benefit from competitive pricing, innovative offers, and better services. According to the EMA, consumers that have switched to retailers can enjoy savings of 20-30 percent compared to regulated tariffs.[17] The statistical analysis of the impacts of electricity market liberalization in Singapore during 2015-2020 published on MDPI[18] also shows that the liberalization played a significant role in reducing residential and industrial electricity prices and improving renewable energy share in Singapore.[19] In addition, the OEM allows more players to participate in the retail market; hence, it has been found to help boost innovation and better awareness of power consumption amongst consumers. Besides price discounts, retailers create more innovative products to attract consumers by partnering with third parties such as banks, telecommunications, and home insurance companies to offer value-added products and services.[20] In terms of property ownership, tenants usually have a direct account with providers and pay electricity bills directly.[21] Hence, there is no barrier for tenants to source renewable power from their preferred providers.

United Kingdom

The United Kingdom (UK) is a pioneering country in power market liberalization in Europe. The first attempt started with the enactment of the Energy Act 1983, which allowed private companies to participate in the generation. Later, the government-owned organizations[22] were privatized and sold to the public in 1990 under the Energy Act 1989. The Office of Gas and Electricity Markets (Ofgem) was set up in 2000 as the independent energy regulator. The UK wholesale electricity market has undergone three major reforms: introducing the Electricity Pool of England & Wales (the Pool), implementing the New Electricity Trading Arrangement (NETA) in 2001, and performing the Electricity Market Reform (EMR) in 2013.[23] The retail or supply market was restructured and competition was introduced in three phases over nine years: first in March 1990 to consumers with a peak load of over 1 MW (30 percent of the market demand); second in April 1994 to consumers with a peak load of 100 kW to 1 MW (15 percent of the market demand), and third in stages between September 1998 and June 1999 to consumers with a peak load below 100 kW (55 percent of the market demand of which residential consumers accounting for 33 percent).[24]

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[16]The thresholds for contestable consumers were expanded from larger power consumers to households over time from 2001-2018. The thresholds were: in July 2001, a maximum power at least 2 MW; in June 2003, average monthly consumption of at least 20,000 kWh; in February 2006, average monthly consumption of at least 10,000 kWh (at this point, retail contestability was expanded to 75% of total demand); in 2015, average monthly consumption of at least 2,000 kWh (at this point, retail contestability was expanded to 80% of total demand); and finally, in November 2018, lower to all consumers.

[17]EMA. "Nationwide Rollout of Open Electricity Market Progressing Well." Energy Market Authority, 8 February 2019, https://www.ema.gov.sg/media_release.aspx?news_sid=20190208apxaEOjfGR16. Accessed 13 January 2023.

[18]MDPI is a publisher of fully peer-reviewed, Open Access journals with a focus on robust and rapid editorial processes. MDPI has supported academic communities since 1996 and is based in Basel, Switzerland.

[19]Ali, Hassan, et al. "Assessing ASEAN's Liberalized Electricity Markets: The Case of Singapore and the Philippines." MDPI, 22 September 2022, https://www.mdpi.com/2071-1050/14/18/11307. Accessed 12 January 2023.

[20]EMA. "Nationwide Rollout of Open Electricity Market Progressing Well." Energy Market Authority, 8 February 2019, https://www.ema.gov.sg/media_release.aspx?news_sid=20190208apxaEOjfGR16. Accessed 13 January 2023.

[21]Singapore Legal Advice. "Guide to Common Commercial Lease Terms in Singapore." SingaporeLegalAdvice.com, 3 January 2023, https://singaporelegaladvice.com/law-articles/common-commercial-lease-terms-singapore/#utility. Accessed 13 January 2023.

[22]The Central Electricity Generating Board (CEGB) owned the country's generation and transmission assets, and the 12 Area Boards owned distribution networks and supply services.

[23]Liu, Jinqi, et al. "Evolution and reform of UK electricity market." Renewable and Sustainable Energy Reviews, vol. 161, no. 112317, 2022, p. 1, https://www.sciencedirect.com/science/article/pii/S1364032122002313. Accessed January 2023.

[24]The UK Department for Business, Energy & Industrial Strategy (BEIS). "Competition in UK electricity markets." GOV.UK, 30 September 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1021770/Competition_in_UK_Electricity_Markets_2020.pdf. Accessed 17 January 2023.

The full retail competition, which resulted in a significant increase in the UK major power suppliers (from 16 in 1989 to 40 in 2020), has created benefits for customers and the electricity market such as lower prices, new products, and innovation. According to Ofgem's report, consumers could save around £260 by switching to the cheapest tariff in the market between June 2018 to June 2019. There were also more innovative tariff and service offerings such as price-cap tracker and electric vehicle (EV) tariffs.[25] In addition, a highly-competitive retail market has created innovation that could potentially solve the issue around wholesale price volatility from integrating more RE. To balance renewable supply with demand, some newer suppliers encourage their customers to consume electricity during off-peak periods which often means the periods of high renewable generation in the UK. For example, one supplier launched a tariff plan that links their consumer tariffs to wholesale prices with capped tariffs, including penalties for usage during peak periods and rewards during the times when the power system needs demand to absorb excess renewable generation.[26] To shift the energy usage, the supplier also offers their API to program customers' smart devices[27] and this could even be achievable when EV adoption increases.[28] The wholesale price-linked tariff could help reduce the use of fossil fuels during peak hours and optimize the use of renewables by balancing the grid. In terms of the property ownership issue, depending on a tenancy agreement, a tenant will pay a landlord if the landlord has a contract and pays the energy company; or else, a tenant can have a direct contract and pay the energy company directly.[29]

Potential concerns and impacts of expanded retail choice

Further expansion of retail choice options that allows for cheaper, reliable, and accessible energy in the Philippines will result in changes to the existing power market that warrants careful transition planning to ensure the opportunity is a net positive for the most players and yields high RE adoption rates. The availability of RE in the energy mix, the potential impacts of customers potentially shifting towards retail options, and how the retail choice programs are governed all warrant careful consideration.

Recent responses from the ERC and DOE

The Philippines have already considered a timeline to expand eligibility to participate in the RCOA program and shared their intention to increase participation in the GEOP. The Philippines Energy Regulatory Commission (ERC) previously held a Call for Comments regarding the "new" proposed RCOA timeline for Phase V implementation in October 2020. Phase V is expected to lower the contestability threshold to at least 10 kW to 99 kW and was slated to take effect in January 2023, but developments have been slow.[30]

During CEIA's "Industry Dialogue on Green Energy Procurement for Corporates", the ERC expressed some reservations to hasten the full implementation of expanded retail choice due to a number of factors that still needs careful consideration and noted that there are other priority areas that require more immediate attention. Several of their points are included below:

[25]Ofgem. "State of the Energy Market 2019." Ofgem, 3 October 2019, https://www.ofgem.gov.uk/publications/state-energy-market-2019. Accessed 17 January 2023.
[26]S&P Global. "Power to the people? UK electricity suppliers disrupt retail market." S&P Global, 18 March 2020, https://www.spglobal.com/commodityinsights/en/market-insights/blogs/electric-power/031820-power-to-the-people-uk-electricity-suppliers-disrupt-retail-market. Accessed January 2023.
[27]Octopus Energy. "Introducing Agile Octopus." Octopus Energy, https://octopus.energy/agile/. Accessed January 2023.
[28]S&P Global. "Power to the people? UK electricity suppliers disrupt retail market." S&P Global, 18 March 2020, https://www.spglobal.com/commodityinsights/en/market-insights/blogs/electric-power/031820-power-to-the-people-uk-electricity-suppliers-disrupt-retail-market. Accessed January 2023.
[29]Citizens Advice. "Switching energy supplier if you're renting." Citizens Advice, https://www.citizensadvice.org.uk/consumer/energy/energy-supply/get-a-better-energy-deal/switching-energy-supplier-if-youre-a-tenant/. Accessed January 2023.
[30]Republic of the Philippines ERC. "ERC Calls for Comments on the Proposed New RCOA Timeline." Energy Regulatory Commission, https://www.erc.gov.ph/ContentPage/62138. Accessed 28 November 2022.

- Lowering the contestability threshold does not always translate to customers being able to leverage competitive offers and it does not necessarily mean equal bargaining power between sellers and buyers.
- The immediate priority of the ERC is to address electricity rates. Having more CCs does not necessarily translate to lower rates.
- The ERC will learn, recalibrate, and adjust existing policies rather than introduce new policies.
- The ERC will also focus on capacity building for existing policies to further increase awareness of existing provisions including the GEOP and RCOA among industry players .

In the CEIA's October 2022 press briefing event "Challenges and Opportunities to Achieve Corporate Renewable Energy Targets in the Philippines: Focus on the Green Energy Option Program", the Philippines DOE shared their ideas to speed up how consumers can participate in the GEOP, but did not provide any insights about the timeframe to lower the participation threshold.

RE supply concerns

CEIA has engaged a global automobile corporation with extensive operations throughout the Philippines and have provided support as they navigated retail choice options, including the implementation of the GEOP. The CEIA recently learned that some of their entities proceeded through the steps to become a GEOP participant, including the setting of a negotiated price, but have been unable to complete the transition process due to the RES lacking RE supply to provide to these entities. While this may be one case at the moment, the potential for RE demand to overcome RE supply is a reality that is easy to accept, especially when considering the sheer number of Philippines businesses and residents that do not have access to retail choice electricity at this time.

Incumbent utility versus RES competition

While commercial, industrial, and residential electricity customers are expected to benefit from more retail electricity choices at discounted rates realized by RE choices, the Philippines' major electricity utilities like Meralco and the network of DUs and ECs may not be able to compete with the prices of the approved RES. As previously mentioned, RES participating in the GEOP program have shared that they are eligible to offer a rate with a fixed discount from the monthly rate of the DUs, because electricity that is generated from 100 percent RE sources is not subject to a 12 percent value-added tax (VAT) rate that electricity generated from non-RE sources is subject to.[31] While the incumbent utilities will also be incentivized, if not required, to increase the amount of RE in their energy mix (that has cheaper generation costs), their abilities to transition to RE sources will not happen immediately when taking into considering the complexity and capital required for scaling RE projects, they will still be subject to 12 percent VAT, and there is no guarantee that these utilities can adjust their rate schedules to be cost competitive. According to the Power Development Plan 2020-2040, in 2019 DUs had 31.7 million captive customer connections of which 92 percent were residential customers and approximately 7 percent were commercial and industrial customers.[32] Considering the considerably lower generation rates (shared above in the previous sections) experienced by participants engaged with an RES in the RCOA (approximately 74 percent lower than the DUs

[31]CEIA. "Challenges and Opportunities to Achieve Corporate Renewable Energy Targets in the Philippines: Focus on the Green Energy Option Program." CEIA, August 2022, https://www.cleanenergyinvest.org/resources. Accessed 28 November 2022.
[32]Philippines Department of Energy. "Power Development Plan." Power Development Plan 2020-2040, 2021, https://www.doe.gov.ph/sites/default/files/pdf/electric_power/pdp-2020-2040.pdf. Accessed 5 January 2023.

generation rates), DUs could face considerable revenue loss if a substantial percentage of future customers make the switch to RES to procure their electricity.

Conclusion and Recommendations

While it may be beneficial to consider the expansion of retail choice, it must also be recognized that there are several stakeholder concerns in terms of its technical and economic impacts as mentioned in the previous section. Therefore, a well rounded implementation for any retail choice expansion program is necessary and required.

The expansion of retail choice options must also include consideration for the registration processes of all retail market participants, governance issues, and monitoring. In regards to registration of new customers and RES, to date the CEIA has gathered first hand feedback from both stakeholders. The application process for interested customers to transition to the GEOP takes on average four months to complete, which is two months longer than it takes to apply to the RCOA. The DOE is aware of these issues and have emphasized their intent to work with both the ERC and the central registration body (CRB) Central Registration and Settlement System to harmonize and simplify the registration requirements. The RES, including retail metering service providers and suppliers of last resort, are also subject to difficulties registering with the GEOP requirements, such as meeting the GEOP's provision for providing 24/7 replacement power exclusively sourced from RE resources. This provision limits the number and size of RES who can register in the GEOP and favors those RES that have operating baseload RE such as geothermal and hydropower assets. The DOE is planning to review and possibly amend the provisions on replacement power and suppliers of last resort and hopes to release a draft policy by the first quarter of 2023.

In order for new customers to register for the retail choice programs, they first need to know these programs exist, which is an area of governance that also needs to be addressed and monitored for, especially for the GEOP. The CEIA has observed that many corporate buyers are not aware of the program, do not know if they are eligible to participate, and do not know how to take action and start the process. Under the GEOP rules, the DUs and smaller local ECs are required to inform their customers on their eligibility for the GEOP program if they have at least 100 kW of demand. The DOE has confirmed that they are considering issuing penalties to DUs that fail to comply with the GEOP rules, but the CEIA is not aware of any updates on this to date.

Addressing design and implementation gaps in existing retail choice policies

There remain elements of the policies that need to be addressed to further expand participation in the programs. For example, the RCOA and GEOP are not able to be implemented in Mindanao until the wholesale electricity spot market is operational there. International corporates who rent their facilities are ineligible to participate in the GEOP. The application to participate in the GEOP has a more complex transition process and takes approximately two months longer to complete than the transition to the RCOA. These reasons and more that were not discussed in length in this paper (such as the lack of a Renewable Energy Market and current policies restrict corporates from trading renewable energy certificates) are additional considerations that need to be addressed to ensure that a much larger population of the Philippines energy customers are able to source RE at cost competitive rates.

Adopting facility ownership considerations in future retail choice policies

Although there are upcoming policies that could lower qualification thresholds as previously mentioned, procurement of RE might still be limited because of facility ownership issues. As such, succeeding or nascent policies involving expanded retail choice should consider those that

do not own their facilities, especially for multinational companies with operations and supply chains throughout the Philippines. There should be provisions put in place recognizing some flexibility for those that do not own the facilities and buildings. Regulators such as the ERC could also consider setting up a Technical Working Group (TWG) to explore models like this since there are other jurisdictions that have already started addressing this concern like Brazil, Singapore, France, and the US through green leases.

Consideration for the Philippines' energy market as a whole

Increasing the amount of customers allowed to participate in retail choice programs is only part of the considerations that need to be made. Extra attention needs to be paid to how the Philippines' energy market as a whole will be affected by the shift of electricity purchasing from incumbent utilities to RES and ensure that expanded retail choice opportunities for electricity procurement is positive for all stakeholders, not just the customers and RES.

Based on the CEIA's observations from past and current engagements with relevant stakeholders, the CEIA is confident that once issues and gaps pertaining to the retail choice policy frameworks and implementation are addressed alongside careful consideration of the benefits and impact from the full implementation of expanded retail choice, it will allow more RE procurement options for consumers. This White Paper aims to encourage alternative and expanded thinking among energy market participants, primarily the customers and regulators, to further improve existing market structure and to open more pathways for energy consumers in terms of access to RE.

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.

Annex A: List of Notable Companies with Science-based Targets, Net Zero Goals, Sustainability, and 100% RE Goals with Activities and/or Supply Chains in the Philippines*

Company	Platform Membership	Comments/Notes
Lululemon	CEDI	
REI	CEDI	
Amazon Web Services	CEDI	
Coca-Cola	Science-Based Targets	
Toyota Motor Philippines	None available	Internal commitment via "Toyota Environmental Challenge 2050"
Mitsubishi Motors	None available	Internal commitment via "Environmental Plan"
Nestle Philippines	RE100, REPH100	
Accenture	RE100, REPH100	
Concentrix	None available	Internal commitment via "Concentrix Catalyst"
Unilever Philippines	RE100, REPH100	
HSBC	RE100, REPH100	
Signify Philippines or Philips Lighting	RE100, REPH100	
3M	RE100	
Apple	RE100	
ASUS	RE100	
BMW	RE100	
Decathlon	RE100	
Dell Technologies	RE100	
Deloitte	RE100	
Google	RE100	
Heineken	RE100	
Hewlett Packard Enterprise	RE100	
Hyundai Motor Company	RE100	
Infosys	RE100	
Ingka Group (IKEA)	RE100	
Johnson & Johnson	RE100	
JPMorgan Chase & Co.	RE100	
KPMG	RE100	
Mars	RE100	
McKinsey & Company	RE100	
Meta (Facebook)	RE100	
Nike	RE100	
Salesforce	RE100	
Sanofi	RE100	
Schneider Electric	RE100	
Sony Group Corporation	RE100	
Starbucks	RE100	
Under Armour	RE100	
Wells Fargo & Co.	RE100	
Proctor & Gamble		Internal commitment via "Net-Zero 2040 Ambition"

Company	Platform Membership	Comments/Notes
Xerox		Internal commitment via “Roadmap to Net-Zero 2040”
Marriott	Science-Based Targets	
Microsoft Corporation	Science-Based Targets	
Pfizer Inc.	Science-Based Targets	
McDonald's	Science-Based Targets	

* comprehensive but non-exhaustive list as compiled by CEIA and partners.