

In Pursuit of Power: The Case of Ayala Energy Corporation's Renewable Energy Investments in Southeast Asia

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The Philippine government attempts to embrace energy transition initiatives to generate energy from renewable sources in recent decades. Due to several domestic, external, and financial challenges, however, the said initiatives are not met diligently and on time. Thus, the said plan is now heavily dependent on the contribution of the private sector in harnessing power from renewable energy sources such as wind and solar among others. One of the said companies is ACEN Corporation (ACEN), formerly AC Energy Corporation, which is considered one of the largest renewable energy (RE) enterprises in the archipelago and continues to aspire as the largest listed renewable energy platform in the region (ACEN, 2022a).

This paper contends that the energy transition of a Southeast Asian country to RE is primarily driven by private sectors through various modes of cooperation. The role of private enterprises in energy transition initiatives is best exemplified by ACEN. The pursuit of power is noticeable in three transformative shifts. The first shift is the company's RE investments domestically in several places in the archipelago. The second shift is the outbound investments in wind and solar farms in various countries in the region either through partnerships, joint ventures, or mergers and acquisitions. The third shift is an offshoot of the second shift which is the cross-border electricity sales in the neighboring states such as Singapore and Vietnam. Moreover, this paper also looks at the mechanisms, conditions, and incentives that were offered to ACEN as enticing packages to invest in.

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INTRODUCTION

To sustain industrialization and support economic growth all over the world, a continuous supply of power (i.e. electrical power) is imperative. Hence, governments explore various ways, sources, and technologies to generate more power supply. In pursuit of power, the energy sector has undergone several major metamorphoses at different times and in various places. In the past years, many of these developments were propelled by the utilization of new primary sources of energy namely coal, gas, and oil as well as by the advancement of innovative energy conversion technologies such as steam engines, internal combustion engines, nuclear reactors, or steam turbines. In recent times, however, several new sources of fuel and related technologies were added (Kern & Makard, 2016: 296). These include the exploitation of energy from solar, wind, and other renewable energy sources.

This energy transition is expected to be initiated and fully supported by the government. However, the latter

is also restricted by several domestic, external, and financial challenges. As a result, the implementation of energy transition and the pursuit of power from renewable sources is now heavily relied upon the hands of the private sector. A good case in point is the ACEN Corporation (ACEN) which serves as one of the leading partners in harnessing renewable energy in Asia. For this paper, the renewable energy investments of ACEN in Indonesia, Laos, the Philippines, and Vietnam are the focus of this study.

ACEN: The Renewable Energy Developer

The Philippines requires a lot of energy-related infrastructure to address the rising demand of the population and for industrialization until 2030 and beyond. Both renewable and non-renewable resources were tapped but mainly on the latter that the Philippines is highly dependent in terms of its power supply. Recently, the Philippine government and private sectors also paid attention to renewable sources of energy. Several Filipino investors, for instance, had put up their companies specializing in harnessing power supplies from wind and solar sources. What is interesting though is the attempt of exploring collaborative ventures with partners in Southeast Asia such as the case of ACEN.

ACEN is the energy platform of Ayala Company with over \$1 billion investment in renewable and thermal energy in the archipelago and even in some countries in the Southeast Asian region. As of 2023, ACEN has a cumulative 4,000 MW of attributable energy in several Asian countries such as the Philippines, Indonesia, Vietnam, and lately Australia and India. Within the short period of three years, ACEN has amazingly surpassed its initial target and reached 87 percent of renewable share in the region. Because of this phenomenon, the company is assured to reach the 20 GW target of renewable capacity in 2030 (ACEN, 2022a). Confident with its established achievements in just a short period, this company became the first enterprise that released the first climate-certified which is publicly listed green dollar bond in the region (Marshall, 2019).

In its pursuit of power and income from RE, ACEN has adopted several business strategies which include geographic expansion, utilization of new technologies, and engagement in strategic partnerships among others (ACEN, 2022b: 77-78).

In line with the thrust of ACEN toward geographic expansion, it signed partnerships with important players for joint venture projects in the Philippines, Indonesia, Laos, Vietnam in Southeast Asia; India, as well as Australia. Moreover, as part of the ACEN's commitment in October 2021 to Net Zero greenhouse gas emissions by 2050 or earlier, the company announced its plan to transition its generation portfolio to 100 percent renewables by 2025 through the spin-off or divestment of all thermal capacity by that year (ACEN, 2022b).

In terms of strategic partnerships, ACEN continues to improve its in-house expertise by developing home-grown resources through training and project assignments. The organic improvement of manpower and experts includes attracting highlight-potential talents both from the local and international markets. To complement this development, the company strives to improve and strengthen its strategic partnerships with developers who are familiar with the Philippine condition, and equipped with technical expertise, as well as complementary skills and strengths. These strategic collaborations with developers and with strong local actors in a way offer a better comprehension of the particulars of the local practices, laws, and regulations of a given international market as well as hasten the process of project development (ACEN, 2022b; Ayala Corporation, 2020).

With the visions and preparations done by ACEN, the company was ready to respond to the invitation of the Philippine government to invest in RE projects. This invitation was complemented by favorable policy directives and attractive incentives to anyone interested to capitalize on RE projects.

Domestic Partnerships

Before Ferdinand Marcos Jr. and Rodrigo Duterte's presidencies, previous administrations began to open the door of opportunities to RE projects with the promise of attractive policies and incentives to would-be investors. The

administration of President Duterte has intensified such initiatives by implementing several programs to address various socio-economic concerns including energy security. In fact, such a plan is highlighted in the Philippine Development Plan 2017-2022 and concretized in the Energy Strategic Directions. In line with President Duterte's *AmBisyon Natin 2040*, which envisions a "strongly-rooted, comfortable, and secure life" for all Filipinos by the year 2040, the Department of Energy (DOE) has laid down eight Energy Sector Strategic Directions (ESSDs) to set the tone of the DOE's policy track for the next two decades. Among the eight directions identified, the last one calls for the fostering of stronger international relations and partnerships. The department did not, however, clearly mention what it means and how to go about it in the document. Nonetheless, the Duterte government has continued the past administrations' initiatives to encourage local enterprises to invest in this transition sector, support collaborative projects with external partners, and forge new partnerships with foreign parties. In fact, energy security is duly emphasized in the DOE's Philippine Energy Plan (PEP) 2017–2040. The said plan outlines anticipated changes and sets goals for the energy sector by 2040. Energy self-sufficiency is becoming ever more challenging as the country's main domestic natural gas field, the Malampaya field, depletes. It is at this juncture that the Philippines has to decide the course of its future energy mix beyond the availability of Malampaya gas. As such, the DOE has explored ways in expanding fossil fuel production through exploration and development. This move is designed to push the growth of the renewable energy sector and in the long run, will be able to attain self-sufficiency and support the ever-growing demand for energy. To complement this program, strategies were also designed to enhance energy efficiency and conservation by end users to reduce resource availability and the energy consumption gap (Asian Development Bank, 2018: 5).

To accelerate the development of renewable energy in the country, private firms such as ACEN are given general incentives such as income tax holiday (ITH) for seven years of its commercial operation. The Republic Act 9513, or the Renewable Energy Act of 2008 also mandated the government agencies to offer duty-free importation and special realty tax rates on RE machinery, equipment, and materials that are directly needed and employed exclusively in RE facilities. RE developers are also given a 10 percent corporate income tax rate after the expiration of their ITH. Moreover, there is a zero-percent value-added tax rate for the sale of fuel or power generated from RE.

Table 1. ACEN's renewable energy farms in the Philippines

Site	Solar (MW)	Wind (MW)	Geothermal (MW)
North Luzon Renewables	81		
Northwind	52		
Pangasinan	60		
Palauig 1	363		
SanMar	283		
Alaminos energy storage	40		
Maibarara			32
Pagudpud	160		
Capa	70		
Cagayan North	133		
Luzon peaking plants	68		
Arayat Mexico	116		
ACEN tech hub	4		
Alaminos	120		
Guimaras (Vis)		54	
Sacasol (Vis)	45		
Islasol (Vis)	80		
Montesol (Vis)	18		

Data is taken from the ACEN Report 2022.

Furthermore, all RE developers are given cash incentives for missionary electrification, tax exemption of carbon credits, and tax credit on domestic capital equipment as well as services (ACEN, 2022b: 269). Furthermore, ACEN and the rest of the RE developers are entitled to the applicable Feed-in Tariff (FiT) for a period of 20 years (ACEN, 2022b: 270).

It should be noted that ACEN has invested in geothermal and wind farms in Indonesia, a combination of solar and wind farms in Vietnam, and all wind farms in Laos. Domestically, the company has invested in 16 solar farms across the islands of Luzon and Visayas, one wind farm in Visayas, and one geothermal plant in Luzon. Furthermore, the total capacity of the solar farms when combined is 1,773 MW, 1,209 MW for wind farms, and 695 MW total capacity for geothermal plants in the four countries. It is noticeable that no farm yet has been established in Mindanao to date and only a few plants in Visayas which could explain of the continuing power interruptions in the south (see Table 1).

ACEN investments in the Philippines as one of the drivers of RE in the country is facilitated by joint ventures and subsidiaries.

Under the mode of a joint venture, ACEN has forged collaborations with the Philippine Investment Alliance for Infrastructure Fund, UPC Philippines, and Mitsubishi Corporation's Diamond Generating Asia Ltd. to establish the North Luzon Renewables. Down under, the company through its subsidiary, Renewable Corp., has entered a joint venture with Thomas Lloyd Group Plc. in the establishment of the San Carlos Solar Energy (SacaSol) solar farm. The said facility is the country's first utility-scale solar farm situated on a 70-hectare property within the San Carlos Ecozone in the northern part of Negros Occidental (ACEN, 2022h). Moreover, ACEN also signed an agreement with Visayas Renewables Corp. and Macquarie Infrastructure and Real Assets' PINAI Fund to establish the Negros Island Solar Power Inc. (IslaSol) with a total capacity of 80 MW for Negros Island's power supply (ACEN, 2022c).

ACEN also has subsidiaries that are present in strategic locations in the northern and central Philippines. In pursuit of power, the company holds NorthWind Power as its subsidiary that owns and operates a 52MW wind farm in Bangui, Ilocos Norte (ACEN, 2022g). Same case for Monte Solar Energy Inc. which currently serves the increasing daytime power requirements of Cebu and the cities of Bais and Dumaguete in Negros Oriental (ACEN, 2022e).

International Partnership and Outbound Investment

It is also interesting that while there are more opportunities for expansion in business investment on RE in the Philippines, ACEN has also expanded its portfolio in various countries in Southeast Asia. This outbound investment either through partnerships or joint ventures appears as the second transformative shift.

In terms of partnerships, ACEN entered a collaborative project with UPC Renewables Indonesia Ltd to operate the Sidrap project, a 75 MW wind farm in South Sulawesi, Indonesia. It is the first offshore greenfield investment of ACEN in 2018 and was developed by PT UPC Sidrap Bayu Energi (ACEN, 2022j). Another partnership is the 330-MW Ninh Thuan solar farm. This is operated by BIM\AC Renewables, the renewable energy development platform of ACEN and Vietnam's BIM Group. It is considered as one of the largest solar farms in the region (ACEN, 2022f).

For joint ventures, Salak and Darajat Geothermal Plants in Indonesia are good examples. They are operated by Star Energy Geothermal (Salak-Darajat) B.V., Star Energy Group Holdings Pte. Ltd., Star Energy Geothermal Pte. Ltd., and Electricity Generating Public Company Ltd (ACEN, 2022i).

Another project is the joint venture between AC Energy and AMI Renewables (AMI\AC Renewables) that will harvest energy from solar and wind projects in Vietnam. The solar plants have a combined capacity of 80 MW and are located in the provinces of Khanh Hoa and Dak Lak (ACEN, 2022d).

The third project is the Mui Ne Wind Farm which is a joint venture between ACEN and The Blue Circle. This wind farm is located at the Binh Thuan province in the southeastern coast of Vietnam (Brucker, 2021).

In 2022, ACEN Vietnam Investments Pte Ltd. entered an agreement with Super Energy Group Hongkong to develop

Table 2. ACEN's Renewable Energy Farms in Southeast Asia

Country	Site	Solar (MW)	Wind (MW)	Geothermal (MW)
Indonesia	Salak and Darajat			663
	Sidrap		75	
Laos	Monsoon		600	
	Mui Ne		80	
	Lac Hoa and Hoa Dong		60	
Vietnam	Quang Binh		252	
	Ninh Thuan		88	
	Khah Hoa and Dak Lak	80		
	Ninh Thuan	405		

Data is taken from the ACEN Report 2022.

and operate renewable energy projects across Southeast Asia. This automatically enables ACEN to nine solar plants of 1,000 MW capacity (Ocampo, 2022). For details of other solar and wind farms in the region, see Table 2.

Policy Directives and Mechanisms

The entry of ACEN into RE investments in Indonesia, Laos, and Vietnam is also facilitated by the policy directives of the concerned states and the mechanisms that are offered to private sectors such as ACEN. In fact, ACEN has also adopted different mechanisms in their energy partnerships in the three states outside the Philippines. The most commonly used mechanisms are FiTs and Renewable Portfolio Standards (RPS) policies. Among all the schemes, FiT is noted as the most common scheme that is available in the ASEAN member states (AMS) with mature RE policies. Based on the definition, FiT is a policy focused on supporting the development of new renewable energy projects by offering long-term purchase agreements for the sale of RE electricity. The purchase agreement typically provides a specified price for every kilowatt-hour (kWh) of electricity generated, is structured with a specific contract period, and is often differentiated based on technology type, size, resource quality, and location. FiT is also acknowledged as one of the policies that dominate RE policy worldwide. FiT is provided in the top five AMS (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) which have the most progressive RE capacity installed. FiT is seen as an effective scheme to create the market in the beginning phase since it incentivizes RE generation cost to be competitive with other conventional energy generation. In these five AMS, the increased RE capacity is strongly related to FiT implementation as a main market driver (ACE & CREEI, 2018: 4).

In Indonesia, for instance, the government launched in 2014 the National Energy Policy (NEP) to achieve an energy mix of renewable energy and coal by 2025. To further promote the use of renewable energy, Presidential Regulation No. 112 of 2022 was issued to accelerate the renewable energy development for electric supply which sets the tone for energy transition in the country. This presidential regulation also stipulates fiscal and non-fiscal incentives to business entities that will venture into RE. Fiscal support includes income tax facilities, import duty facilities, property tax facilities, geothermal development support, and assistance for financing and guarantee facilities through state-owned enterprises. The non-fiscal incentives include fiscal support, and ease of licensing to invest from the Ministries of Finance, Agrarian and Spatial Planning, Environment and Forestry, Public Works and Housing, Home Affairs, State-Owned Enterprises, Industry, and Investment as well as from regional government (Bagus Enrico & Partners, 2023).

Indonesian players believed that renewable power is expected to play a significant role in supply expansion. The Ministry of Energy and Mineral Resources of Indonesia, as reflected in the 2021-2030 General Plan for Electric Supply, sets targets in the new and renewable energy sources to account for at least 48 percent of total installed

capacity by 2030. To boost this development, several initiatives have been introduced to include numerous incentives, such as favorable tariffs for solar and wind, income tax, and importation reliefs (ACEN, 2022b: 164).

The Lao People's Democratic Republic, on the other hand, drafted its renewable energy development strategy in 2011. In the said document, the Lao government supports domestic and foreign investors to venture into energy projects at the village level. It is clear to the government that any development related to renewable energy should involve both the public and private sectors. To facilitate more investments, the government is willing to provide financial incentives to those who are willing to produce clean energy as well as take social and environmental corporate responsibility. The government also plans to formulate and improve laws and regulations that will promote the development in renewable energy (Lao PDR, 2011: 24-25).

According to available documents, the country as of 2020 has not yet adopted FiT or auction policies. The delay in adoption is one of the reasons why there are limited investments that reached the country (Vakulchuk et al., 2020: 1). The potential of the return on investment, however, due to Vietnam's energy demand has been the motivating factor why ACEN still pushed the investment in the country. Furthermore, the MOU between Laos and Vietnam on RE is sufficient enough to guarantee ACEN investments in Laos. It should be noted that the Memorandum of Understanding (MOU) between the two countries, according to Patrice Clausse, "unlocks a new avenue of providing more power to Vietnam while serving as a catalyst for more cross-border power sharing in the region". Specifically, the agreement allows the distribution and selling of generated electricity to Vietnam Electricity (EVN) under the 25-year power purchase agreement (ACEN, 2023).

In the case of Vietnam, the government has implemented initiatives that will encourage investors to capitalize on the renewable energy sector. In fact, the third draft of the Prime Minister's decision regarding the mechanism that will encourage the advancement of solar power projects was released by Vietnam's Ministry of Industry and Trade (JLL Vietnam, 2019). Prime Minister Nguyen Xuan Phuc's Decision No.11/2017/QĐ-TTg has established mechanisms to encourage the development of solar power projects in Vietnam and consequently created a magnet for investors in this sector (CPV Online Newspaper, 2019) to include ACEN. In fact, ACEN has openly confirmed that the decision to invest in Vietnam was caused by the policy environment in Vietnam, and the gargantuan potential of future solar developments. This policy is clearly outlined in the National Master Plan of Vietnam. The demand for extra energy capacity is accordingly emphasized in the plan highlighting the importance of renewable energy sources (NS Energy, 2018).

According to the Revised National Development Master Plan for 2021-2030 (PDP 8), the government of Vietnam is targeting to quadruple its installed capacity from 54 GW in 2020 to 234 GW 20 years after. Along with this target is the strategy employed by the government to increase the share of electricity produced from solar and wind energy projects as well as gas-fired power plants. The three sources combined are planned to make up 47 percent of the system in 2030, and 57 percent in 2040 (ACEN, 2022b: 164).

Cross Border Power Sales

The third shift in ACEN's partnership and investment is the cross-border power sales to neighboring countries adjacent to the farms controlled by ACEN such as Singapore and Vietnam. While this development can be considered as an offshoot of the outbound investments done by ACEN in the three countries, the cross-border power sales are also a distinct development in the history of the energy partnership of a private enterprise. It should be noted that while ACEN has developed farm sites in several places in Vietnam, the energy of Vietnam has increased through the years and requires additional supplies from Laos. Another project in the pipeline is a joint venture with Suryagen Capital Pte. Ltd., to generate power from RE projects in the islands of Bintan, Batam, Karimun, and East Nusa Tenggara province by 2023. The project includes the export of power to nearby Singapore via subsea cable (Power Philippines News, 2022).

CONCLUSION

ACEN's exposure overseas particularly in Southeast Asia is still considered a small portion of its total attributable capacity, or to the output that corresponds to its shareholdings in its various projects which are mostly in partnership (joint venture) with other established companies. However, no matter how small, its presence in the region could be a success story worthy of emulation by other companies who would like to venture also in the region and beyond. The outbound investment could also create more curiosity to investors in other countries in the region to explore the potential in the Philippines and experience for themselves the RE incentives provided by the government and the competitive environment of the archipelago. Doing so will increase the power supply from renewable sources of energy and lessen the power consumption rate in the country and in the region in general. In addition, the increase of companies investing in RE is undeniably a contribution to mitigating the effects of climate change and in the long run, facilitating the steady transition to a green energy economy. At the same time, the company also provides opportunities to enhance energy security, create jobs and most importantly reduce air pollution (Epstein, 2017).

It is now clear that harnessing solar power is a better means to decrease dependence on the increasing and volatile prices of fuels generated from fossils. The recent Ukraine crisis and even the ongoing global Covid pandemic have tremendously affected various sectors of the economy and of the Philippine society. As seen in the past, conflicts in the oil production areas such as West Asia and Russia had adversely affected the domestic prices of fuel. Being a small buyer, the Philippines is at a huge disadvantage both in terms of access and price. Hence, it is practical that the Philippines should invest more in RE including solar to avoid external risks and gradually become less dependent on foreign oil. Hedging for the future surely reduces the country's exposure to geo-political conflicts since sunlight is accessible (GIZ, 2013: 7), and wind force is abundant all year round especially in tropical countries like the Philippines.

The Philippines in recent years still requires investment in energy extraction and utilization both from within and beyond the country. Despite the attempts of the government and the private sectors to address the backlogs of energy supply and even the construction of its allied infrastructures, the problem remains that the country has to exert more efforts in the years to come to maintain the existing facilities of non-renewable energy sources while fast-tracking the transition initiatives to shift the country's generation of energy from renewable sources. While various sectors are running after the initiatives, it is good to hear that there are some Philippine companies that also ventured out to immediate neighbors such as Indonesia, Laos, and Vietnam in exploring renewable sources of power. ACEN's experience aptly fits an observation of a business watcher. She said that "Gone are the colonial days of the East. These days, it's not surprising to hear about an Asian company taking over long-standing companies in the West. In the case of ACEN, it is still in the east but what is important is that the capital is invested outside the archipelago". She noted further that Philippine companies in the process have earned important experience in running various enterprises across multiple markets especially in dealing with regulators in various jurisdictions and collaborating with their foreign partners. In the process, these businesses are expanding their overseas footprint and blazing the trail for other local companies who aspire to go global while fiercely guarding their home turf in emerging markets (Dumlao-Abadilla, 2018).

It is also worth pointing out that ACEN's decision to expand abroad was triggered by the presence of trusted partners. According to ACEN President Eric Francia, the robust growth of the company is due largely to the strategic partnerships formed with developers and operating companies. "It's in our DNA to work with partners. That's how we grew at a rapid pace in the first seven years; we look for complementarities." Furthermore, Ayala Corporation President Fernando Zobel de Ayala further reiterates that "partnerships have always been at the core of Ayala's success. The partnerships are crucial in ensuring that the company executes effectively and is able to fast-track the projects". Moreover, Francia further emphasizes the urgent need to scale up the company's renewables if there is a

determination to exceed its own 2025 goal. He also highlighted that while there are opportunities in the Philippines, the company is also considering the incremental growth in renewables that will come through international expansion. For this reason, ACEN has identified the Philippines, Indonesia, and Vietnam as key markets in their regional expansion strategy (International Finance, 2018). Lately, the company has expanded its presence in India and Australia which are interesting topics to pursue in the next paper. The joint ventures, however, between ACEN and its partners in Indonesia and Vietnam are good examples of collaborations among private entities with the strong support of governments both in national and local levels. In the case of the Philippines, such transition is driven mainly by natural economic forces that could spur private investment of at least US\$11 billion in five years from private sectors like Ayala Company and other international power sector investors, with financing from capital markets (Ahmed, 2019: 6).

Cooperation, whether bilaterally or multilaterally, will contribute to ASEAN's dream of achieving its renewable energy target for the year 2025. One of the benefits of cooperation among Southeast Asian states in terms of renewable energy is the possibility of creating a space for connectivity, conversation, and coordination (De & Kumarasamy, 2020: 14; USAID, 2018). It is worthy to mention that the development cooperation initiated by ACEN with various countries in the region did not only benefit the power consumers but also the nearby communities residing in the farms through the farm to market roads for farmers in Sulawesi, Indonesia, Ayta Communities in Zambales, Philippines, and the local communities in Mui Ne, Vietnam. Other than this, ACEN and its partners also contributed to the creation of additional tourist attractions such as the Sidrap Wind Farm Tourism Center in Indonesia, and various wind farms in the Philippines among others. Moreover, other projects also promoted women's empowerment through livelihood projects in Vietnam, reforestation in Quang Binh, Vietnam, and many more. Further, once the Monsoon Wind farm is completely operational by 2025, it will become the first cross-border wind project in the region that will export electricity to Vietnam (ACEN, 2022a). It is expected that this project will enhance connectivity in Southeast Asia through cross-border sales of electricity. Lao PDR, on the other hand, will earn revenue from royalties and other sources (Adonis, 2023). The same is true for the Indonesia-Singapore cross-border power sales which will surely benefit the island communities of eastern Indonesia.

Thus, it is with fervent hope that the pursuit of power in the case of the Philippines and other Southeast Asian countries will continue in decades to come especially in the field of RE. The energy transition can be sustained given the various platforms of cooperation and of the demand created by the evolving technologies, an increase of population, and continuing demands of globalization. The pursuit of power, however, is not an easy task and is not cheap. Despite all the challenges, ACEN has proven its commitment to this endeavor and through the years has exhibited important milestone projects in the use of RE sources. This paper, however, has proven one significant point - that the protection of the environment and the sustainability of mankind through RE requires the serious collaboration of all stakeholders especially with the strong support of private sectors. This is best manifested by the projects undertaken by ACEN in its continuing partnerships with government and private sectors to harness that power in the region and beyond.

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