

Off Our Coasts!

Fighting fossil gas expansion in the Philippines

About 500 miles from the shores of mainland Southeast Asia lies the Philippines, an archipelago of over 7,600 islands that boasts of a colorful history, thriving biodiversity, and rich land and seascapes.

As a country in the outline of the Pacific Ocean, however, the Philippines is also unfortunately known for being on the receiving end of some of the deadliest natural calamities and disasters in the world, including an average of twenty typhoons entering it and wreaking massive havoc every year.

Ironically, the Philippines exacerbates its status as a climate vulnerable developing country with dependence on carbon-intensive energy. The end of the last decade saw coal, the dirtiest fossil fuel, occupying about 40% of the total installed capacity of operating power plants nationally, with the Philippines also ranking among the top ten countries in the world with the biggest coal expansion plans. On top of this, the energy sector today has its eyes set on rapidly developing another fossil fuel: fossil gas.

Expanding fossil gas fleet

Currently, there are six operating fossil gas plants in the country with a total installed capacity of 3,453 MW.

Table 1: Operating Fossil Gas Plants

Facility	Location	Installed Capacity (MW)
Avion	Bolbok, Batangas	100.6
Ilijan	Ilijan, Batangas	1277
San Gabriel	San Gabriel, Batangas	430
San Lorenzo	Sta. Rita, Batangas	549.1
Santa Rita	Sta. Rita, Batangas	1094.8
DESCO Natural Gas	Bogo City, Cebu	1
Total:		3452.5

While operating capacity saw minimal increase in the past half decade, fossil gas capacity in the pipeline saw a steep rise from 2,050 MW in 2016 to 7,100 MW or seven projects today.

There are also 10 proposed gas projects with a total capacity of 10,400 MW that were delisted by the Department of Energy (DOE) in the last year, with no confirmation of cancellation. The latest Philippine Energy Plan (PEP) and the country's Nationally Determined Contribution (NDC) both forecast fossil gas as having a key role in the power sector in at least the next two decades.

The PEP, in fact, estimates the installed capacity of fossil gas to rise to 21,660 GW by 2040.

Table 2: Fossil Gas Plants in the Pipeline

Facility	Location	Installed Capacity (MW)
Batangas Combined Cycle Power Plant - Phase 1	Brgy. Dela Paz Proper, Batangas City	875
Batangas Combined Cycle Power Plant - Phase 2	Brgy. Dela Paz Proper, Batangas City	875
Lloyds Energy Philippines	San Pascual, Batangas Bay	1,200
GNPower Sisiman LNG Combined Cycle Power Plant	Mariveles, Bataan	1,200
Natural Gas-Fired Power Plant	Pinamucan Ibaba, Batangas City	1,100
Mariveles Natural Gas Power Project	Mariveles, Bataan	1,200
Energy World Corporation CCGT Power Plant	Brgy. Ibabang Pulo, Pagbilao, Quezon	650
Total:		7,100 MW

In the midstream industry, this scenario is coupled with the ambition now being pushed forward by the DOE of turning the Philippines into the liquefied natural gas (LNG) trading and trans-shipment hub of Asia-Pacific, with seven LNG terminal projects that have already received notices to proceed.

If built, these terminals will facilitate regasification of LNG supply from all over the region.

Table 3: Proposed LNG Terminals

Project	Location
Energy World Gas Operations Philippines, Inc.	Brgy. Ibabang Pulo, Pagbilao, Quezon
Linseed Field Power Corporation	Ilijan, Batangas
FGEN LNG Corporation	Barangays Sta. Clara, Sta. Rita Aplaya, and Bolbok, Batangas City
Excelerate Energy L.P.	About 9.5 km offshore, Batangas Bay
Vires Energy Corporation	Batangas Bay, Brgy. Simlong, Batangas City
Batangas Clean Energy, Inc.	Brgy. Pinamucan Ibaba, Batangas City
Shell Energy, Philippines, Inc.	Tabangao, Batangas City
CNOOX Phoenix Petroleum Philippines, Inc.	Batangas, Batangas Province
PNOC	Limay, Second District, Bataan
PNOC	Mabini, Batangas
GNetPower	Mariveles, Bataan

Fossil Gas: Threat to the Philippines' energy security, self-sufficiency, and affordability of electricity

Currently, all fossil gas supply used for power generation in the Philippines comes from three active fields: the Malampaya Gas Field, Libertad Gas Field, and Alegria Oil Field.

Five out of six operating fossil gas plants in the country rely on Malampaya for their fuel needs. The two decade-old field, however, is nearing the end of service contract in 2024, with its reserves expected to be depleted by 2027 to 2029.



Malampaya Gas Field. Photo: Manila Bulletin.

Even as the government seeks to hasten the exploration and discovery of new domestic fields, the expansion of the midstream and downstream industries while gas supply from Malampaya dwindles makes the Philippines at risk of relying solely on imported fuel, threatening our energy security and self-sufficiency.

Lack of energy self-sufficiency will leave the country vulnerable to supply disruption risks, which are heightened even more during the pandemic, and security risks as China continues to display aggressive behavior in its military expansion within or near its so-called 'nine-dash line' claim.

Increasing dependence on fossil gas also exacerbates the Philippines' status as having one of the highest electricity rates in Asia, coming in second only to Japan. Under power supply agreements with Meralco, the biggest distribution utility in the country, the contract generation rates of fossil gas plants range from Php 3.7121 to 5.5348/kWh.



Photo: Meralco

However, in the past year, gas generation rates footed by consumers fluctuated to exorbitant rates, even reaching up to PhP 6.2789/kWh higher than the power supply agreement rates.

These are attributed to a variety of factors, including forced outages and fuel price changes. Looming dependence on imported fossil gas supply will worsen this, exposing consumers to LNG cost volatilities from all over the region. Considering that Meralco is also purchasing solar power at Php 2.99/kWh from Solar Philippines Tarlac Corp.'s Solar Farm, fossil gas is clearly neither a more affordable nor reliable option.

No place for gas in the climate race to 1.5°C?

Often dubbed by proponents as 'clean energy' for having a lower concentration of carbon emissions than coal, fossil gas, in fact, is no better than other fossil fuels in triggering catastrophic climate change.



In a recent study, the International Energy Agency (IEA), a think-tank globally recognized as authority in energy issues, notes that no new coal, gas, or oil plant must be built in any part of the world in order to still preserve a chance at limiting global temperature rise to the Paris Agreement goal of 1.5°C from pre-industrial levels.

Around the world, many countries are already moving away from gas.



In the United States, President Joe Biden announced plans to eradicate fossil gas in the next 15 years.

President Werner Hoyer of the European Investment Bank (EIB), the lending arm of the European Union, also urged European member states to phase out fossil fuels.



Meanwhile, the Philippine Congress is currently deliberating bills that would fast-track the development of the midstream and downstream fossil gas industries, with no mention of exit plans or timelines for their phase-out.

In consideration of equity and fair share in the global climate response, some countries have declared less ambitious goals with fossil gas as a transition or bridge fuel—this means that fossil gas should serve as supposedly a substitute low-carbon fuel for coal and oil to reduce carbon dioxide emissions in the near future while also providing a leverage to enable renewables. The role of fossil gas as a bridge fuel has since become an intense debate that mainly revolves around determining until when is it necessary to use fossil gas, if at all. At the heart of this debate of course lies the more critical question—should we be focusing efforts, resources, and time promoting fossil gas or renewable energy?

A detour from the road to 100% renewable energy

Based on 2016 DOE estimates, the Philippines has an abundant renewable energy (RE) potential of at least 250 GW, excluding solar power and other potential offshore systems. Despite having a Renewable Energy Law as early as 2008, however, RE development continues to lag behind.

Today, the highest ambition pushed forth by government bodies is to have 35% RE in the power mix by 2030, despite findings from both government and civil society studies that state a 50% RE mix is already possible by the end of the decade. The development of fossil gas facilities diverts time and resources that can be used to hasten the advance of RE, resulting in a detour from a potentially nearing renewable energy powered future for the country.





Fossil gas and LNG projects in Batangas

Verde Island Passage in Peril: Protecting life above and below our waters

Most of the existing and proposed fossil gas plants and LNG terminals are located in Batangas City and Batangas Bay, which are part of one of the most environmentally sensitive areas in the country: the Verde Island Passage Marine Corridor (VIPMC), a marine biodiversity hotspot that spans five provinces and encompasses 36 Marine Protected Areas.



Part of an underwater wilderness known as the Coral Triangle, it is dubbed as the “Center of the Center” of marine shore fish biodiversity in the world.



Provides food and livelihood to over 7 million Filipinos in the fishing, aquaculture, and tourism sectors.



Home to over 1,700 shore fish species, more than 300 coral species, at least 3 endangered turtle species, and a variety of other marine life forms.



Because of its rich biodiversity, various groups have also already been calling for its recognition as a World Heritage Site.

Pollution and disturbance from the implementation and operation of LNG and fossil gas projects in Batangas threaten the survival of marine life in VIPMC and the health, food security, and livelihood of coastal communities and businesses around it. Fisherfolk, who are already among the most vulnerable and impoverished sectors in the country, are part of those set to be most heavily impacted. Preserving the VIPMC from fossil gas also translates to protecting the well-being of Filipinos and marine life who call its coasts and waters home.

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ABOUT CEED

The Center of Ecology, Energy, and Development is a think-do institution that conducts research and advocacy, and partners with communities in promoting an ecologically just, people-centered energy sector and development path.

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