

2021 Indonesia Small-Mid Scale LNG Infrastructure Development Update – *PLNGG Exclusive Interview*

As part of the socialization of low-carbon energy usage in Indonesia, Indonesia Maritime & Energy Society (IMES) conducted an exclusive interview with one of the important players in the development of gas infrastructure for power plants in Indonesia. We conducted an online interview in early March 2021 with **Mr. Ir. M. Riza Affiandi, MT**, President Director of **PT. PLN Gas & Geothermal (PLN GG)**, a strategic business entity under the state holding company of PT. Perusahaan Listrik Negara (PLN).



PT. PLN Gas & Geothermal was formed in 2017 as a development of PT. PLN Geothermal, which has been existed since 2009, to answer the needs of developing gas infrastructure as well as geothermal power plants in Indonesia. PT. PLN Gas & Geothermal ensures a sustainable gas supply and geothermal power supply in all development areas to meet the overall strategic targets of the PLN Group. PLN Gas & Geothermal emphasizes business activities in the Planning, Construction, Development, Operation & Maintenance of Logistics Infrastructure and Gas Transportation as well as the Development and Operation of Geothermal Power Generation (Geothermal) to exploit gas and geothermal resources into electrical energy.

In the development of gas infrastructure since 2017, PLN GG has completed the Amurang floating plant conversion project, which is the world's first floating “LNG to Power” project. This is an important breakthrough in efforts to reduce carbon emissions in Indonesia. The seriousness and commitment of all stakeholders are needed considering that the development of small-medium scale gas infrastructure is a very important part of the entire supply chain for gas distribution to meet the needs of generators with Indonesia's characteristics, especially for the central and eastern parts of Indonesia.

The following is our interview regarding the development of the small-medium scale gas infrastructure that has been developed by PLN GG.

1. How can the gas infrastructure development carried out by PLN GG help to meet the electricity needs in Indonesia?

Today, PLN GG has completed the generator gasification project used by PLN in 2 locations, namely LMVPP in Amurang, North Sulawesi 120 MW, and PLN Power Plant in Tanjung Batu, East Kalimantan with a total capacity of 180 MW and this greatly helps the electricity needs at that location.

2. What have been the challenges and opportunities in developing small-mid scale LNG infrastructure and distribution?

The challenge in developing a small-mid scale LNG infrastructure is that the existing FOB LNG source currently only available in Bontang (Kalimantan), while PLN gas power plants generally require small volumes of gas. It's around 2-7 bbtud, and is generally located in the central and eastern regions of Indonesia which are quite a distance away far from Bontang LNG Plant. This leads to the high cost of gas transportation and large storage capacity requirement so that the final tariff of 2-7 bbtud of gas demand is high and can be uneconomical for the production costs of PLN power plants. On the other hand, this creates an opportunity for the development of LNG distribution hubs that can reduce gas supply rates, thereby meeting economic rates.

3. Is infrastructure and small-medium scale LNG distribution the right method to help meet the electricity demand in Indonesia, especially the Middle and Eastern parts of Indonesia?

To meet the electricity needs in central and eastern Indonesia where gas generation is an inevitable need to meet the load follower in the PLN's electricity system, and also there are no gas fields that can be monetized with piped gas around the power plant located, then the development of a small-mid scale LNG infrastructure is the only solution in meeting the needs of electricity gas in the region.

4. How can the revision of gas prices through the Ministry of Energy and Mineral Resources Regulation No.10 / 2020 stimulate the development of small-medium scale LNG infrastructure in the future?

This revision of gas prices is very good in ensuring the availability of the gas in the market and in helping to reduce the gas plant gate prices at power plants but it requires monitoring on its implementation and related collaboration/synergy as well.

5. How has the Covid 19 pandemic affect the implementation of gas infrastructure development projects, includes the project that currently running and that will be worked on? And what is the PLNGG strategy in dealing with this situation?

The Covid 19 pandemic has caused very sharp fluctuations in electricity demand which resulted in a high level of gas demand uncertainty for our generator so that gas infrastructure projects must undergo adjustments in terms of design capacity to maintain project economics. PLN GG can implement a gradual development strategy for gas infrastructure where the infrastructure is built with a capacity that adapts to gas demand during pandemic

6. How is the progress of the oil to gas conversion program for the 52 PLN generators that are included in the National Strategic Project (PSN)?

It can be confirmed directly to Pertamina Group which has been assigned by the Government, and PLN GG is ready to support the development of a form of cooperation in this implementation.

7. How is the progress of other projects currently being undertaken by PLN GG such as the Tanjung Batu plant, the conversion of the Amurang plant?

Currently, PLN GG has successfully operated 2 midstream gas facilities to support the gasification of generators used by PLN in 2 locations, namely LMVPP Amurang North Sulawesi on September 19, 2020 and PLN Power Plant in Tanjung Batu on December 31, 2020.

8. What about the BUMN synergy that has been carried out so far in related with the overall performance of project implementation and completion?

The spirit of BUMN (state company) synergy has been reflected in the construction of the Tanjung Batu Pk 52 PLN GG gas pipeline construction project in East Kalimantan. This can be seen in the presence of PT Hutama Karya (Persero) as the contractor for the construction of the gas pipeline and besides that PT Surveyor Indonesia (Persero) also helps PLN GG as a partner in construction management or provision of PMC (Project Management Construction).

9. What are the future expectations of PLN GG in developing small-medium scale LNG infrastructure in Indonesia?

Concerning the development of an integrated small-mid scale gas infrastructure will be a solution for PLN, especially for PLN gas power plants that are already operating in the Eastern Indonesia Region, PLNGG expect that these activities can be completed in an immediate time so that the projected cost optimization that PLN expects as an effort to reduce BPP in East Indonesia region can be obtained maximally.
