

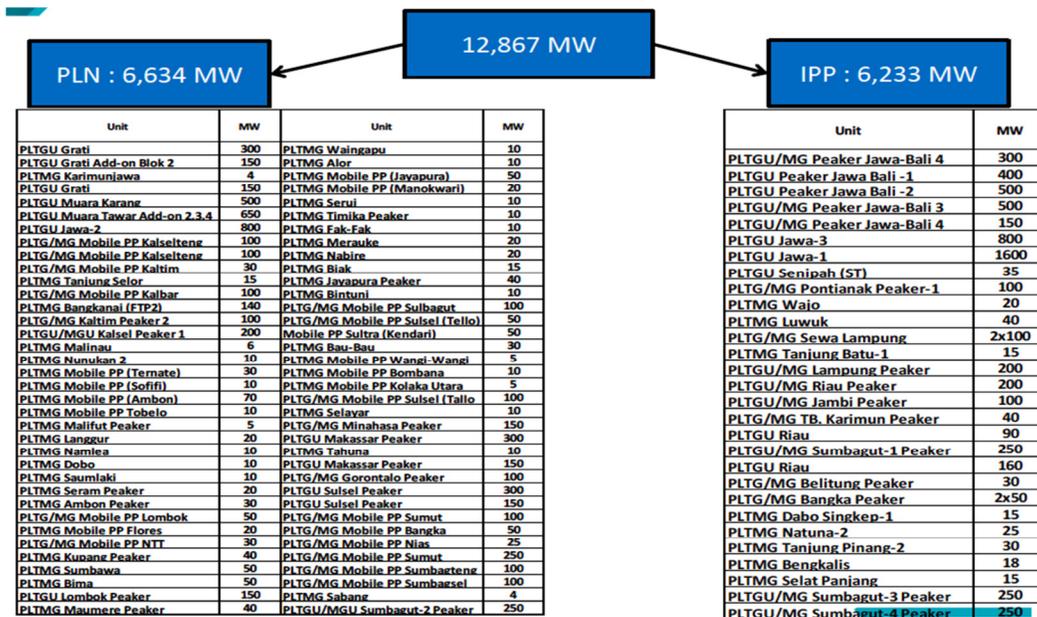
Update on natural gas from Energy Nusantara

Energy Nusantara would like to share with you the following updated information on 35,000 MW Program that was launched by the Government of Indonesia last year. These figures are obtained from Ministry of Energy and Mineral Resources of Republic of Indonesia (ESDM) and State Owned Electricity Company (PLN).

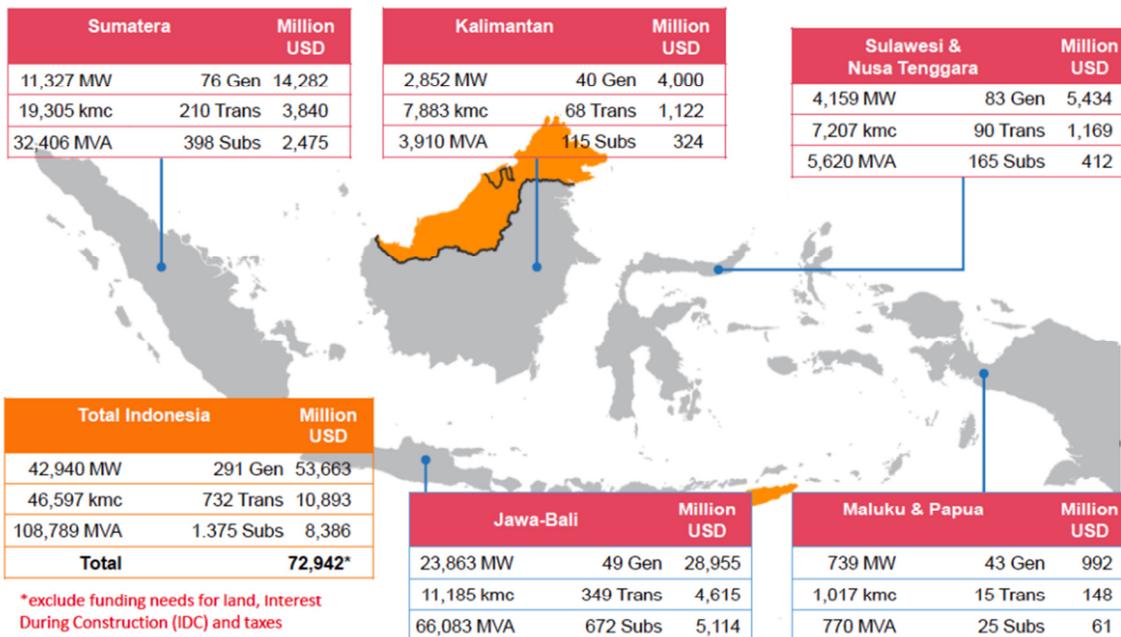
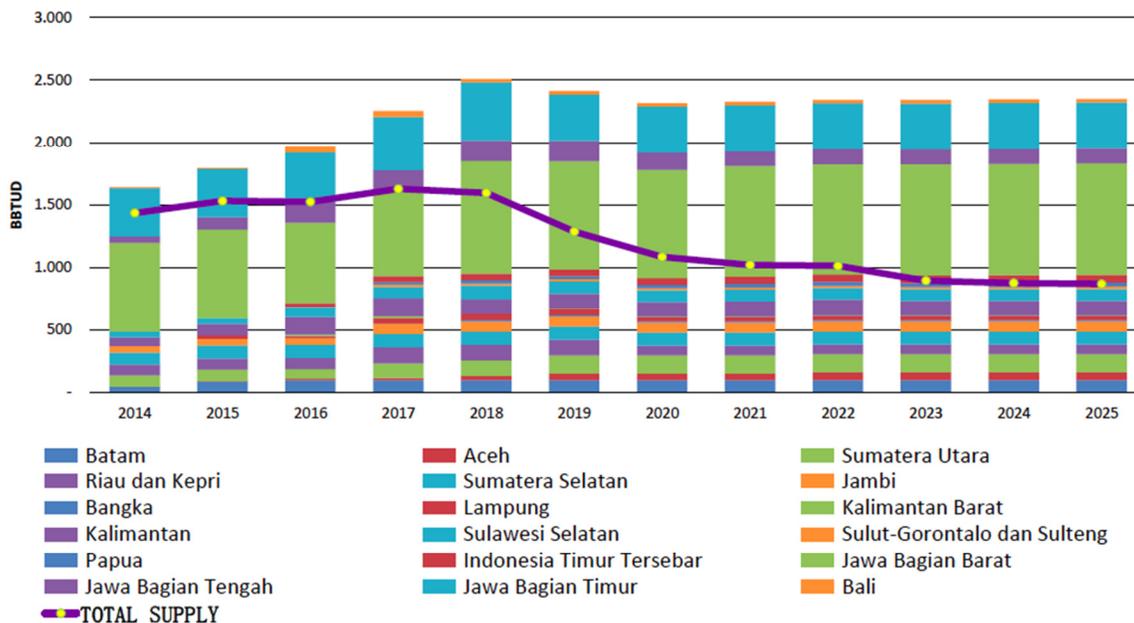
Figures:

1. New Additional Gas Power Plant under 35,000 MW Program
2. Gas Balance for Electricity in All Provinces up to 2025
3. Distribution Map of Indonesia on the required Generation, Transmission, Substation and Investment

Total additional power plant capacity 2015 to 2024 is about 70.4 GW that will come from Geothermal (4.8 GW), Coal (42 GW), CCPP of Gas (9.2 GW), GTPP/ GEPP of Gas (5.0 GW), Hydro (9.3 GW) and other sources of Energy (0.1 GW).



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Source: Energy Nusantara www.energynusantara.com

Geothermal case study: Making risk bankable

MKK geothermal team

When we speak of innovation in project financing for geothermal energy plants, what do we really mean? I suppose we can say it is when various innovations fit together like pieces in a puzzle to create a new improved financing model. Thanks to the **Sarulla geothermal power project**, there may be reason to say that enough pieces have come together to offer a new level of efficiency for geothermal project financing in Indonesia.

A consortium of project owners (*Itochu Corporation, Kyushu Electric Power Company, PT Medco Power Indonesia and Ormat*) cooperated in the development of the over US\$1billion Sarulla 330MW Geothermal Power project in North Sumatra. This project is one of the longest running and most ambitious in the history of the industry. The Sarulla geothermal power plant is a 330 MW power plant made up of three units that, when completed, will be Indonesia's largest power project and in fact, one of the largest geothermal power projects in the world. The power which is produced will be dispatched to the Sumatra grid in a concession area held by PGE. The electricity is to be sold to PLN, the state-owned utility and sole off-taker in a 30-year Power Purchase Agreement (PPA).

To see the light of day, the Sarulla geothermal project required innovative solutions to various financing needs, and an original financing structure had to be developed. In this short note, we will discuss some of the innovative and groundbreaking steps that were taken (1) to manage completion risk, (2) to deal with the limited recourse nature of financing and (3) to unlock pre-completion funds by financing the three separate units as one.

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Completion risk: bankable EPC contract

Establishing and bringing to fruition a geothermal plant entails taking on many sorts of risk, among others, regulatory, general economic, financial, competitive risk and the omnipresent danger that any one of these factors could shift the balance making it more expensive or ultimately unfeasible for the project owners to put the project into operation. One risk that cannot be disregarded is that of completion risk; if the EPC contractors cannot complete their work in a timely manner and within the desired schedule, the whole project may be called into question. Clearly, the financiers of the project need to know that completion risk has been competently managed before disbursing any funds.

How does one formulate a *bankable turnkey EPC contract* to minimize completion risk? The completion risk in the Sarulla project would ultimately be shared by Hyundai Engineering for the power island and Halliburton for the drilling. The two contractors cooperated to enter into an EPC contract that would be a *bankable turn-key* one for the project owners. By turn-key, we mean that all the EPC contracts would be bundled into one. By bankable, we mean an EPC contract which, thanks to various risk mitigation mechanisms, would substantially shift completion risk onto the EPC contractors, thereby giving comfort to the financiers that this risk had been mitigated.

The project owners thus had to convince the EPC contractors to cooperate and enter into one turn-key EPC project. This was the first step. Then, they had to convince them to take on the various risks, be they commissioning, disasters, schedule delay, performance guarantees and start-up testing. To convince them to do so, the project owners had to build in risk management protocols into the EPC contract. One provision that afforded comfort was the *contingent equity fund* that was offered in the event of cost overruns; in addition, extra reporting and covenants were added to reduce construction risk to the lenders. Performance bonuses were offered to the EPC contractors as incentives to finish the project on time and on budget. At this point, the project owner could shift much of the completion risk onto the contractor.

Overall, it must be noted that the success factors here were not only the innovative risk protocols and concept of a unified EPC contract, but also the risk appetite and the high level of cooperation among the EPC contractors.

Limited recourse: bankable BVGL

The second issue was the limited-recourse nature of the financing. Sarulla was in fact the first limited-recourse greenfield project to close since the Wayang Windu Unit 1 closing over a decade earlier. Limited recourse means that there is insufficient collateral in the project to cover the loan amount, and in the case of total failure of the project, the financiers may have to incur a significant write-off. An innovative finance structure was thus needed to cover the many risks associated with this project, given its high risk profile and large monetary investment since significant capital is needed in geothermal resource development.

The project owners of Sarulla also wished to raise financing before the resource had been proven. The lenders showed great appetite for risk by sharing in the resource risk and provided financing for the three generating units in a single contract. Debt financing could thus be called upon to fund exploration activities. Why did they do this given the limited-recourse nature of the financing? It was probably thanks to a number of risk-mitigating factors that the project owners were able to draw upon:

- Allocation of risk to the contractors (Hyundai Engineering & Construction and Halliburton) would make them assume unforeseen costs;
- A Business Viability Guarantee Letter (BVGL) from the Ministry of Finance would give comfort to the financiers;
- An attractive feed-in tariff had been negotiated;
- Early revenue stream from the first unit would provide a timely pre-completion revenue stream (discussed further below).

In summary, these factors, among others, helped to enhance the overall financial viability of the project and offset risk arising from the limited-recourse nature of the funding.

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Integration: bankable exploration report

Another unique feature of the Sarulla project was the successful bundling together of three 110MW units into a single contract and funding of the development phase in a single tranche. Usually, individual units must be brought on line and funded and treated separately. The development phase is risky, costly and lengthy, which naturally lends itself to a unit by unit financing basis. The integrated approach of the project financing presented unique challenges for the lenders when structuring the financing package. This problem was solved by careful due diligence of the construction and drilling programs and by developing a *bankable exploration report*. The lenders' high level of involvement and participation in exploration and development is rarely seen, and this factor as well as their appetite to take on risk was a key success factor.

In previous geothermal projects, at least 50 percent of steam under the wellhead of a unit must be proven before financial close can be reached. Then and only then can the project owner move onto the next unit. This unit by unit approach is the industry standard and is intuitive from a risk averse point of view. However, in the Sarulla project, the financiers were willing to take on more risk and treat the three units as a single unit. This approach was based on the strong pillars of:

- (1) a thorough exploration report;
- (2) close liaison and consultation with PLN (to ensure that the tested resource would be exploited and the plant commissioned according to PLN technical requirements);
- (3) mezzanine financing offered by the Canadian Climate Fund (CCF) and the Clean Technology Fund (CTC);
- (4) pre-completion revenues from the first unit.

Taking risk to the bank

In the Sarulla project, the structuring of the project financing mitigated investor concerns over completion risk and the limited-recourse nature of the transaction. In addition, the integrated approach to financial close that was adopted facilitated the success of the project allowing more timely access to capital. In many ways, the Sarulla project was a pathfinder project that may well serve as a template for future geothermal projects. In any case, the expertise and know-how that were acquired during the course of the project will serve the major players well in the future. Whether these innovations in aggregate form a new protocol that will be followed by other industry players remains to be seen.

The unprecedented level of cooperation among the various players was surely paramount to Sarulla's success. This allowed them to structure the usual *de rigueur* contracts into new and original instruments via the insertion of risk mitigation provisions; no longer purely internal agreements among parties, the new contracts laid the groundwork for third parties to gain comfort and to base financing decisions upon. The new contracts thereby earned the status of *bankable contracts*. MKK was proud to have played a part, however small, in bringing this project to completion. We hope that the innovations in this project will be the breakthrough that is needed to help overcome the many obstacles in geothermal development going forward.

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Social Media Insurance Coverage (SMIC)

MKK insurance team

The current trend is for companies to turn to social media (SM), such as *Facebook*, *Twitter*, among others, to carry out company PR, marketing campaigns and inter-company communications. This trend seems to be an enduring one. SM is also used in the modern era to build up, position and protect an image or brand. Companies also rely on social media as an interface with their customer base to respond to people who speak negatively about their company and to handle complaints, respond to queries and search for ‘brand ambassadors’. The public’s perception of the brand can also be altered or fine-tuned through SM campaigns.

Despite affording myriad advantages to businesses, SM also carries risk that managers must be wary of. Since the main purpose of SM is for branding and marketing purposes, negative comments, untruthful stories, disinformation, false or misleading testimonials can have a negative impact on a brand name. Potentially, these risks can translate into lower sales, weaker profits, a damaged reputation, decrease in value of a company’s brand(s) and even litigation, among others.

In this short note, we look at the legal pitfalls that create risk for companies and the procedure for an insurance company to create a Social Media Insurance Product to underwrite those risks. The insurance industry has been nimble in crafting products that can take the edge off many risks. It is difficult to quantify damage to a brand or reputation while other damages are simpler to calculate. The following are representative products (though by no means a complete list) that are available in Indonesia to protect against damages in SM; however, to our knowledge there is no dedicated SMIC available:

1. Media Liability Coverage

Media liability coverage includes, but is not limited to:

- a. Defamation or a company or a company’s officers
- b. Invasion of privacy;

- c. Infringement of copyright, trademark, marketing slogan, motto, or any act that amounts to plagiarism;
- d. Litigation claims stemming from the acquisition of information;
- e. Negligent supervision of an employee, discrimination in hiring practices;
- f. Transmission of a computer virus, malware, phishing;
- g. Breach of confidentiality agreements (via employee usage, for example)

2. IP Infringement

This insurance product covers risk pertaining to IP rights. It covers legal expenses to pursue litigation over a patent, trademark or copyright.

3. Breach of Contract

This insurance product covers damages and costs incurred from pursuing lawsuits pertaining to performance of a contract.

4. General Commercial Liability

This Insurance policy is a very general one and is not specifically for SM although many SM issues may be covered therein. It generally covers claims arising from any sort of damage or injury during the course of business operations.

Basis in Indonesian Law for Social Media Related-Issues

In Indonesia, the regulation that governs the management of Information and Electronic Transaction (**ITE**) is Law No. 11 Year 2008 on Electronic Transactions. This law basically has five main points:

- a. Information, Documents, Electronic Signatures
 - Electronic Information and/or Electronic Documents are valid evidence under the applicable law.
 - Electronic Signatures have legal force and legal effect as long as they meet the requirements of this regulation.

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- b. Implementation of Electronic Certification and Electronic System
- c. Electronic Transactions
 - Electronic Transactions may be performed publicly or privately.
 - Electronic Transactions carried out via Electronic Contract are binding on the parties.
- d. Domain Name, Intellectual Property Rights and Personal Rights
 - Each state administrator, Person, Business Entity, and/or the public are allowed to have a Domain Name based on the principle of first registrant and the manager/administrator is the Government or the public.
 - Intellectual Property (IP) violations are dealt with under the laws governing IP
 - The use of someone's personal data through electronic media shall only be carried out with their permission.
- e. Prohibited Actions
 - Distributing Electronic Information and/or Electronic Documents which are indecent, insulting and/or constitute defamation, gambling, extortion and/or threats.

Violation of the Prohibited Action Chapter will result in imprisonment for a maximum of 6 years and/or payment of a fine of a maximum Rp 1,000,000.

Pursuing breaches of contract, defamation, damage to a brand name and IP infringement can be very time-consuming and costly, considering the fees to register the case, to enter into litigation proceedings and all the associated costs. It thus follows that SMIC is a viable solution for companies to consider to mitigate the risk of doing business electronically.

The procedure for Indonesia-based insurance companies to register such a product that would cover their clients from the risks associated with SM is as follows.

Procedure to Register New Insurance Products

There are four stages of approval and registration of new insurance product which is regulated in OJK Regulation Number 23/POJK.05/2015, regarding Insurance Products and the Marketing of Insurance Products:

1. Obligation to Report
2. Every Insurance Products that will be marketed shall be reported to the OJK to obtain an approval letter
3. Approval of Insurance Products
 - To obtain an approval, a report on any new Insurance Product shall be accompanied by these documents:
 - a. Reporting of new Insurance Products form;
 - b. Projection of premium income or contribution and expenses related to the marketing of new Insurance Products for 3 years;
 - c. Description of the new Insurance Product;
 - d. Specimen of the Insurance Policy;
 - Description of the new Insurance Product;
 - The OJK will send an approval letter within 10 working days after receiving a complete set of the correct documents.
4. Registration of New Insurance Products
 - Insurance products that shall be reported to the OJK to obtain the registration letter are new Insurance Products which are Standard Insurance Products and changes to Insurance Products that are already being marketed.
 - the reporting of new Insurance Products which are Standard Insurance Products shall be accompanied by these documents:
 - a. Report of the new Insurance Product
 - b. Description of the new Insurance Product;
 - OJK will send a registration letter regarding Reporting of the Insurance Product within 7 working days after receiving a complete set of correct documents.

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5. Completeness of Reporting Insurance Products Documents

- If the documents are incomplete, the OJK shall notify the company thereof regarding the remaining requirements and the response shall be by:
 - a. Post;
 - b. Email;
 - c. Meeting with the companies' representative at the OJK's offices and/or;
 - d. Another form of transmission, as requested by the OJK.

Conclusion

In conclusion, there is a definite need for insurance companies to constantly keep pace with change in the business environment and create new products to service the need for risk mitigation in the market place. Although Business Interruption Insurance, Cyber Insurance, IP Coverage, among others, are offered by certain brokers, there is as of yet no dedicated integrated SMIC on the market. Perhaps this short note will serve as a starting point to reflect on this very real need.

DISCLAIMER

The views in this newsletter are personal and purely informational in nature and should in no way be construed as constituting legal advice.