# Prospects of Engineering Procurement and Construction (EPC) Business For Construction Companies

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Given the low margin of the construction business due to tightening competition, some large construction companies are diversifying into EPC business. Power plant and oil and gas industry are the main targets for EPC business of construction companies.

**Low electrification rate will drive the growth of EPC for power plant**

PEFINDO views that the prospect of EPC business in Indonesia will be favorable in the near to medium term. One of the supporting factors is the relatively low electrification rate in the country, which may lead to more constructions of power plant by The State Electricity Company, Perusahaan Listrik Negara, (PPLN: $_{id}$AA+/stable) and/or independent power generator companies. Power plants, given their standardized structures, are generally constructed using EPC scheme and therefore, they are one of the major revenue contributors for EPC contractors.

Looking at the list of projects proposed by the Master Plan For Acceleration of Economic Development in Indonesia (MP3EI), there are about 64 power plants constructions being proposed across the country with estimated total project value of IDR 314 trillion. Assuming a conservative 50% execution rate, this will mean about IDR 157 trillion worth of projects (accounted for about 40% of total national construction spending in 2011) are ready to be tendered to the EPC contractors.

As oil in the country is becoming more scarce, most of these power plants will likely use alternative energy sources that are still abundantly available in Indonesia, such as coal, hydro-power and geothermal energy. Geothermal energy, in our view, is one potential alternative that is still largely untapped. Estimates suggest that about 40% of the world's geothermal energy supply can be found in Indonesia, but only about 4% of this reserve has so far been utilized. In our opinion, the effort to seek for more diversified source of energy in power plant constructions should therefore open opportunities for more EPC contractors with differing area of expertise to participate and acquire more contracts.

**Exhibit 1 : Provinces with low electrification rate in Indonesia -2011**

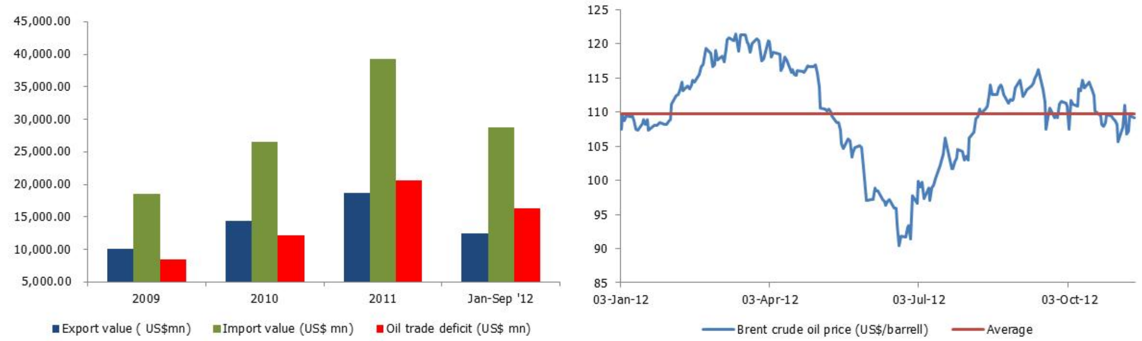
| Province | Electrification rate (%) |
|---|---|
| Papua | 30.8 |
| Jambi | 32.7 |
| West Sulawesi | 33.6 |
| NTT | 34.5 |
| NTB | 47.2 |
| Southeast Sulawesi | 51.1 |
| Central Kalimantan | 53.0 |
| North Maluku | 53.5 |
| Papua Barat | 54.3 |
| Riau | 54.8 |
| Banten | 55.3 |
| Indonesia | 71.2 |

*Source : PLN*

**High oil and gas price will provide the business opportunity for EPC business**

Another supporting factor should come from the oil and gas industry. This sector has also been a regular user of EPC contractors as the need to find new source of oil has become increasingly more urgent, especially since Indonesia became a net importer of oil in 2004. The increasing number of middle class also means higher domestic consumption, including oil. According to an independent research company, Euromonitor.com, there were about 13.7 million households in Indonesia that fall under the middle class category with annual disposable income of more than US$10,000 in 2011. This number is expected to continue to rise, reaching more than 30 million households by 2020. Furthermore, a relatively high crude oil price (Brent crude oil price up to Oct 12 averaged at US$ 109.7/barrel) as well as the government's plan to gradually phase-out oil subsidy have pushed companies to explore new sources of oil by going to areas that were previously considered non-viable.

**Exhibit 2 Indonesia oil trade deficit and Brent crude oil average price 10M12**




Source : BPS and Bloomberg

**EPC business offers more margin but also carries higher operation risk**

There are increasing number of construction companies that are joining the EPC sector. Companies such as PT Pembangunan Perumahan (Persero) Tbk (PTPP: $_{id}$A-/stable) and PT Adhi Karya (Persero) Tbk (ADHI: $_{id}$A/stable) are among the new local EPC players competing with existing major EPC players, including PT Rekayasa Industri, Tripatra (subsidiary of Indika Energy Tbk) and PT Inti Karya Persada Tehnik.

**Exhibit 3 Revenue from EPC by companies**

| Revenue from EPC (IDR billion) | 30-Jun-12 | 2011 | 2010 |
|---|---|---|---|
| PT Pembangunan Perumahan (Persero) Tbk | 329.8 | 520.2 | - |
| PT Adhi Karya (Persero) Tbk | 180.5 | 775.9 | 1,057.9 |
| PT Rekayasa Industri (Rekin) | n.a. | 2,283.1 | 2,527.5 |
| PT Indika Energy Tbk- Energy Services Segment | 2,500.3 | 3,979.8 | 3,506.3 |
| Total ( excluding Rekin for June 30, 2012) | 3,010.63 | 7,559.1 | 7,091.7 |

*n.a. : No publicly available data*
*Source : BEI website, except for Rekin ( Rekin website)*

Nevertheless, there are key risk factors in the sector. These include the inherent complexity of EPC projects, which require EPC contractors to be equipped with the correct technological know-how and the qualified manpower to finish the project on time and according to specifications.

Furthermore, EPC projects are usually turnkey projects, whereby a contractor is obliged to deliver a complete facility to the project owner who only needs to turn a key to start the operation of the facility. The responsibility to design, procure and construct the plant/facility is in the hands of the contractor, which means that the EPC contractor has to bear the risks of delay and cost overruns. Any deviation from the agreed terms will usually result in the contractor being penalized financially.

In addition, unlike regular construction work where the contractor receives down payment and is paid on the basis of percentage of completion of the projects, there are some types of turn-key projects that require pre-financing from the contractor as the payment from the project owner will only be done once everything is ready to operate. This means that the contractor needs to have good cash flow management and strong capital, given the generally significant size of turnkey projects. The contractor will also need to carefully assess the business and financial conditions of the project owner to mitigate the risk of payment default when the turnkey project is completed by the contractor.

As more new players are entering into the EPC segment, competition is expected to intensify, which could result in margin contraction and loss making projects especially for the new players. The complexity of EPC projects compared to regular construction work and the need to accurately estimate the cost and the time required to finish the projects may cause inexperienced EPC contractors to incur losses, amid heightened competition.

The machineries for EPC projects in Indonesia are mostly imported. As a result, EPC companies are exposed to foreign currency related risk. Procurement of machineries constitutes a major part of EPC projects (about 50%-60% of contract value), and therefore any miscalculation of foreign currency risk may cause financial losses to the EPC contractor.