Investment Opportunities in Electricity Sector

Myanmar faces a shortage of electricity supply to meet the demands of industry and private citizens. As such, the government drew up national energy policies to fulfill the nation's energy needs, which is projected to grow 13 – 15 percent per year. At present, Myanmar's energy demand is 30% more than the available supply, and only 38 percent of households in Myanmar are electrified. This insufficient electricity supply results in businesses being reliant on private generators to supply electricity during power shortages. Development of Myanmar's energy infrastructure is one of the essential requirements for Myanmar's sustained economic growth. Thus, there are ample opportunities for both the local private sector and foreign investors to invest in power generation, transmission, and distribution in Myanmar.

Legal Framework

The new Electricity Law of 2014 (announced on 24 October 2014) established the Electricity Regulatory Commission (ERC) and grants some regulatory responsibilities to the ERC. The law also authorizes the Ministry of Electricity and Energy (MOEE), region and state governments, and leading bodies of self-administrated zones and self-administrated divisions to grant permits, and engage in electricity-related works, such as generation, transmission, and distribution. Thus, interested investors can directly contact those parties to invest in the energy sector.

According to the Electricity Law 2014, the electricity business is divided into three business categories: small scale electricity business (equal to or less than 10 MW), medium scale electricity business (more than 10 MW but less than 30 MW), and large scale electricity business (more than 30 MW). The Constitution Law (2008), Section 188, 2, Clause (4)a states that small and medium scale electric power production and distribution have the right to be managed by Regions and States, and might not have any link to the national power grid. Large scale electric power production and distribution are to be managed by the Union Government.

Electrical Power

By the end of December this fiscal year 2017-2018, foreign direct investment reached over US$ 362.9 million in Myanmar's power sector. The Directorate of Investment and Company Administration (DICA) has approved over US$ 20.9 billion foreign investment in the power sector since 2005.

According to the Ministry of Electricity and Energy (MOEE), the current situation in electric power sector data is as follows:

Installed capacity	5,389.97 MW
Electricity generation	17,866.99 MW
Total electricity consumption	15,355.09 Gwh
Per capita consumption	300.68 Kwh
Grid connected households (%)	38%
230 Kv transmission line	4,469.57 km
230 kV substation	4,900 MVA

132 kv transmissions line	2,190.892 km
132 kV substation	1,692.5 MVA
66 kV transmission line	6,065.68 km
66 kV substation	3,590.35 MVA

With regard to installed capacity, hydropower continues to provide the majority of Myanmar's electricity, which was about 60% of the total amount of electricity in 2017. Gas provided 35% and coal and diesel provided 2.23% and 1.75% respectively of the total electricity generated in Myanmar.

Investment Opportunities in the Power Sector

Given that Myanmar needs additional electricity as soon as possible in order to boost economic development, there are many opportunities to invest in power generation, transmission, and distribution in Myanmar. All foreign investors are encouraged to submit an Energy Performance Certificate (EPC) and documents to verify that they are an Independent Power Producer (IPP).

Hydropower

At present, hydropower comprises two thirds of the country's energy mix, with 3,255 MW of installed capacity. Hydropower still has high potential throughout the country. According to the Asia Development Bank (ADB), the country has hydropower potential of more than 100,000 MW, which comes from four main rivers: Ayeyarwaddy, Chindwin, Thanlwin and Sittaung.

According to the Ministry of Electricity and Energy (MOEE)'s long term plan, power generation from hydropower is a key part to fulfill increasing demand for electricity. Myanmar has only developed 3 GW out of the potential of more than 100 GW of hydropower in the country. In order to develop hydropower energy, another 46 GW of technically feasible potential has been identified so far. Major hydropower resources can be found in Kayin State, Shan State, and Kayah State, which is located along the Salween River. These states have huge potential for those who are interested to invest in hydropower in Myanmar.

Oil and Gas

The government plans to use Liquefied Petroleum Gas (LPG) to meet the rapid growth of domestic power demand by 2020. The Myanmar Oil and Gas Enterprise (MOGE) under the Ministry of Electricity and Energy plans to strengthen the oil and gas sector and engaged in three joint ventures with international service companies in 2017. The joint ventures focus on onshore seismic acquisition services, onshore drilling services, and onshore pipeline construction and maintenance services. A total of 17 sedimentary basins, 3 offshore and 14 onshore, have been identified for exploration, development, and production onshore and offshore in the Myanmar oil and gas sector. At present, Myanmar has a daily production of 12,500 bbls and 2.03 bscfd from onshore and offshore oil and gas fields. Out of the total production, 1.15 mmscfd is exported to Thailand, 450 mmscfd is exported to China, and domestic utilization is about 430 mmscfd.

Although the current gas demand in the country is about 780 mmscfd, only 400 mmscfd can be supplied, which is about 51% of the actual demand.

By the end of December 2017, the oil and gas sector attracted over US$ 22.4 billion in foreign direct investment from 154 permitted foreign enterprises. In Myanmar's oil and gas sector, many multinational companies are involved in petroleum operation in 37 blocks onshore and 38 blocks offshore. Myanmar's oil and gas sector will continue to grow, and there are opportunities to introduce cost-effective solutions to local oil and services companies. In conclusion, the oil and gas sector plays a key role in driving sustainable economic growth, and boosting the country's GDP, given that gas exports constitute a considerable part of national income.

Solar (renewable energy)

Solar energy has potential in Myanmar, and can solve power shortage problems in rural communities, especially in central Myanmar and the dry zone. In October 2015, Black and Veatch company was appointed by Thailand's Green Earth Power (GEP) to provide design and consultancy services for a 220 MW PV power plant to be built in Minbu, Magway Region. There are six solar power projects planned to generate 1,460 MW in central Myanmar. The projects' locations include: Sagaing and Mandalay (880 MW), Min Bu (220 MW), Thapyaysan (100 MW), Nabuaing (Myingyan) (150 MW), Wundwin (Meikgtila) (150 MW), and Shwemyo (10 MW).

In addition, floating pilot projects are also planned for Kun Chaung Dam (30 MV), Zaung Tu Dam (30 MW) and Shwe Gyin Dam (30 MW). Myanmar's National Electrification Plan aims to achieve 100% electrification in the country by 2030, and has received financial support of US$ 400 million from the World Bank. At present, the power grid cannot keep up with soaring electricity demand. Thus, mini-grid and solar home systems have high potential in remote areas to solve power shortage problems.

To conclude, Myanmar needs efficient electricity supply as soon as possible and there are several opportunities for foreign investment in the power sector, such as hydropower, coal, gas, and solar energy, as well as wind power and tidal power. The Ministry of Electricity and Energy has drawn up strategic ways to implement power projects which are implemented through foreign investment, either as a Joint Venture (JV) or on a Build Operation Transfer (BOT) basis. The ministry always strives to have reasonable electricity price per unit, efficient electricity generation, and the least impact on society and the environment.

Government agencies and private sector contact details for futher information:

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