

# Myanmar's Energy Sector

## Policies and Regulations

- **The Myanmar National Electrification Plan aims to achieve 100% electrification by 2030.** According to the Ministry of Electric Power (MOEP), full electrification would require more than 7.2 million households to be connected over the next 16 years.
  - Myanmar is working on 17 new power plant projects that are due for completion in 2016, 10 others were completed between 2013 and 2014, and there are plans to construct another 87 power plants that can supply 54,608 MW of installed capacity.
  - President Thein Sein, in his monthly radio address, stated: “as of 2014, we have managed to provide electricity to 243 townships out of the 398 townships from the national power grid and the remaining 155 townships by other alternative ways... Needless to say, regular supply of electric power is an essential component in developing a country’s economy. Furthermore, electricity is also a crucial infrastructural need for education and healthcare sectors. As such, we have tried to the best of our ability to improve the performance of the electricity sector.”
- In addition to the FDI law, the acts and laws related to the energy sector include
  - the 1914 Companies Act (currently under revision), includes several statutes related to labor issues,
  - recently approved mining laws,
  - and multiple laws governing the oil and gas sector, including the Oilfields Act (1918), the Petroleum Act (1934), the Oilfield Rules (1936), the Petroleum Rules (1937), the Essential Supplies and Services Act (1947), the Oilfields (labor and Welfare) Act (1951), the Petroleum Resources (Development Regulation) Act (1969), and the Environmental Conservation Law (2012).
  - In December 2012, Myanmar submitted an application to join the Extractive Industries Transparency Initiative (EITI), and was admitted as an EITI candidate in July 2014. Myanmar’s participation in EITI requires compliance with international standards on transparency for all its oil, gas and mining earnings, which can include disclosure of information relating to company ownership, contract terms, state-owned extractive industries and revenue allocation.
  - **National Energy Policy:** accomplished with the help of the Asian Development Bank (ADB) (7 energy related ministries are cooperating under the National Energy Management Committee, under the patronage of the Vice President)
  - **Electricity Law:** legislated on 27 October 2015, by-laws are also ongoing

## Challenges

- Challenges to entering Myanmar’s energy market include the lack of both human and physical capacity, an opaque and ever-changing legal system, lack of coordination among the multitude of energy-related ministries, and remaining U.S. sanctions.
- The distribution of energy is also another challenge facing the Myanmar government and investors: even after the necessary capital has been secured, successful projects must develop and execute an appropriate strategy to reach all communities.
- Despite these challenges, Myanmar has tremendous potential in its energy sector and, if developed properly by all involved, will not only bring much-needed power generation and wealth to its people and investors, but also become a major regional energy hub.

- The Myanmar Investment Commission issued a directive in August 2014 to expand the sectors that could be 100% held by foreign investors, including small and medium sized hydropower and coal-fired power projects, but did not extend this privilege to the oil and gas sector.
- Even beyond legal and regulatory hurdles, falling oil prices have dulled excitement for this sector.
- Reputational issues can also impact investors' decision to enter the Myanmar market. Fears of local protesters, potential JV partners and entire industries plagued by corruption, an opaque legal system, and the possibility that the country could backslide to its military past all temper investor enthusiasm.

## Opportunities

- Infrastructure and equipment: rehabilitating or building roads, pipelines, and other infrastructure
- Technical assistance and capacity building: Myanmar's government and its population strongly desire an energy sector that adheres to international standards. Government officials, managers, and laborers need training to be able to draft appropriate legislation, comprehend complex production sharing agreements and contracts, build a physical and corporate infrastructure that complies with international and domestic regulations, and provide workers with necessary skills.
- Environmental and social impact assessment consultancy services: conducting in-depth studies on the environmental and social impact of projects could mitigate potential social issues and alleviate concerns about environmental degradation.
- Business Monitor International (BMI) predicts that Myanmar's consumption of transport fuel (particularly gasoline and diesel) will grow by 65% over the next ten years, and that the increase will rise from 45,300 barrels per day (bpd) in 2015 to 74,400 bpd by 2024.
- Surging domestic demand has overwhelmed the country's three small refineries, which can now only meet about 30% of diesel and gasoline needs. The other two thirds has to be imported, raising end-user costs (Mizzima Issue 4, Vol. 5 Jan 28 2016).

## *Energy Sector Potentials*

### *Oil and Gas*

- Myanmar's oil and gas industry has up to 3.2 billion barrels of oil and 18 trillion cubic feet (Tcf) of natural gas reserves (with unproven resources potentially expanding that figure). Gas comprises 90% of total Myanmar petroleum products.
- **Myanmar is the 10<sup>th</sup> largest producer of natural gas in the world.**
- According to the U.S. Energy Information Administration, Myanmar has estimated proven gas reserves of 10 Tcf, and proven oil reserves of 50 million barrels.
- U.K. Trade & Investment noted that Myanmar's oil and gas sector received over US\$14.3 billion in FDI by the end of the third quarter of the 2014/15 fiscal year, and currently accounts for about 36.3% of the country's total foreign investment.

### *Hydropower*

- Myanmar also has great hydropower potential through its major rivers, which drain the four main basins of Ayeyarwaddy, Chindwin, Thanlwin, and Sittaung Rivers - capacity is estimated to be more than 100,000 MW.

### *Coal*

- An estimated 400 coal occurrences have been identified in Myanmar, with significant occurrences in the Ayeyarwaddy and Chindwin river basins and in Shan state. (ADB)

- Coal has mainly been found in the Sagaing, Magwe, and Tanintharyi Divisions. Most of Myanmar's coal resources were formed during the Tertiary period, and are the most valuable type in terms of quality (lignite to sub-bituminous).
- Coal found in Shan state tends to be of lower quality (sub-bituminous). The 33 major coal deposits have estimated reserves totaling some 488.7 million tons in various qualities. Only 1% of this estimated potential has been confirmed, however.

### *Solar*

- Renewable energy in Myanmar has recently been a focus of NGOs and social enterprises that are looking to bring clean energy sources to villages without power, but are concerned with environmental damage from coal or hydropower-related projects.
- In 2014, U.S.-based ACO Investment Group announced plans for a US\$480 million solar power project in the Mandalay region that is projected to provide up to 12% of the country's future power generation.
- Last year, the ADB announced a plan to bring power to 25 off-grid villages in the country through a US\$2 million grant project to expand clean energy use, including through solar power.

### **Activities and Financial Support to provide opportunities**

- **Thailand and Myanmar signed an MoU on energy cooperation**, specifically in the petroleum and electricity sectors in June 2015 (The Myanmar Times: June 17, 2015)
- Since 2011, offshore and onshore oil and gas blocks have been awarded to major oil and gas companies, and international businesses and financial institutions, including the ADB, which have sought power generation opportunities throughout the country.
- Foreign investors from Singapore, Thailand, China, the U.S., Japan, the U.K., Norway and other European and Asian countries are working in the energy sector, including in the oil and gas, coal, and hydropower industries.
- In September 2015, the World Bank approved a 400 million USD loan to support the Myanmar government's National Energy Policy (NEP), which aims for universal electricity access by 2030. In the first phase of NEP, electricity will extend to over 1 million households, 60% of which will connect to the national grid and 40% will obtain off-grid electricity by 2021.
- Other international donors – including the ADB, UN agencies, and development agencies from Germany, Japan, Italy, Norway, India, and other countries – are making significant investments in this area.
- In addition, international oil and gas companies, such as Total and Chevron, now have corporate social responsibility (CSR) activities addressing Myanmar's rural electricity access; private charitable foundations are scoping potential projects as well. With this influx of interest and resources, local and international nongovernmental organizations (NGOs), social enterprises, and renewable energy service providers are positioning themselves to implement pilot projects and, if successful, to launch longer-term, commercially viable initiatives.

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