The Current Status and Future Vision of Oil and Gas Sector in Myanmar

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Energy Planning Department
Ministry of Energy
Myanmar

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Institutional Frameworks in Renewable and Non Renewable Energy Sectors

(1) Ministry of Energy (MOE) = Petroleum, Oil Shale & Fertilizer
(2) Ministry of Electric Power
   Thermal Electric-power, Coal and
   = Hydropower Generating,
   Gas Turbine Power
   transmission and distribution
(3) Ministry of Mines = Coal
(4) Ministry of Environmental
   Conservation & Forestry = Biomass & Fuel Wood
(5) Ministry of Agriculture & Irrigation
(6) Ministry of Science & Technology = Renewable Energy
(7) Ministry of Industry = Energy Efficiency

* Ministry of Energy is Focal Point for Myanmar Energy Sector Cooperation with International and Regional organizations.
Ministry of Energy
Organizations and Respective Responsibilities

Energy Planning Department (EPD)
- Coordination
- Management
- Regulation

Myanmar Oil and Gas Enterprise (MOGE)
- Exploration
- Drilling
- Production
- Onland Oil and Gas Pipeline Network
- CNG

Myanmar Petrochemical Enterprise (MPE)
- Refineries & Process
- Fertilizer Plants
- Methanol Plant
- CO2 and LPG Plants
- Waxing & Tar

Myanmar Petroleum Products Enterprise (MPPE)
- Marketing
- Distribution

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To Secure Our Own Energy for Future

- To integrate all types of Energy Sectors, Renewable Energy and Non Renewable Energy

- National Energy Management Committee (NEMC) and Energy development Committee (EDC) were formed by President Office dated on 9th January 2013

- NEMC, Vital Task, to compile Integrate Energy Policy for future program, short terms and long terms

- The 3rd draft of Working Paper for Myanmar Energy Sector Policy in progress
National Energy Management Committee (NEMC)

- Formed on 9th January 2013
- Patron - Vice President (2)
- Chairman - Union Minister for Energy
- Vice Chairman - Union Minister for Electric Power
- Members - Ministers from Agriculture, Forest, Mines, National Planning, Industries and representatives from NGO’s Renewable Energy Organizations
- Secretary - Deputy Minister for Energy
- Joint Secretary - Deputy Minister for Electric Power

*** Highlighted duties and functions as:-

- To formulate National Energy Policy and Energy Regulation
- To encourage private sectors in Energy Development
- To plan short terms to fulfill requirements
- To portrait long term plans to generate electricity by coal with CCT and to meet domestic demands
- To develop three sectors: energy, industrial and electrical
- To adopt National Energy Security Strategy and so on!
Energy Development Committee (EDC)

- Chairman - Union Minister for Energy
- Members - Ministers, Dy. Minister, High authorities personnel from Agriculture, Energy, Forest, Mines, National Planning and Industries and former retired expertise personnel from ministries and NGO’s organizations
- Secretary - Director General, Energy Planning Department

*** Some key tasks as:-

- To lay down Energy Development Policy
- To concern for changing ratio between state-owned and private-owned sectors
- To estimate demand of energy and energy developing policy for short terms to long terms
- To improve strategies and opportunities for energy development
- To attract the foreign and domestic investments in renewable energy projects
- To regulate energy development project
- To seek technology and management assistances
- To acquire effective information in energy sectors
Exploration and Development of Petroleum

Summary

Onshore

<table>
<thead>
<tr>
<th>Daily Production</th>
<th>- Crude Oil <strong>7600</strong> bbl &amp; Natural Gas <strong>55</strong> mmcf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovered</td>
<td>- 28 oil and gas fields</td>
</tr>
<tr>
<td>Producing Fields</td>
<td>- 18 oil fields and 5 gas fields (Total 23)</td>
</tr>
<tr>
<td>Tested/Suspended Fields</td>
<td>- 1 tested and 4 suspended oil fields</td>
</tr>
<tr>
<td>Appraisal</td>
<td>- 1 in Southern Chindwin Basin</td>
</tr>
<tr>
<td>Unconventional Project</td>
<td>- <em>Shale Gas Projects under Study Period</em></td>
</tr>
<tr>
<td>IPR</td>
<td>- 1 field by Horizontal Drilling</td>
</tr>
<tr>
<td>Onshore Blocks</td>
<td></td>
</tr>
<tr>
<td>Total Demarcated - 53 (Operating 16, awarded 16 blocks in 2013 Bidding, Open 21)</td>
<td></td>
</tr>
</tbody>
</table>

**Domestic Crude Pipeline Network** - 535 km

**Domestic Gas Pipeline Network**

- Onshore (4” to 20”) - 2874.5 km
- Offshore Yadana to Yangon (24“) - 436 km (Offshore 286.5 km + Onshore 149.7 km)

**Myanmar –China Pipeline**

- Crude Pipeline (22”) - 744 km
Exploration and Development of Petroleum

Summary

Offshore

Producing Fields - Yadana, Yetagun and Shwe
Daily Production - Crude Oil 10,000 bbl & Natural Gas 1400 mmcf
  Yadana - 750 mmcmd (722 BTU)
  Yetagun - 10,000 bbl/day + 450 mmcmd (1010 BTU)
  Shwe - 200 mmcmd (1012 BUT)

Export - 1100 mmcmd (Thailand) and 200 mmcmd (China)
Ongoing - Zawtika Project M-9 (year 2014)
Plan - A Project for domestic use in Block M-3
Appraisal - Block A-6
Offshore Blocks - Demarcated Ttl 51: Operating 19, Bidding 30

Export Gas Pipeline to Thailand (PTTEPI)
Yadana to Metering Station (36”) - 410 km
Yetagun to Metering Station (24”) - 274 km
Zawtika Project is undergoing in progress & 1st. Gas is estimated on February 2014!

8
Domestic Crude Pipeline - 119 km

Domestic Gas Pipeline Network
Onshore (4” to 20”) - 2874 km
Offshore, Yadana to Yangon (24”) - 436 km

Export Gas Pipeline to PTTEPI
Yadana to Metering Station (36”) - 395 km
Yetagun to Metering Station (24”) - 271 km

Myanmar –China Crude and Gas Pipeline (Ongoing)
Crude Pipeline (32”), Myanmar side - 760 km
Gas Pipeline (40”), Myanmar side - 782 km
Current Onshore Activities (16 blocks)

<table>
<thead>
<tr>
<th>Company / Operator</th>
<th>Block</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nobel Oil</td>
<td>PSC-A</td>
<td>(Hukaung)</td>
</tr>
<tr>
<td></td>
<td>PSC-B1</td>
<td>(Uyu)</td>
</tr>
<tr>
<td>SIPC Myanmar</td>
<td>PSC-D</td>
<td>(Mahudaung)</td>
</tr>
<tr>
<td>North Petro-Chem</td>
<td>PSC-F</td>
<td>(Ngahlaingdwin)</td>
</tr>
<tr>
<td>GOLDPETROL</td>
<td>IOR-2</td>
<td>(Chauk Oil Field)</td>
</tr>
<tr>
<td></td>
<td>MOGE-1</td>
<td>(Yenangyaung Oil Field)</td>
</tr>
<tr>
<td>MPRL E&amp;P</td>
<td>MOGE-2 (N)</td>
<td>(Mann Oil Field)</td>
</tr>
<tr>
<td>SNOG, UPR</td>
<td>PSC-R</td>
<td>(Oil Shale, Kayin State)</td>
</tr>
<tr>
<td>Geopetrol Intl.</td>
<td>RSF-9</td>
<td>(Pyalo-Paukkong)</td>
</tr>
<tr>
<td>Petronas</td>
<td>RSF-2</td>
<td>(Tuyintaung, Mying S)</td>
</tr>
<tr>
<td></td>
<td>RSF-3</td>
<td>(Gwegyo-Ngashadaung)</td>
</tr>
<tr>
<td>Jubilant Oil &amp; Gas Pvt. PSC-I</td>
<td></td>
<td>(Hintada)</td>
</tr>
<tr>
<td>PTTEPI</td>
<td>PSC-G</td>
<td>(Taungdwingyi)</td>
</tr>
<tr>
<td></td>
<td>EP-2</td>
<td>(Aung Lan)</td>
</tr>
<tr>
<td>Istech Energy Ltd.</td>
<td>EP-5</td>
<td>(Inbin-Tegyigone)</td>
</tr>
<tr>
<td>Asia Orient Intl. Ltd.</td>
<td>PSC-E</td>
<td>(Myingyan)</td>
</tr>
</tbody>
</table>

E&P: In onshore area, 16 Contracts are active in 16 onshore blocks with 12 foreign companies from 11 countries.
Current Offshore Activities (19 blocks)

<table>
<thead>
<tr>
<th>Company / Operator</th>
<th>Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>- M-5, M-6 (Yatana Project)</td>
</tr>
<tr>
<td>PETRONAS</td>
<td>- M-12, M-13, M-14 (Yetagun Project)</td>
</tr>
<tr>
<td>DAEWOO INTERNATIONAL</td>
<td>- A-1, A-3, AD-7 (Shwe Project)</td>
</tr>
<tr>
<td>PTTEPI</td>
<td>- M-3, M-11, - M-9 (Zawtika Project)</td>
</tr>
<tr>
<td>CNOOC</td>
<td>- MD-7, MD-8</td>
</tr>
<tr>
<td>CNPC INTERNATIONAL LTD</td>
<td>- AD-1, AD-6, AD-8</td>
</tr>
<tr>
<td>MPRL E&amp;P</td>
<td>- A-6</td>
</tr>
<tr>
<td>PETROVIETNAM</td>
<td>- M-2</td>
</tr>
</tbody>
</table>

In offshore area, **18** Contracts are active in **19** offshore blocks with **8** foreign companies from **8** countries.
Existing Petrochemical Plants Operated under
Myanmar Petrochemical Enterprise (MPE)

<table>
<thead>
<tr>
<th>Plant Type</th>
<th>Count</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Oil Refinery</td>
<td>3</td>
<td>51,000 bbl/day</td>
</tr>
<tr>
<td>LPG Plant</td>
<td>3</td>
<td>50 mmscfd</td>
</tr>
<tr>
<td>Fertilizer Plant (Urea)</td>
<td>5</td>
<td>Ammonia 1340 MTD &amp; Urea 2012MTD</td>
</tr>
<tr>
<td>Methanol Plant</td>
<td>1</td>
<td>450 MT/day, under rehabilitation</td>
</tr>
<tr>
<td>CO₂ Recovery Plant</td>
<td>1</td>
<td>Liquid 24 Ton &amp; Dry ice 6 Ton/day</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>Waxing and Bitumen 548 MT/day</td>
</tr>
</tbody>
</table>
Privatization Scheme

- Distribution of Petroleum Products including LPG
- Refineries under JV system, Initiating & Exercising to Thanlyin refinery near Yangon at present
- Promoting and Improving to Private Sectors by!
Improvement of Petroleum Sector for New Comers

- EITI process by collaborating between State Own Enterprises and IOCs
- EIA, SIA and EMP for all movements
- Foreign Investment Law 2012
- More Institutions and Cooperation
- Regional cooperation in ASEAN and wider
Role and Future Petroleum Sector

- Key factors for National Economic growth
- To priority the demand of domestic needs
- Domestic market oriented, especially natural gas based industries
- Comprehensive roadmap for sustainable development subsequent to National Energy Policy by NEMC
- Promoting private sectors both in upstream and downstream sectors
Potential Opportunities

- E&P in onshore and offshore area
- EOR and Unconventional Hydrocarbon
- New Refinery
- LPG and LNG project
- Existing Refineries: JV system
- Trading of Petroleum Products
- Research and Development, e.g. Laboratory, Process etc.
- Supply equipments spare for Factories and Plants
Focal Personal for Ministry of Energy

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