



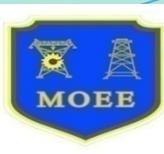
CPI-5-18 PROGRAM FORMULATION COURSE

AGENDA

- MINISTRY OF ELECTRICITY AND ENERGY
- MYANMA OIL AND GAS ENTERPRISE
- ELECTRIC POWER GENERATION ENTERPRISE
- MYANMA PETROCHEMICAL ENTERPRISE

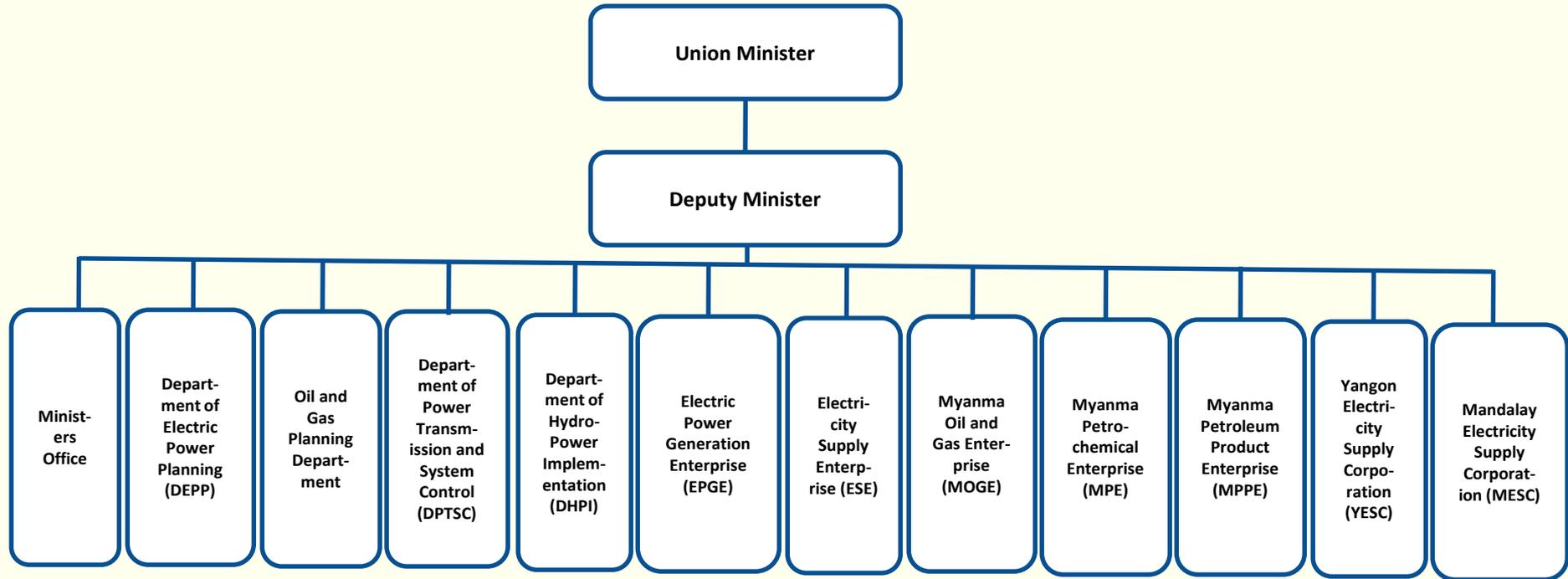


REPUBLIC OF THE UNION OF MYANMAR





Organization Chart Of Ministry Of Electricity and Energy





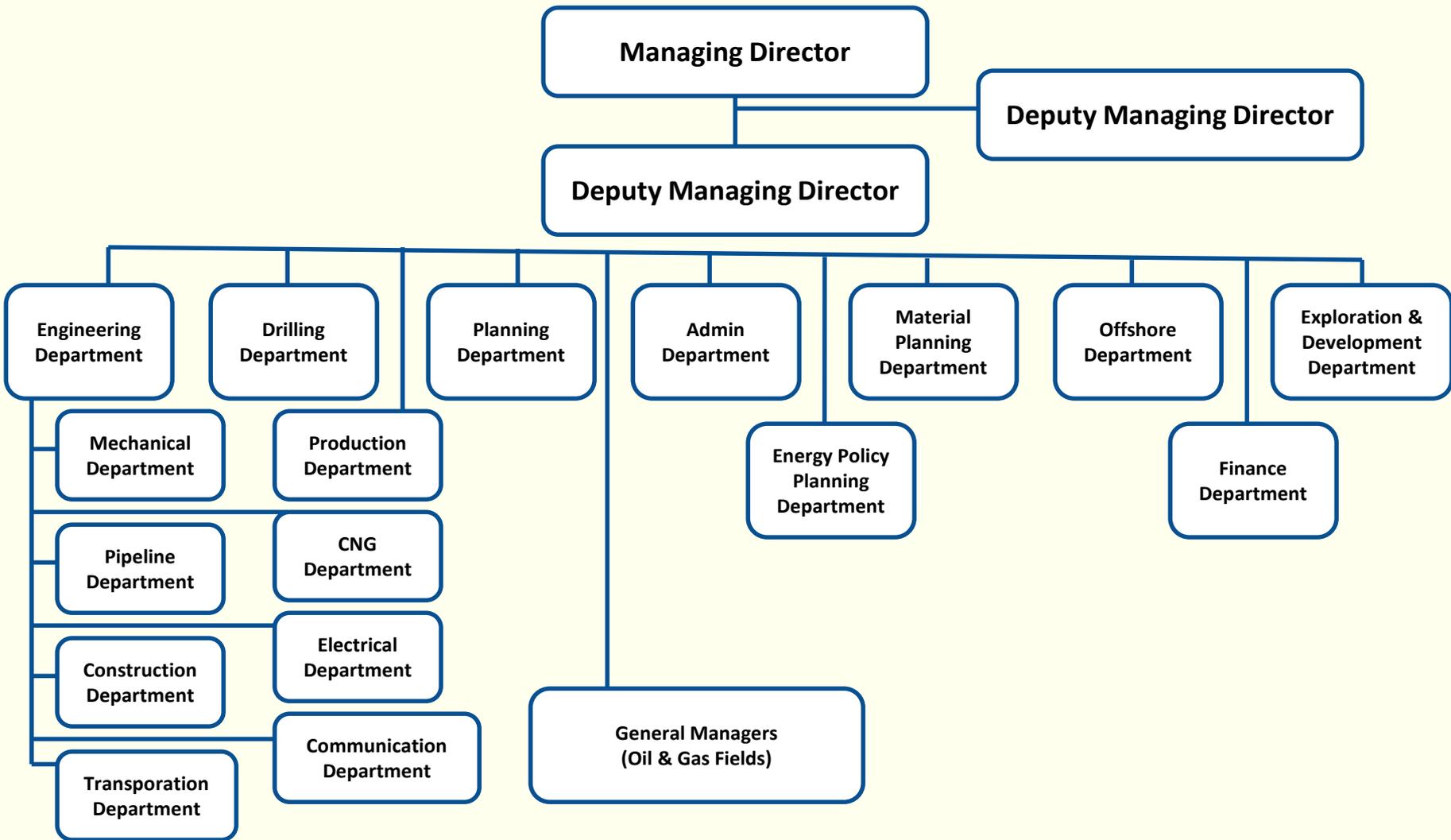
MINISTRY OF ELECTRICITY AND ENERGY



MYANMA OIL AND GAS ENTERPRISE



Organization Chart Of Myanmar Oil and Gas Enterprise





MOGE OPERATED PIPELINES

Major Crude Oil and Natural Gas Pipelines

- Onshore Pipeline - 2276 miles

- Offshore Pipeline - 95 miles

Total - 2371 miles (As of 2018 March)



Daily Oil and Gas Production, Exploration and Domestic Use

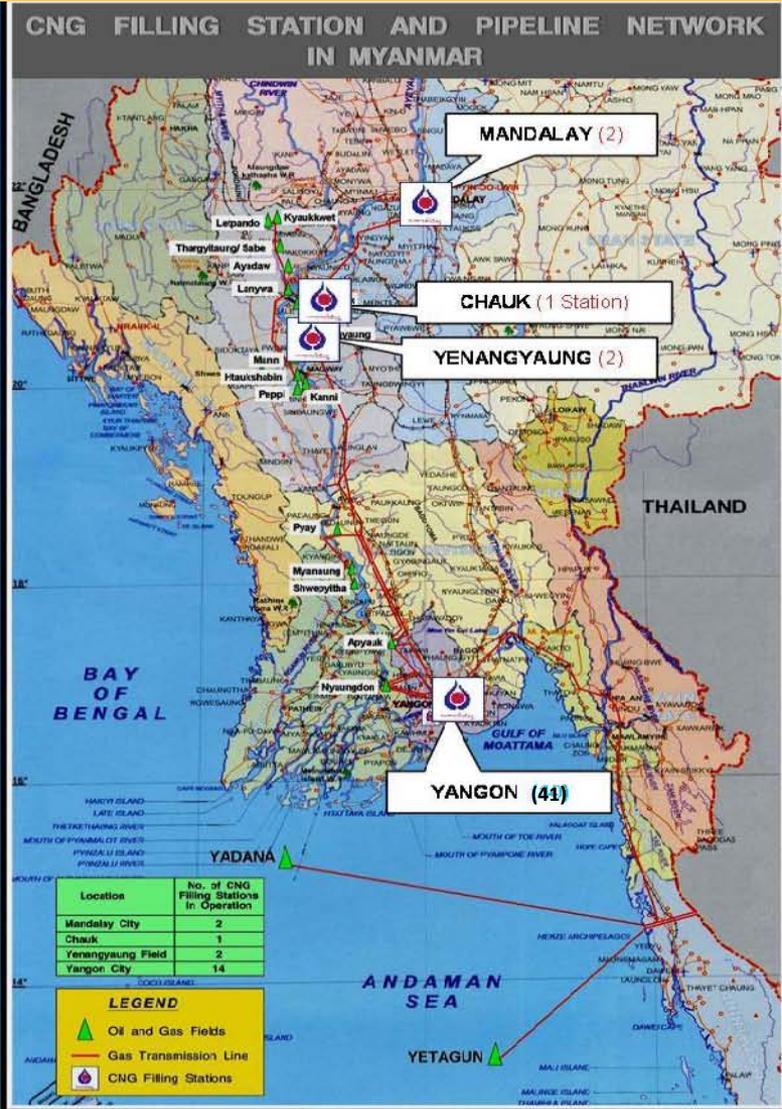
Oil

❖ Onland	- 7,000 bbls
❖ Offshore	- 5,000 bbls(Condensate)
Total	- 12,000 bbls

Gas

❖ Onland	- 50	MMscfd
❖ Offshore	- 1.75	Bscfd
Total	- 1.80	Bscfd
❖ Export to Thailand	- 950	MMscfd
❖ Export to China	- 400	MMscfd
❖ Domestic use	- 400	MMscfd

CNG/ NGV Converting Program



- ❖ Initiated in Myanmar since 1986.
- ❖ 1986 – August 2004 :
 - 5 CNG Refueling Stations -
 - 2 in Yangon City
 - 2 in Yenangyaung Field
 - 1 in Chaulk Field
 - 587 NGVs
- ❖ CNG / NGV Programme was reactivated in August 2004 and widely used in 2005.
- ❖ As at 2018 :
 - 46 CNG Refueling Stations in Myanmar-
 - 41 in Yangon City
 - 2 in Mandalay City
 - 2 in Yenangyaung Oil Field
 - 1 in Chaulk Oil Field
 - About 28,299 NGVs



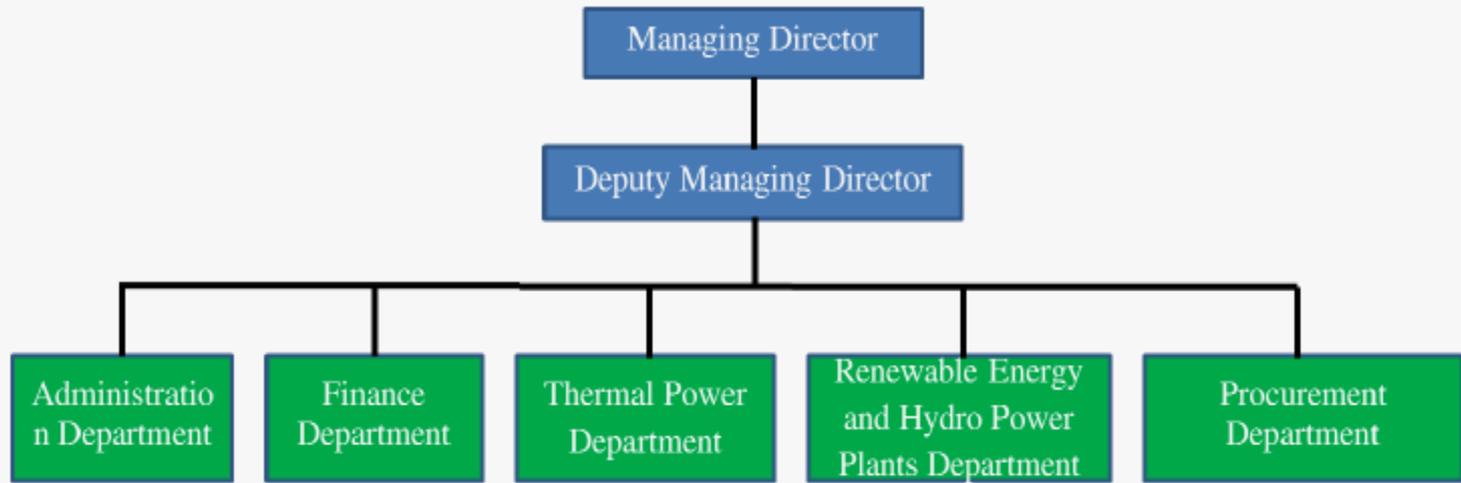
MINISTRY OF ELECTRICITY AND ENERGY



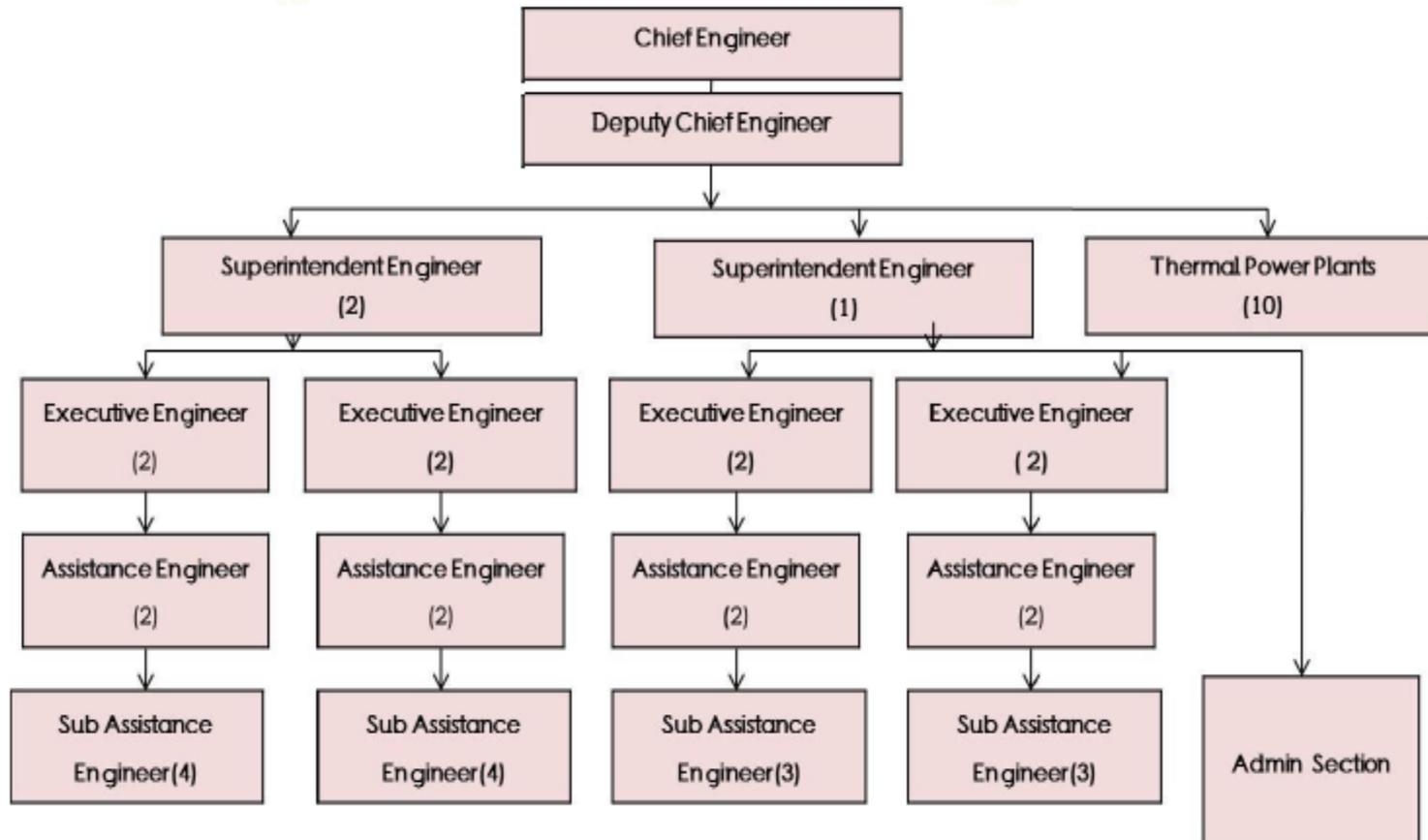
ELECTRIC POWER GENERATION ENTERPRISE



Organization Of Electric Power Generation Enterprise



Organization of Thermal Power Department





Forecasting on Electricity Demand

High Case : GDP 8.74%

Low Case : GDP 6.4%

JICA : Master Plan Study



In the implementation phase, high case scenario should be chosen to avoid supply shortage which is the most serious problem in power sector.

➤ Electricity demand for high case in 2016, 2020, 2025, 2030 shall be forecasted 2840 MW, 4531 MW, 8121 MW and 14542 MW respectively.



LNG TO POWER PLANT PROJECT

THOSE HAVE BEEN AWARDED

NOTICE TO PROCEED FROM MOEE



AHLONE LNG TO POWER PLANT PROJECT (PRIVATE)

1. Project Name - Ahlone LNG Power Generation Project
2. Location - Ahlone Electrical Power Plant ,Ahlone Township
3. Organization - TTCL Public Co.,Ltd
4. Type of Project - IPP/BOT
5. Contract Capacity - 356 MW((117MWx2) + 122 MW)
6. Type of Power Generation Plant and System - GE 9E.03,
2GT x 2 HRSG x 1 STG
7. Signing Date of Notice to Proceed - 30.1.2018
8. Commercial of Date - May,2020 (between 28 Months from NTP)
9. Life of TREATY - 30 Years
10. FSU/FSRU facilities - Proposal for FSU in South District Thilawa,Yangon
and construction LNG Gas Pipeline from Thilawa to
Power Plant.
11. Transmission Line and Grid Connection - 230 KV Ahlone- Hlaing Thar Yar Transmission Line
(Ahlone Sub-station)
12. Annual Power Generation - 3116 million kWh
13. Current Condition - Continuous to negotiate to sign contract of electricity
and project location
- Site Cleaning
- Choosing the LNG supplier
- Preparing for ESIA Report and MIC Proposal



KAN BAUK LNG TO POWER PLANT PROJECT (PRIVATE)

1. Project Name -Kan Bauk LNG To Power Project
2. Location -Kan Bauk Region,Htar Dawei District,Tha Nin Tha Yi Division.
3. Organization -Total Company (French)and Siemens Company (Germany)
4. Type of Project - IPP/BOT
5. Contract Capacity(MW) - Phase I "860 MW(GT-430 MWx2)
- Phase II " 370 MW (STG-185 MW x2)
6. Type of Power Generation Plant and System - Siemens SGT5-8000H,
(1GT x 1 HRSG x 1 STG) + 2 blocks
7. Signing Date of Notice to Proceed - 30.1.2018
8. Commercial of Date - Phase I-January,2021 (between 36 Months from NTP)
- Phase II-february,2022 (between 48 Months from NTP)
9. Life of TREATY - 24 Years
10. FSU/FSRU facilities - Berthing on East Side of Heinze island and construct offshore pipeline 15 km and onland 13 km
11. Transmission Line - 500 KV Kanbauk-Mawlamyaing-Phayargyi Transmission Line to Phayargyi Sub-station 450 km and 230 kV line to Dawei Sub-station
12. Annual Power Generation -10769 million kWh
13. Current Condition - Continuous to negotiate to sign contract of electricity and project location
- Continuous to negotiate for ESIA
- Continuous to negotiate for FSU with Bergesen and Worldwide LNG organization
- Tender for Grid Construction



MEE LAUNG GYANT LNG TO POWER PROJECT (PRIVATE)

1. Project Name - Mee Laung Gyant LNG Power Generation Project
2. Location - Mee Laung Gyant Region, Shwe Thaug Yan City, Ayeyarwaddy Division.
3. Organization - Zhefu Holding Co., Ltd (China) and Superme Trading Co., Ltd (Myanmar)
4. Type of Project - IPP/BOT
5. Contract Capacity (MW) - Phase I "900 MW (GT-225 MW x 4)
- Phase II "490 MW (STG-245 MW x 2)
6. Type of Power Generation Plant and System - GE 9F . 03.
(2GT x 2 HRSG x 1 STG) + 2 blocks
7. Signing Date of Notice to Proceed - 30.1.2018
8. Commercial of Date - Phase I - January, 2021 (between 36 Months from NTP)
- Phase II - January, 2021 (between 42 Months from NTP)
9. Life of TREATY - 30 Years
10. FSU/FSRU facilities - Construction Gas Pipeline offshore 1.8 km and onland 1.6 km
11. Transmission Line - 500 KV Line to Hlaing Thar Yar Substation and 230 KV Line to Athode Substation
12. Annual Power Generation - 12170 million kWh
13. Current Condition - Continuous to negotiate to sign contract of electric energy
- ROW & Survey for National Grid
- Preparing for reporting of Feasible Study Report
- Continuous to negotiate for ESIA



MEE LAUNG GYANT LNG TO POWER PLANT PROJECT (PRIVATE)

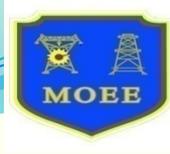
14. Current Condition

- Already accepted proposal letter for industrial LNG usage and LNG supplier
- Preparing for draft of BOT or Project implementation agreement
- Continuous to implement for approval of project location



KYAUK PHYU POWER PLANT PROJECT (PRIVATE)

1. Project Name -Kyauk Phyu Power Generation Project(Neutral Gas)
2. Location - Kyauk Phyu Region,Rakhine State
3. Organization -Superme & Sinohydo Corporation
4. Type of Project - IPP/BOT
5. Contract Capacity(MW) - 135 MW((47.5MWx2) + 40 MW)
6. Type of Power Generation Plant and System - Siemens SGT5-800,
(2GT x 2 HRSG x 1 STG)
7. Signing Date of Notice to Proceed - 30.1.2018
8. Commercial of Date - June,2020 (between 29 Months from NTP)
9. Life of TREATY - 25 Years
10. FSU/FSRU facilities - Berthing on East Side of Heinze island and construct offshore
pipeline 15 km and onland 13 km
11. Transmission Line - 230 KV line to Kyauk Phyu Sub-station
12. Annual Power Generation -1182 million kWh
13. Current Condition - Continuous to negotiate to sign contract of electricity
and survey for project location
- Continuous to negotiate for ESIA
- Preparing for draft of BOT or Project implementation
agreement
- Continuous to get water supply for industrial useage



MINISTRY OF ELECTRICITY AND ENERGY



MYANMA PETROCHEMICAL ENTERPRISE



Managing Director

DY-Managing Director

**Director
(Administration)**

**Director
(Production)**

**Director
(Planning)**

**Director
(Finance)**

**Director
(CPMDD)**

Existing

3

**Refinery
Plants**

5

**Fertilizer
Plants**

3

**LPG Extraction
Plants**

**Transportation and Distribution of
Petroleum & Petrochemical
Products**

New

**New
Refinery**

**Joint Venture
Projects**



Related to MOGE with Current JCCP Training Course

- ❖ Turnaround and Inspection
- ❖ Maintenance Management
- ❖ Maintenance Management of Rotary Machinery
- ❖ Project Management For High-Value-Added Petroleum Industry Course
- ❖ Project Management For Mechanical Engineers
- ❖ Maintenance Management (TR-3-16)
- ❖ Current Situation and Future Perspectives of LNG Technology (TR-15-15)
- ❖ Latest Technologies For Power Plant Turbines and Boiler systems (IT-3-15)
- ❖ Equipment Materials in Consideration of Life-Cycle Maintenance and Welding (IT-1-16)
- ❖ Noteworthy Future Technologies For Petroleum Industry and society (Renewable Energy Others) (TR-2-16)
- ❖ Reliability Enhancement and Maintenance Management of Rotary Machinery ²²



Related to MOGE with Current JCCP Training Course in 2017

- ❖ Strategic Management For Petroleum Industry For Next Leader)TR-10-16)
- ❖ Human Resources Management (HRM) and Current Situation and Future Perspectives OF LNG Technology
- ❖ Low-Ordinary – Temperature Facilities and Maintenance Technology in the Oil and Gas Downstream (OFF - Site)
- ❖ Equipment Materials and Corrosion Management and Reliability Welding Technology For Middle Management Level
- ❖ Training Course ON Emendation Maintenance For Mechanical Engineers
- ❖ Training Management
- ❖ Personal Management
- ❖ Training Course on Training Management
- ❖ Material Problem and Their Countermeasures
- ❖ Training Course on Current Situation and Future Perspective od CNG



Related to MPE with Current JCCP Training Programs in 2017

- ❖ Noteworthy Technologies for Refinery and Social Demands (Renewable Energy, Petroleum Refining Technologies and Others)
- ❖ Maintenance Management of Aging Refineries
- ❖ Instrumentation and Control in Refineries
- ❖ Planning of New Refinery and Upgrading - for Next Generation -
- ❖ Environmental Conservation by Petroleum Industry (Air, Water and Soil)
- ❖ Project Management for High-Value-Added Petroleum Industry
- ❖ Utilization of Information and Control Systems in Refineries
- ❖ Safety Management for the Downstream Petroleum Industry
- ❖ Refinery and Technology Management -for Next Technology Executive-
- ❖ Strategic Management for Petroleum Industry - for Next Leaders-



Related to Electric Power Generation Enterprise(EPGE) with Current JCCP Training Programs in 2017

- ❖ Latest Technologies and Maintenance for Power Plant Turbines and Boiler Systems

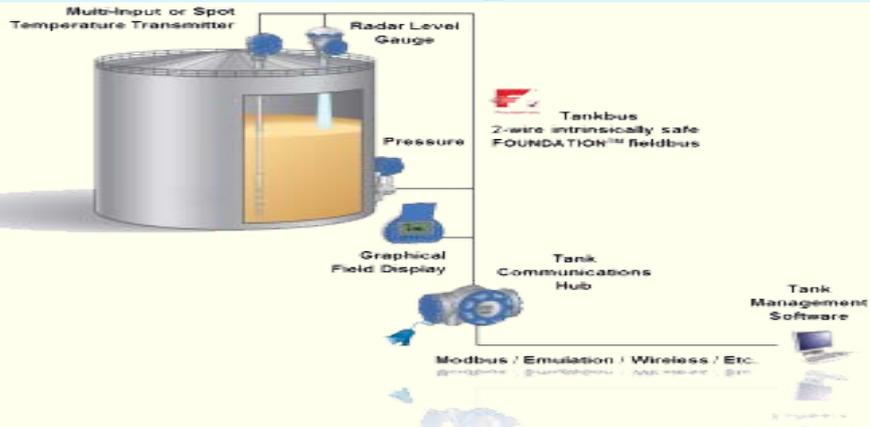
Related to MOGE and EPGE with Current JCCP Training Programs in 2017

- ❖ Current Situation and Future Perspectives of LNG & Natural Gas Technology

Related to MOGE and EPGE with Current JCCP Training Programs in 2018

- ❖ Gas Processing for LNG for MOEE (CPO-4-17)

Proposed Future Training No(1)



❖ Intelligent Automation System for Oil Terminal

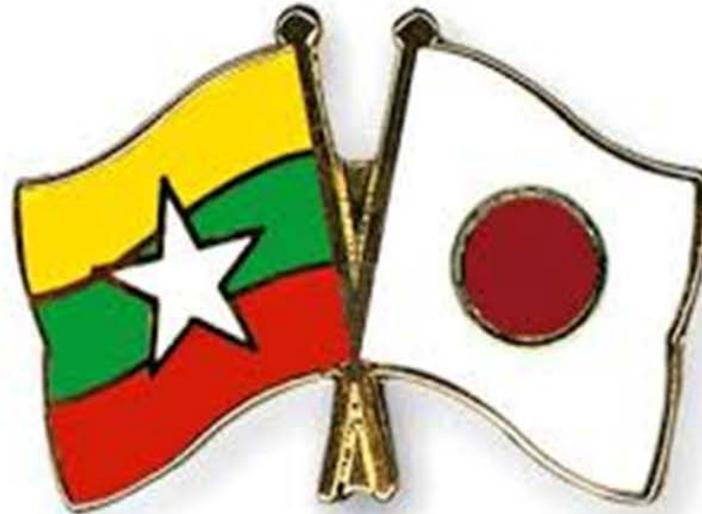
- ❑ Monitoring, Control and Management of entire product handling process for receiving to storage for distribution.
- ❑ Terminal and tank farm includes product such as crude oil, refined oil, Liquefied petroleum gas (LPG), petroleum gas and chemical tank farms utilizing loading system for ships, trains, trucks and pipe line.
- ❑ Data integration, automatic control and business management function.
- ❑ Ensure the safe and stable operation, optimal management and profit maximization of terminal.
- ❑ Storage Tank and inventory management.
- ❑ Provide safety protection

Proposed Future Training No(2)



❖ Operation with modernized flow meters in oil and Gas

- Coriolis flow meters for oil and gas
- Ultrasonic flow meters for oil and gas
- Vortex flow meters for oil and gas
- Thermal flow meters for oil and gas
- Differential flow meters for oil and gas
- Positive displacement flow meters for oil and gas; etc.



THANK YOU

2018年7月25日プレゼンの様子@JCCP

