The Standard Criteria for Investment Activities to obtain the approval of the Ministry of Electricity and Energy under MIC Notification(15/2017) section(d) sub-section(6)

Sr. No	Business Activities	Criteria
1.	Large-Scale Electrical Business (electrical business which generates more than 30 megawatts according to the Electricity Law)	(1) Type of electric power generation. (2) Generating Capacity. (3) Electric power connection arrangements. (4) Technical limitations. (5) Technical and functional specifications. (6) Undertaking to follow the Laws, Rules, Regulations, Grid – code, Procedures, Performance Standards and Code of Conduct practiced by the Ministry of Electricity and Energy. (7) Application for new thermal power plant must include the following points:- (a) Location (location maps, site map), land area. (b) Technology, size of the plant, number of units, expected availability. (c) Fuel: type, imported/ indigenous, supplier, logistics, etc. (d) Emission values. (e) Cooling water source: (tube wells, sea/ river/ canal, distance from source, etc.). (f) Interconnection with national grid: distance and name of nearest substation, voltage level, single line diagram. (g) Infrastructure: roads, rail, communication staff colony and

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		amenities. (h) Project cost, information regarding sources and amounts of equity and debt. (i) Project commencement and completion schedule with milestones. (j) EIA/SIA (Environmental Impact Assessment and Social Impact Assessment). (k) Safety plans, emergency plans. (l) System studies: load flow, short circuit, stability and reliability. (m) Plant characteristics: generation voltage, frequency, power factor, automatic generation control, alternative fuel, auxiliary consumption, time(s) required to synchronize to grid. (n) Metering, instrumentation and protection. (o) Training. (8) Application for new hydro-power plants must include the following points:- (a) Location (location maps, site map), land (b) Plant: run of the river, storage, reservoir. (c) Head: minimum, maximum. (d) Technology, type, size and number of units. (e) Tunnel (if proposed): length,

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		diameter. (f) EIA/SIA (Environmental Impact Assessment and Social Impact Assessment). (g) Detailed feasibility study report. (h) Infrastructure development. (i) Interconnection with national grid: distance and name of nearest sub-station, voltage level, single line diagram. (j) Project cost, information regarding sources and amounts of equity and debt. (k) Project schedule, expected life. (l) Plant characteristics: generation voltage, power factor, frequency, automatic generation control, control metering and instrumentation. (m) System studies load flow, short circuit, stability and reliability. (n) Training.
2.	All electrical business to be connected to the electric power system	(1)Committed to follow the law and rules practiced by the Ministry of Electricity & Energy as well as the regulations to be instructed, Grid Code, Procedures, Performance Standards and Code of Conduct. (2)Documents of power plants and sub- stations to be connected to the electric power system. (a) Type of electric power generation. (b) GeneratingCapacity. (c) Location.

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		(d) Electric power connection arrangements. (e) Sub- Station documents. (f) Technical limitations. (g) Detailed technical and functional specifications. (h) The period during which the subject generating facilities is expected to operate commercially. (i) Environmental and communicational related assessment. (j) Proposed unit price. (k) Standards - IEC, IEEE, & ANSI (3) The following points are necessary for connecting sub-stations to the electric power system. (a) Installed capacity of sub-station. (b) Voltage level. (c) Hourly demand forecast. (d) Load. (e) Detailed specifications of protective equipment and related materials. (f) Expression to conduct environmental study (if require). (g) Line length. (h) Line profile, line route map, number of towers/ poles. (i) Standards -IEC, IEEE, ANSI. (4) In order to connect the factory and household used transformers to distribution system, it is needed to follow Distribution

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		Service Operator (DSO) and Transmission System Operator (TSO) specifications. (5)The following points are necessary for sub-station to connect the electric power system and also applicable to factory and household used transformers. (a) Purpose. (b) Line route. (c) Voltage Level, Line lengths, starting point, termination point, year of completion. (d) System studies (e) EIA/SIA (Environmental Impact Assessment and Social Impact Assessment) (f) Structures: type, number/km (g) Line characteristics. (h) Types of Conductor, current carrying capacity, number of circuits and lines. (i) Insulators. (j) Compensation employed: series, Shunt, SVC. (k) Communication system: PLC, fiber optics, microwave. (l) Substations involved: existing/new with appropriate details.

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3.	Constructing and installing of all kinds of offshore platforms, and importing, producing, constructing and installing as for such related businesses	**Rules and Regulations** (1) Offshore Supply Base (OSB) is a kind of service providing business with the aim to provide various necessary services to petroleum operations such as offshore oil and gas exploration, drilling and production in offshore area with efficient and effective manner. As per nature of the work, OSBs should be constructed in suitable site area along the Coastal Regions which is commensurate and in line with the specifications defined by Port Authority. The project proposals need be scrutinized and thoroughly examined whether they conform to the following specified rules and regulations. (a) The nearest estimation of the most possible potential market for Myanmar Offshore Supply Base service business. (b) The proposed port location by means of the port nature, port construction model and designs needs be considered whether it is practicable and protected from storms and natural disasters as. Furthermore, in the condition of not enough water depth, it needs to specify how much and how frequent dredging work is needed. (c) To check whether the Bathymetry Studies/ Assessments, Hydrological

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		Studies/ Assessment etc., have been undertaken in order to prove that the investor's proposed project design meets the aim of the project. (d) To check whether the Wave Modeling for upcoming 20/30 years has been pre-calculated by using the survey data. (e) The status of conducting soil sampling/assessments at proposed port and foreshore site area to ensure that the proposed project design is sufficient enough for probable issues. (f) The status of performance for the detail calculated FEED (Front End Engineering Design) and the construction of onshore/ offshore facilities. (g) The status of EIA/ SIA work done in order to assess the impact on natural and social environments. (h) To evaluate the capability of the investors in doing completely International Supply Chain Management System. (i) To evaluate the investors' submission on showing how to attract the service consumers who are the operator of international oil company working in Myanmar Offshore. (j) The ability to provide services

Sr. No	Business Activities	Criteria
		conformed to the international standard and the involvement of international experienced partners while doing OSB operations. (2) Since the locations selected for Offshore Supply Base may be situated in undeveloped regions, the relevant Government Departments should ascertain to get a pledge from the investor to vitally provide fundamental essential services. (For example, provision of fresh water, electric power, machinery and apparatus, power production and related transformer, electricity distribution system, firefighting system and other communication system which are very fundamental and essential for proposed facilities and services.) (3) Jetty must be designed to facilitate offshore drilling and all necessary offshore services including mud plants construction, mixing cement, barite, bentonite and brine as well as loading. Despite the answer that break waters are not needed in doing wave modeling, the structure of jetty is essentially required to ensure an all-year round safe service and a wave-danger free port in any kind of weather condition. Depending on the type of coastal soil, some enclosures may be necessary to protect the coast-line.

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		Investment Specifications (4) The following criteria are needed to evaluate when scrutinizing the Offshore Supply Base (OSB) project proposals to decide if it is sustained project for the country, to ensure financial viability and work opportunities for local people - (a) To check the company's financial status that need sufficient enough to establish standard OSB. (b) Concerning with the proposed investment by loan by local and oversea companies to establish OSB, we need to check if they can submit evidence and track records of successful history to enjoy loans from the bank. (c) Conditions for generating a supportable/ reasonable income. (d) Statement showing berthing and leaving condition of Platform Support Vessel (PSV) / Fast Support Vessel (FSV) at OSB Jetty. (e) Whether the quantity of goods/ commodity match up the current market. (f) Presumption of potential competitors. **Infrastructures** (5) When establishing the OSBs, the related following infrastructures will be included,

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		however such infrastructures can be varied depending on the extent of investment, size of proposed project area, geological condition, and bathymetric and metocean conditions- (a) 24 hours Jetty Operation & Related facilities (All year round operation including monsoon period) (b) Jetty cranes (c) Bonded Warehouse Facilities (d) Equipment and Manpower (e) Explosive and Pyrotechnics Storage Facilities (f) Cement Silo (g) Mud Plant (h) Fresh Water Supply (i) Warehousing/ Open Storage Yard (j) Machine Workshop (k) Pipe Storage Yard (l) Explosive Bunkering (m) Medical Facilities (n) Waste Management (o) Firefighting Facilities (p) Staff Housing (q) Power Generation Facility **Services relating to the Offshore Supply Base** (6) There are variety of services supported from Offshore Supply Base Project. The common services available from OSB based on infrastructures are as follows:-

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		(a) Jetty Operations (b) Equipment and Manpower Services (c) Vessel Agency Services (d) International Freight and Global Forwarding Services (e) Documentation and Custom Clearance (f) Explosive and Pyrotechnics Storage Services (g) Supply Chain Services (h) Inventory Management Services (i) Roll on and Roll off Services (j) Equipment Rental Services (k) Supply of Bulk Materials (l) Procurement Services (m) Local Logistics Transportation Services (n) Catering Services – Tugs and Barges (o) Ship Husbandry Services (p) Office, Warehousing, Yard Rental Services
4.	Importing, exporting, transporting, storage, distribution and selling of oil, gas and petroleum products, and construction and implementation of storage tank, loading and unloading port, pipeline, related machineries and equipment and building for such related businesses	1. Import, Storage and Distribution of LPG business which aims to use LPG, clean and substitution fuel instead of electricity, firewood and coal, in households, vehicles, commercial and industrial sectors for decreasing air pollution . Related facilities and buildings for LPG business are to be established in the locality demarcated by the Departments concerned with the Ministry of Electricity and Energy.

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		Moreover, shall undertake to observe law, by- law, regulation and procedures, practiced by the MOEE. 2. Person who carries out import, storage and distribution of LPG shall submit the following documents- (a) Profile and experience of applicant (or) company (or) association (b) Map of location, layout plan and detail design drawing (c) Initial environmental examination and market examination (d) Approval of land-owner (e) Kinds of LPG, specification and storage capacity (f) Capital Expenditure and Investment Schedule (g) Plan to implement and potential date of operation (h) Carrying out environmental and conserveation law, by- law, regulation and procedure concerning with environmental and social impacts. (i) Appoinment of employees. (j) Plan to import and distribution of LPG (k) Approval of fire bridge department (l) Other necessary documents according to the requirement of the Ministry of Electricity and Energy.

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5.	Construction of the various type of refinery, maintaining and upgrading of old refinery and implementation of work	1. To submit the process license for production concerning the construction of various types of refinery, LPG plant, fertilizer plant and petrochemical plant. 2. To submit capacity, type of products and quantity, detail design 3. To submit a plan comply with the standard quality of petroleum products issued by Ministry of Electricity and Energy and the international standard. 4. To mention source of raw materials, raw water, and electricity. 5. Scrutinizing impact on the environment and the society. 6. To submit project implementation schedule. 7. Management measures for safety and emergency response plan.
6.	Exploring and interpreting of oil and gas by geological and geochemical methods, and importing, producing, constructing and installing of equipment, accessories and part of installation for such related businesses	The following points need to be scrutinized for the exploration of oil and natural gas through geological, geophysical and geochemical interpretation and installation and transportation of pipe-line networks for oil and natural gas. (a) To report feasibility study and long-term oil and gas Development Plan. (b) To submit Project Execution Plan and Health, Safety and Environmental measures (HSE) completely.
7.	Exploiting, producing and testing of oil and gas importing, producing,	The following factors need to be checked for importing and installation of oil fields equipment's in order to conduct the

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	construction and installing of equipment, accessories and part of installation as for such related businesses	examination of oil and gas samples; (a) To Check the testing equipment's quality which will follow API Standards (American Petroleum Institute defines standard) (b) To inspect Manufacturer's track records. (c) To monitor the importer's after sale services. (d) Availability of spare parts
8.	Transporting and constructing pipeline network for oil and gas, and importing, producing, construction and installing of equipment, accessories and part of installation as for such related businesses	**(1)Standards of Line pipes and pipeline's accessories for purchasing** (a) Steel Line Pipe -API 5L,PSL-2 ISO 3183 (b) Pipeline Valve -API 6 D/ ASME B16.54/ ISO 14313/ NACE MR 01.75/ ANSI (c) Welding Electrode – E-xxxx (d) Coating - DIN 30670 (e) Pipeline's Accessories -ASME B16.5 (Flange & Fitting) (f) Larger Diameter Pipeline's Accessories - ASME B 16.47 **(2) Standards of Pipeline Installation and Fabrication** (a) Pipeline Installation - ASME B 31.8/ASME B31.4 (b) Design, Construction, Operation and Maintenance of pipeline - API RP 1111 (c) Welding - API 1104/ SMAW (d) Non-destructive testing and Examination of

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		Welded joint - -ISO17636/EN 1435/ ASMEV (e) Standard Test Method for Radioscopic Examination of Weldments -ASTM E 1416 & ASTM E 1255 (f) Steel Pipeline Crossing Railroad And Highway - API RP 1102 - Standards, rules and regulations of Corresponding ministries. (g) Cathodic Protection System – - ASTM G-57/ NACE SP 0169 (h) Pressure Test of Steel Pipeline - API RP 1110 (i) Mechanical Testing of Steel Product - ASTM A 370 **(3) Operation and Maintenance of Pipeline** (a) Pipeline Transporting System - ISO 13623 (b) Quality Management System - ISO 9001/ API Q1 (c) Environment Management System - Laws , by-laws, rules and regulations of Ministry of Natural resource and environmental conservation - ISO- 14001