

Policy Reforms on Public Private Partnership (PPP) in Myanmar¹

Abstract

This study aims to analyse conducted Policy Reforms on Public Private Partnership in Myanmar. In addition to the assessment of secondary data and statistics, the research design includes meetings with stakeholders to discuss current methods of infrastructure procurement and financing, the role of the private sector in financing infrastructure and constraints or barriers to development especially human resource capabilities. Based on secondary data sources, this paper was embedded what is "action-based research" in the international literature whereby we provide results of the research back to stakeholders for them to comment in the hope that recommendations might be more readily accepted by government. It is found that that capacity building in the public and private sectors of the Myanmar economy for infrastructure planning is the number one priority. The studies also found that Myanmar need Policy and Strategic framework to implement an effective PPP project and to be able to get the specialist expertise and highly specialised knowledge to undertake different tasks in PPP. Reforms should put in place to support infrastructure planning and procurement. Effective policymaking, strategic planning, implementation, and monitoring require reliable, timely, and relevant information on the country's social, economic, and environmental conditions. Based on assessment of stakeholder needs in Myanmar one early deliverable by government should be a road map for reform in the institutional space for infrastructure and the financing space. The road map should identify clear targets (key performance indicators) and the dates by which those targets should be achieved by all agencies. With undertaking strategic planning the government should determine the business case for any infrastructure concept. The government's primary roles are, in a preliminary way, to establish: first, the conceptual validity of the proposal in the context of alternative options and government policies; and, secondly, to estimate its economic worth of to society.

Key words: PPP, institutional capability, capacity building, Economic reforms, Effective policymaking

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Introduction

New and better infrastructure services are one of the challenges facing governments in most developing countries. Available funding in the public sector to meet the growing demand for new infrastructure services remains limited. Public-Private Partnerships are increasingly envisaged as an attractive proposition for involving the private sector to increase and improve the supply of infrastructure. Public-Private Partnerships (PPP) usually through a legally binding contract, agree to share responsibilities related to implementation and operation and management of an infrastructure project. This collaboration or partnership is built on the expertise of each partner that meets clearly defined public needs through the appropriate allocation of¹Resources, Risks, Responsibilities, and Rewards services. In practice, however, PPPs are not always uniformly defined as it includes a wide variety of arrangements. It is categorized developmental PPPs according to a set of criteria in terms of shared goal, joint funding, resource and activity sharing and risk distribution. This paper describes the overall process and activities usually involved in infrastructure project development, implementation and management in Myanmar. It has been developed as a general resource material for better understanding of the whole process. It is conducted a research project into an institutional analysis of economic infrastructure, especially the public-private partnership (PPP) modality of financing investment in Myanmar.

Objective of the Study

The objective of the study is to assess of institutional capability for Public-Private Partnership (Economic Infrastructure) in Myanmar. And then, the study aims to formulate policy recommendation for PPP especially economic infrastructure development.

Methodology of the Study

The research design includes meetings with stakeholders to discuss scooper method of infrastructure procurement and financing, the role of the private sector in financing infrastructure and constraints or barriers to development especially human resource capabilities. Based on secondary data sources, this study was embedded what is “action-based research” in the international literature whereby we provide results of the research back to the stakeholders for them to comment in the hope that recommendations might be more readily accepted by government.

Organization of the Study

This study is composed 5 parts. There are Background of the economy, Recent Economic Reforms, Analysis of Economic Infrastructure - Current Situation and Plans for Major Infrastructure by Sector, National Economic Planning and Barriers for PPP Preparedness in Myanmar.

¹ Adapted from the definition of PPP provided by the Canadian Council for PPPs (see http://www.pppcouncil.ca/aboutPPP_definition.asp).

Literature Review of the Myanmar Economy

Myanmar endeavoured to make transition from central planning to a market-oriented economy since 1988. Myanmar exercised various economic reform measures aiming at achieving greater participation of private national investment, larger foreign capital inflows and effective channelling these resources to their most productive uses. A civilian government established in 2011. The country is moving towards political, civil and economic reforms. In 2014, Growth rate of gross domestic product in Myanmar is estimated at 7.7%. Structural reform has highlighted the strong growth performance. Increasing flows of foreign direct investment provide to benefit manufacture.

Construction was driven by government investment in infrastructure, and property development in Yangon and Mandalay. Manufacturing benefitted from increasing flows of foreign direct investment, with more than one new garment factory opening per week on average in 2014. Growth in services was bolstered by a surge in tourist arrivals from 2.0 million in 2013 to an estimated 3.1 million in 2014.

Table provides information from Myanmar between 1995 and 2013 but based on different data sources. Myanmar remains a predominantly rural country with only 31 per cent of the population living in urban areas.

Table.1 Macro - Economic Indicators for Myanmar, 1995 - 2013

	1995	2000	2005	2013
GDP (kyat billions) (current) ^a	604.7	2,945.89	14,179.12	49,868.813
Per capita GDP (kyat) (current)	13,489	58,765	255,940	962,240
Export, FOB (Million US \$)	896.9	1960.9	3558.0	11204.0
Imports, CIF (Million US \$)	1832	2319.1	1984.4	13759.5
Trade Balance (Million US \$)	-935	-358.2	1573.6	-2555.5
Total population (millions)	44.74	50.13	55.4	51.9 ^{***}
Human Development Index ^{**}	0.481	0.552	0.406	0.483 [*]

a IMF, WEO Data Base²

* for 2011

**Human Development Index is Composite index of longevity (measured by life expectancy at birth), knowledge (measured by expected years of schooling and mean years of schooling), and decent standard of living (measured by the adjusted per capita income in PPP US\$).

*** 2014 data, which is got population census, 2014.

(Sources: Key Indicators for Asia and the Pacific, 2011 and 2012, ADB, International Monetary Fund, World Economic Outlook Database, April 2007 and International Monetary Fund, World Economic Outlook Database, October 2013, CSO)

² No official publications are available on the movement of the free market exchange rate in Myanmar.

Myanmar has a high socio-economic potential as a result of its abundant natural³ and human resources that are currently underused. In 2013, the agriculture sector contributed 23 percent of Gross Domestic Product (GDP), generated 20 percent of total export earnings and employed about 60 percent of labour force. Thus, with 70 per cent of the population living in villages, the Myanmar government is giving high priority to agricultural development and views it as the base for all-round economic development.

Recent Economic Reforms

A new government took office in March 2011 and continues to adopt the market-oriented economic system. It is in pursuit of the goal to build a modern and developed nation through all-round development of the economy in general and agricultural development in particular. In order to improve the whole economic infrastructure of the nation, the government reviews macroeconomic policies in combination with other related policies for improvements of present monetary policy, fiscal policy, trade policy and investment policy to amend the laws, rules and procedures as well as supporting policies as infrastructure development policies and institutional framework policies.

The focus on macroeconomic issues has also been used by some inside and outside government to advocate a process of broader economic reform. Major reforms are introduced in order to increase competitiveness and to realize its potential. The government encourages the private sector, invites foreign investment, and enacts new laws and regulations. Concurrently, the government relaxed import restrictions and abolished export taxes, which is expected to improve the foreign trade. Export taxes have been reduced from 10 per cent to 2 per cent for most products, which has given partial relief to exporters. There were plans underway to establish a more independent Central Bank. The New Government embarked on several political and social reforms so as to make Myanmar more liberal and more transparent to the international community. Myanmar currency (Kyat), became stronger due to large capital inflows since early 2010. The Central Bank of Myanmar embarked on a plan to unify the country's multiple exchange rate system. From April 2012 to April 2013 the official exchange rate was floated up, to foster an interbank money market. From 2013 to 2014, the most widely used informal black market rate will be completely eliminated. The Securities Exchange Law was enacted on 31 July 2013, and provides the framework for the establishment of a stock exchange. Moreover, the Foreign Exchange Management Law was enacted on 10th August 2012. This Law removes all exchange restrictions and eliminates multiple currency practices.

Economic developments in Myanmar can also be judged by the activities in the banking and financial sector. Private Banks were given permission to install automatic teller machines and banking cards. On 12 July 2013, the New Central Bank Law was enacted. The main feature is that the Central Bank of Myanmar will be an autonomous body, acting more independently from the Ministry of Finance. This relaxation in regulation and control seems to indicate the opening up of the banking industry to more international participation. The

³ Myanmar is indeed very rich in forest resources, as the forest covers about 50 percent of the total land area. According to its climatic zones from temperate to arid and tropical, several variant forests types exist. They are the temperate forests in the north, the deciduous forests and dry forests in the central part and semitropical rain forests in the south. Myanmar is rich in mineral resources and minerals of potential importance are oil and gas, gem, copper, coal, lead, zinc, silver, tin and tungsten, antimony, chromium and nickel. Myanmar's offshore natural gas reserves estimated at 10 trillion cubic feet.

government has also approached the International Monetary Fund (IMF) for advice in unifying the official and semi-official exchange rates.

Foreign Direct Investment (FDI) Policy

Investment prospects are boosted under the Union of Myanmar Foreign Investment Law. The Union of Myanmar Foreign Investment Law (FIL) was enacted on 30 November 1988 but parliament approved a new draft foreign investment law on 7th September, 2012. Foreign and Myanmar companies can be formed in Myanmar under the Myanmar Companies Act, which has common legal language known to all entrepreneurs in the competitive commercial world. Foreign investors can set up their business either in the form of:

- (a) a wholly foreign-owned or
- (b) a joint venture with any partner (an individual, a private company, a cooperative society or a state-owned enterprise)

With the aim of facilitating investment procedures, and getting better opportunities in doing business, the Myanmar Government has issued two notifications relating to the land used and to foreign currency. There is a location policy to direct investment. A Special Economic Zone Law was enacted in January 2011 and is now proceeding for amendment. The Dawei Special Economic Zone Law was also enacted in January 2011. The main features are: a 5-year tax holiday; and further tax exemption/relief for an appropriate period in case it is considered beneficial for the State. Table (2) shows Myanmar Laws relative to Land and Foreign Currency.

Table 2. Myanmar Laws relative to Land and Foreign Currency

Existing Law	Revised Law
No specific definition on investment	Specific definition on investment
No specific definition on grantee of land lease or grantee of land used	Specific definition on grantee of land lease or grantee of land used
Not mentioned on restricted activities	Mentioned on restricted activities
Export Promotion	Export promotion and import substitution
No description on rights and obligation of investor	Description on rights & obligation of investor
3-year tax holiday	5-year tax holiday
No description on land use	Description on land use
Official exchange rate	Market exchange rate
No description on administrative penalty	Description on administrative penalty
No description on dispute settlement	Description on dispute settlement

The Transfer of Immoveable Property Restriction Law (Pyithu Hluttaw Law No. 1, 1987)	Republic of the Union of the Myanmar Notification of Concession Rights for Land Used relating to FIL (Notification No. 39/2011)
No person shall lease to a foreigner or a company owned by a foreigner immoveable property for more than a year at a time	Investor has a right of the grantee of land lease or land used from government-owned land, governmental department, organization owned lands and citizen owned private lands

New Foreign Investment Law (2012)

On 2nd November, 2012, new foreign investment law was promulgated. The details in Myanmar-language state newspapers said joint ventures between foreigners and Myanmar citizens or the government would be permitted with any stake ratio agreed between the partners. Foreigners can still own 100 per cent of businesses without the need for a local partner, as in the previous law dating from 1988. But there could be restrictions in some areas. A previous draft had said foreigners would only be able to hold a maximum 50 per cent of a firm in certain sectors deemed sensitive, including agriculture, and that foreigners would have to hold at least 35 per cent of any start-up joint venture. A parliamentary source told Reuters this that additional regulations covering the restricted sectors could follow later.

One article of the new law says the Myanmar Investment Commission can allow foreign investors into the restricted sectors with the approval of the government, in the interests of the people and the country. Under the new law, foreign investors can lease land from the government or from authorized private owners for up to 50 years, depending on the type and size of the investment, and the deal can be extended twice, for 10 years each time. The old law did not define land lease periods but in practice contracts tended to cover 30-year terms, extendable for two periods of five years. The Land Acquisition (Mines) Act, 1885, The Public Utilities Protection Act, and the Five Star Shipping Corporation Act were revoked because they are no longer relevant as they prohibit private-sector participation.

Public-private partnerships (PPP) in Myanmar

Public-private partnerships (PPP) in Myanmar have been widely used as a mechanism for engaging the private sector to deliver the infrastructure requirements of a state or of a quasi-government body. The underlying logic for establishing such partnerships is that both the public and the private sectors have unique characteristics that give them advantages in specific aspects of service or project delivery. These partnerships are characterized by sharing investments, responsibilities, risks, and rewards among partners. A Public Private Partnership is an agreement between the government or a government entity and one or more private partners. The private partners deliver a public asset and/or a public service in accordance with output specifications in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners. There is a well defined allocation of risk with appropriate transfer of risk to the private partners. Types of public private partnership in Myanmar are “Build-Operate-Transfer”, “Design-Build Finance-Operate”, “Renovate-Operate-Transfer”. PPP means that a Private Party builds and/or renovates the PPP Item; by using its own funds or funds it has raised; operates it within the period specified in the PPP Agreement; and, transfers the PPP Item upon the expiration of the PPP Agreement to the State or Entity. Scope of PPPs in Myanmar defines the Minimum capital expenditure of 5,000,000,000.00 Kyat; and Minimum contract duration of 5 years.

PPP Sectors in Myanmar includes Agriculture; Generation, transmission and distribution of electric and thermal power; Processing, storage, transportation, transmission and distribution of oil and natural gas; Automobile, railway, water, air, urban electric transport; Roads and railways (including bridges and tunnels); Public utilities and public services; Medical, medico-preventive and other health care services; Education, upbringing, culture and social services; Mobile and stationery telecom services; Tourism, recreation and sports; Water resources and wastewater Solid Waste management; Mining and other forms of mineral extraction and other sectors involving the provision of services to a wide range of consumers.

Analysis on Economic Infrastructure - Current Situation and Plans for Major Infrastructure

Roads

Legislation - In 1994, the Myanmar Citizens Investment Law was enacted. Thus the private sector was enabled to invest in economic infrastructure. It is meant that a PPP model for financing infrastructure could be adopted from a legal perspective. This can clearly be illustrated with the *BOT Road Regulations* – The essential features of this regulation permit the private-sector participation in road building and maintenance. The private sector needs an approval by ministry of construction for a road BOT (build, operate, and transfer). The engineering construction specifications for roads and bridges are set out in a schedule, essentially with work to be undertaken as a function of traffic volumes. Road is upgraded until bituminous road with stipulated standards within 3 years construction period depending on the traffic volume. Similarly, bridges along with road need to be upgraded until R.C bridges of 60 ton for local companies and 75 ton for international company loading bearing capacity. There is a 40-year concession with three possible renewals each for an additional five years. However, there is 60 years contraction period from the start of operating period until the end of transfer period for international company. The tax payable to the national government on tolls is based on a sliding scale from 0 (for first 3 years then up to 20% for the last 7 years of the concession).

Analysis BOT Policy Outcomes – The first BOT Road was opened to traffic in 1996 from Mandalay to Nankham built and operated by Asia World & Diamond Palace (Ishiwa Construction Company). By 2015, there are now 30 BOT companies responsible for 70 roads totalling 4,110 miles (6,614 km) in 12 out of the 14 divisions and states (not in Chin and Kayah where traffic volumes are still low). Myanmar must finish the upgrade of all roads, including international highways in Myanmar to be ASEAN Standard Class III by 2015. One study of the road sector of Myanmar has reached such conclusion: “The concession agreements - many of which are not viable - appear to reflect a relationship between the government and a selected concessionaire” (ADB 2012a, p. 16).

Railways

As production of various sectors has increased, transportation services have also been expanded to facilitate smooth flow of commodities and convenient traveling of the public. Accordingly, Myanma Railways (MR) has been extending its network as well as its services. As MR is one of the SOEs, a feasible restructuring program must be established, and it must be in future privatized for the sake of economic reform to gain economic growth and development. Currently, total track length has been 5,844 km, running on 1,000 mm track gauge (meter gauge), and rolling stock include 431 locomotives, 1,277 passenger coaches,

3,236 freight wagons. In addition MR also operates the only urban rail transport that loops around the city of Yangon called the Yangon Circular Rail Line.

The railways system provides important access to most of heavily populated areas of the country. This is generally along the main, north-south with a number of branch lines serving remote areas including the delta area. Ministry of Rail Transportation is in charge of Railways, Road Transport, Transport Planning Department, Road Transport Administration Department, and Central Institute of Transport and Communications.

However, Myanmar railway has many problems due to the fact that it has been long while since railways were constructed and development of railway technology has stopped for 30 years. Some parts of embankment soil are not good condition. Therefore the formation settlement occurs seriously at every rainy season. Due to shortage of track workers and skill labours, it cannot repair properly at every joint and therefore riding comfort is not good at its passenger train, and could not make track maintenance by manual sufficiently and effectively. Moreover, track maintenance system is needed to change from manual to mechanized maintenance. Nowadays, although the total revenue of railways is not cover the cost, the government continues undertaking for people' interest so that government has to pay subsidies to the Myanmar Railways. That's why, Myanmar Railways need to develop and invite rail-concerned business to reduce the annual subsidy. In this connection, cooperation with private sector will reduce the government's burden and the performances of its will be raised to give satisfaction for passengers.

Railways are operated by the Ministry of Rail Transportation state enterprise, Myanma Railways, and there are no policies that would attract a PPP project. The cost of running the railways is from the national government budget allocation. Revenues go to the central treasury and financing is allocated through the budget in the same manner as any government department, with a cumulative result of a "seriously inadequate and inefficient transport system" (ADB, 2012a, p.3). Funds for maintaining and improving the existing core railway network have been extremely limited. Consequently, the operating assets, including locomotives (37 steam locomotives and 313 diesel locomotives), passenger and freight cars (150 container cars - around 20 of which are not in service - and many boxcars), and signalling and communications systems, all require substantial investment.

During the past 20 years, the rail network has been expanded considerably as part of the government's long-standing policy of national integration. Many peripheral areas are mountainous and sparsely populated, with little economic base, so the cost of providing infrastructure is high with the economic returns and revenue potentially low. Since the late 1980s, the rail network (1 meter gauge) has almost doubled from 1,976 km to 3,516 km; the number of bridges has doubled (to more than 11,000) and the number of tunnels has increased from zero to 12, indicating that the new railways have been constructed at a commensurately high cost (ADB, 2012, p.3). The People's Republic of China, India, and Japan continued to support investment, notably physical works, but over the years there was little investment or reform in the agencies that managed and operated the state-owned service providers. Like other ministries, Ministry of Rail Transportation has been implementing the cooperation with the private sector. Currently, passengers and freight transport services in Mandalay-Myint Kyi Nar Section has carried out with cooperation of private company. Moreover, passenger transport services in Bagan – Kyaut Pan Thaing section have been implemented jointly by MR and the private company. Passenger coaches are provided clean works in daily by private company, and freight wagon hiring has been permitted to the private company. The concrete sleepers are also been producing by the PPP projects except Thibaw-Shwe Nyaung factory.

It can be found that PPP application is still weak in MR. Myanma Railways (MR) is solely responsible for infrastructure development and rail-related transport service production. Accordingly there is no competition within the rail sector, while MR has been faced with tough competition with other modes of transport such as highway buses, inland water transport and highway trucks. In order to fulfill social and economic transport needs of the nation, the efficiency of MR is needed to promote, and PPP applications should be applied in the necessary parts of the firm.

Assessment of PPP Readiness - The principal railway sector issues are the lack of an overall transport sector strategy, the related lack of rigorous cost-benefit economic analysis in the decision-making process for prioritizing infrastructure investments, and the limited role of the private sector. Our meetings discovered there was an interest in utilizing land adjacent to railway stations in the major cities to develop “transit oriented developments” that are successfully developed in Hong Kong and Japan as one way of attracting private sector finance. A joint venture company was established in 1997 and discussions and negotiations are currently underway with 5 companies from China, Korea and Japan.

Sea Ports

Current Situation - There are 9 sea ports in Myanmar. Myanmar’s principal port city is Yangon, 30 km upstream from the sea. Because of the shallow draft leading to the port, access is limited to vessels of around 10,000–12,000 deadweight tons. Additional government-owned terminals for petroleum products and other commodities are in the same port area. Yangon port now includes the new port area at Thilawa, about 20 km downstream of Yangon. This is a private-sector investment developed and operated by Hutchison Port Holdings of Hong Kong. The new port has rail access, provides some 1,000 meters (m) of wharf, and handles container and general cargo. It offers a deeper draft than Yangon, 10 meters compared with Yangon’s 7 meters and can handle larger vessels, including cruise ships. The private sector in Myanmar is heavily involved in port activities. Currently, two thirds of quay length is in private ownership.

Port developments – The Yangon port development scenario is: to cope with the growth of sea borne traffic resulting from market-oriented economic reforms; and the liberalization of port development assisted by inviting local and foreign investment at Yangon and Thilawa Ports. Yangon Port is the premier port and a gateway for export and import (85 per cent of freight), and requires more port terminals. For the development of the Thilawa Port, 37 plots of water front land (15 hectares by measuring a uniform quay length of 200m with a depth landside of 750m) have been designated. Recent projects implemented by foreign investors in term of BOT and Joint Ventures at Thilawa are as follow:

1. Developed 10 Plot ;
2. Under Construction 4 Plot (GC Terminal)
3. Under Construction (Tanker Berth) 11 Plot ;
4. Under Construction(Grains Terminal) 4 Plot;
5. Reserved 8 Plot.

On 25 May 2013, the Myanmar government and Japanese firms signed a memorandum of understanding for the development of the Thilawa Special Economic Zone in Myanmar’s Yangon region. The memorandum of understanding lays out cooperation between nine Myanmar public companies and a Japanese consortium including -- Mitsubishi Corporation, Marubeni Corporation and Sumitomo Corporation.

Deepwater ports are also to be developed with Thai investment at Dawei in the southeast of the country and with PRC government investment at Kyaukphyu in Rakhine State. There is the potential to develop a deep sea port at Kalagauk on the south coast.

Current Situation and Assessment of PPP Preparedness - The dominant provider of both passenger and freight services on the inland network of waterways is the Myanmar Inland Water Transport (IWT), a state enterprise of the Ministry of Transportation. IWT has approximately 240 powered vessels, many of which are old, with a total capacity of about 70,000 tons. Myanmar has some 5,000 km of navigable waterways, of which about 2,400 km make up the primary inland waterway network, including the Ayeyarwaddy and the Chidwin rivers and the extensive channel system of the Ayeyarwaddy Delta. The lack of budgetary resources for dredging activities and navigation facilities is a major constraint and we do not believe there are PPP project opportunities. The main reason for inadequate dredging is the lack of finances for spare parts and fuel, rather than a lack of dredging equipment. Extensive and repeated dredging is required on all river systems, as well as effective navigation and communications facilities – and this is the responsibility of the Ministry of Transport's Directorate of Water Resources and Improvement of River Systems. The directorate operates through several agencies, including the Waterways Conservation Department, which is responsible, among other activities, for navigation facilities and dredging.

For most locations where IWT provides services, the river ports are little more than landing beaches and for this reason we have not investigated further this kind of economic infrastructure. Vessels are loaded and unloaded from the beach by means of a simple gangplank. At some locations, specialized cargo-handling facilities are available for bulk commodities, such as petroleum, cement, and fertilizer. In 2011, IWT handled 28 million passengers and 5 million tons of freight – about 50 per cent more freight than carried by the railways – and so future studies should pay attention to river ports.

However, there is an example of one potential PPP project relating to inland water transport is at the east bank of Ayeyarwady river (about 70 km north-west of Mandalay city centre). The project is intended to reduce the transportation cost for cargoes from Yangon and the lower part of Myanmar by using inland water transport along the Ayeyarwaddy river. That inland waterway river port project will cover a land area of 370 acres and the intended construction period is about 30 months. The berth length is about 5000 ft and it can be used by up to 3000 DWT local barges and vessels. The project consists of other related industries including developing warehouses for agricultural products, packing factories, and other industrial zones and.

Aviation Sector

In the case of the aviation sector in Myanmar the data allows us for a more detailed analysis of this sector which is important in the sense that this infrastructure sector is the most likely to attract PPP projects in the future, including airport privatisation..

Policy for Airports and Airlines – In the aviation sector, the Department of Civil Aviation (the former Directorate of Civil Aviation) is a subordinate organization of the Ministry of Transport and is the regulatory body controlling civil aviation in Myanmar. The Department of Civil Aviation is responsible for the regulation, establishment, provision, maintenance and operation of all aspects of civil aviation, including airports, for the safety, regularity and efficiency of air transportation in Myanmar, except the operation of airline services.

Myanmar has not established a national air transport policy or a formal policy on air transport liberalization but has liberalized some of bilateral air services agreements on a case-by-case basis. Myanmar has incorporated the liberalized ownership criteria of "principal place of

business" in place of the traditional "substantial ownership and effective control" ownership criteria in eight of bilateral air services agreements, and the airline designation provision changed from single designation to dual designation in two agreements and to multiple designation (the right to designate more than one airline) in seventeen agreements. Myanmar has also agreed with Thailand, Singapore, China, UAE and Kuwait to implement a more liberalized framework in their bilateral air services relations with regard to traffic rights and route rights. Myanmar is party to the Cambodia, Lao PDR, Myanmar and Viet Nam (CLMV) Multilateral Agreement on Air Services signed on 29 April 2005 and which entered into force on 23 April 2007. As a member state of ASEAN, Myanmar is also a party to the ASEAN Multilateral Agreement on the Full Liberalization of Air Freight Services and the ASEAN Multilateral Agreement on Air Services signed on 6 November 2008 at the 14th ASEAN Transport Ministers Meeting held at Manila, the Philippines, and the ASEAN Multilateral Agreement on the Full Liberalization of Passenger Air Services signed on 11 November 2010 at the 16th ASEAN Transport Ministers Meeting held in Brunei. Myanmar is also working together with other ASEAN member states for the establishment of an ASEAN Single Aviation Market by 2015.

The State-owned Economic Enterprises Law stipulates that the Government has the sole right to carry out, among other economic enterprises, air transport services. However, the same Law provides that the Government may permit in the interest of the State, any economic enterprise reserved for the Government under the Law to be carried out by joint venture between the Government and any other person or any other economic organization; or under conditions by any person or any economic organization subject to conditions. The domestic airlines, Air Mandalay and Yangon Airways, were initially formed with foreign investment in joint venture with Myanmar Airways, the State-owned airline, under the Foreign Investment Law and the permission under the State-owned Enterprises Law that is obtained from the State Cabinet of Ministers through the Union of Myanmar Investment Commission. Yangon Airways was later reformed as a private company under the Myanmar Citizens Investment Law with 100 percent Myanmar nationals' investment. The domestic airline, Air Bagan, was formed as a private company under the Myanmar Citizens Investment Law with 100 percent Myanmar nationals' investment with permission obtained as mentioned above. The international airline, Myanmar Airways International (MAI), was also formed with foreign investment in joint venture with Myanmar Airways, the State-owned airline, under the Foreign Investment Law and permission from the Myanmar Investment Commission. It was later reformed under the Myanmar Citizens Investment Law but remains as a joint venture with Myanmar Airways although its equity reduced to 20 percent.

Aviation Policy –The Aircraft Act 1934 and the Aircraft Rules 1937 were amended on 20 August 2004 in order to incorporate in part some essential provisions which are critical for international civil aviation. The Myanmar Government is responding to: the ASEAN Multilateral Agreement on the full liberalization of Passenger Air Services (MAFLPAS) & Protocol (1) (2); and the ASEAN Multilateral Agreement on the Air Services & Protocol (1-6); and the ASEAN Multilateral Agreement on the full liberalization of Air Freight Services (MAFLAS) & Protocol (1)(2). The government currently is considering the privatisation of major airports in Myanmar. In the economic development context, the relevant regulations in the Myanmar Aircraft Rules 1937 are Part XI. - Aerodromes; Part XIII.-Licensing of Air Transport Services; and Part XIV. - Air Operators' Certificates.

Part XI - Aerodromes implies that airports may be owned and operated by private entities other than the government and also would allow foreign investment as long as the business enterprise is incorporated in Myanmar. The operation and management of all civil airports in Myanmar remained the responsibility of DCA until 1 June 2010 when the management,

operation and maintenance of both the international and domestic passenger terminal facilities of the Yangon International Airport were transferred to Pioneer Aerodrome Services Co., Ltd., a national-owned private company, under a management lease arrangement. Pioneer Co. has contracted to Singaporean expatriates to work in some management positions. This is the first case of privatization of an airport in Myanmar, even if in a partial sense. DCA, and the government plan to extend Pioneer's management and operation of Yangon to the air-side facilities by stages although the air traffic control function will still be retained by DCA. It is also highly possible that Pioneer will be contracted to manage and operate the new Nay Pyi Taw International Airport after the completion of the construction project. Partial or full privatization of more airports in Myanmar seems likely.

Until 1990, airport upgrading, construction and maintenance was the monopoly of the Public Works and although pavement works critical to safety such as runway, taxiway and apron were carried out according to standard specifications, the workmanship of other less critical building works like terminal buildings and ancillary buildings are generally of lesser standard. Since the Public Works is a government department, client departments had little chance for effective supervision during construction or to seek any remedies arising from post-construction defects. From 1990 onwards, upgrading and new construction of runway, taxiways and airport terminal buildings were contracted to local private construction companies. The standards of workmanship were improved by these public-private partnerships in which the Department of Civil Aviation has the authority for construction supervision.

Assessment of Preparedness for PPP Projects – The Department of Civil Aviation (DCA) has proposed a relationship model of PPP in airport infrastructure (including a PPP Unit). In 1979, the Japan International Cooperation Agency (JICA) carried out a feasibility study funded by Japanese overseas development aid (ODA) for the development of Yangon International Airport. Based on the results of the feasibility study, the Government of Myanmar and the Overseas Economic Cooperation Fund (OECF) of Japan signed four loan agreements during 1981 to 1986 for the design, supervision and construction works that would have allowed wide-body aircraft such as the Boeing 747 to operate. Design, supervision and construction contracts were signed respectively between the Department of Civil Aviation and a Japanese consulting firm, Japan Airports Consultants Inc., and a consortium of Japanese contractors, Taisei Joint Venture, with a combined contract amount of Yen 14.37 billion from the loan amounts. Construction works started in January 1987 but the project was suspended in 1988 because of civil unrest. As the existing airport terminal became increasingly congested, a new international arrival passenger terminal with a capacity of maximum 3,000 passengers was built by the Myanmar Government at a cost of Kyat 483.21 million and opened in September 1996. In August 1998, the Japan Bank for International Cooperation (JBIC) approved partial disbursement of loan funds totalling Yen 3.99 Billion for the resumption and completion of some works critical for the safe operation of Yangon International Airport and it was completed in February 2002. With no further disbursement of loan funds from JBIC, the Department of Civil Aviation and the consultants and contractors cancelled their respective contracts by mutual agreement in March 2009.

Although the Japanese-funded project partially fulfilled minimum requirements for the safe operation of the Yangon International Airport, the runway length was insufficient to accommodate wide-body aircraft and the passenger terminal building and other facilities were still inadequate. The runway and taxiway of the Yangon International Airport were extended with a contract to the Public Works, started in on 14 December 2004 and completed in 10 July 2008. To accommodate the anticipated increase in the number of international passengers at the Yangon International Airport, the international arrival passenger terminal

was upgraded and expanded. The Department of Civil Aviation contracted the works to Asia World Co. Ltd, a private Myanmar national-owned construction company, and the contractor sub-contracted the design for the terminal building to CPG Corporation of Singapore. The construction started on 7 December 2002 and opened on 25 May 2007. The project's foreign exchange portion was US \$13.3 million.

Because Yangon International Airport was the only international airport in the country, a new international airport was built at Tada Oo, about 29 kilometres South-West of Mandalay. The existing domestic airport was located just outside Mandalay. The construction of the new runway, taxiway and parking apron was carried out by the Public Works and commenced in March 1994. The scope of works - a design-built turnkey contract - was awarded to Italian-Thai Development Public Co. of Thailand, included the construction of a passenger terminal building, control tower/operations building and installation of associated facilities including airfield lighting system, radio-navigational aids, communication and meteorological facilities, fuel storage and supply facilities, electrical power supply and distribution system and crash, fire and rescue facilities and equipment. The new passenger terminal building, with six passenger loading bridges is capable of handling 1,000 incoming and 1,000 outgoing passengers at the same time or three million passengers annually. The construction and installation works of the airport complex and works commenced in May 1996 and the new Mandalay International Airport was opened on 17 September 2000 but its traffic remains very low. As the project was implemented by a supplier credit loan from the Thai Export and Import Bank, the loan principle and interest repayments and costs of maintenance are not covered by the revenue received.

After the government moved its administrative capital to Naypyitaw, about 320 kilometres north of Yangon, an airport was built to serve the new capital, designed for an ultimate handling capacity of twenty million passengers annually. The project was contracted to Asia World Co. and work started on 7 April 2009. The design for the airport was to be carried out by AirBiz Consortium of Singapore. Two 3,657.4 m x 61 m runways with taxiways aligned from North to South will be constructed 500 m and 1,600 m apart. The existing 3,657.4 m x 61 m runway will be designated as runway no. 1. The pier type passenger terminal building is being constructed between the two runways with a total floor area of 56,687.46 square metres with six passenger-boarding bridges with a capacity of 3.5 million passengers annually. It is intended to progressively increase the passenger handling capacity to 10 million annual passengers and 20 million annual passengers in later phases by extending the piers. The project cost is estimated at between US dollar 250 and 300 million, funded by a government-to-government loan from the People's Republic of China.

The government called for the Construction of International Airports (a new Hanthawaddy airport and the Mandalay International Airport). Myanmar's Department of Civil Aviation has issued an invitation to help construct the Hanthawaddy airport located 50 miles (80 km) away from Yangon. The Hanthawaddy International Airport (HAI) project includes design, construction, procurement, commissioning of all necessary facilities including supply of equipment and procurement of all finance for the project. HAI project has been selected for a Public Private Partnership (PPP) project by DCA. Although PPP law has not been promulgated in Myanmar yet, reference shall be made to the foreign investment law promulgated on 2nd November of 2012 and the Rules promulgated in 31 January 2013. The project scope required by DCA is as follows.

- First phase development shall be put into operation as soon as possible by 2018.

- The capacity of the new airport shall be 12 million passengers per annum (mppa) and 100 thousand tons of cargo having one runway with more than 3500m length.
- The new airport shall be an international airport and twenty four (24) hours operation airport.
- The project planning shall consider future expansion development plan and conceptual design plan.
- The new airport shall be developed in compliance with Myanmar Environmental Law including the relevant national laws.

There are two stages of status of Hanthawaddy International Airport. Stage one is prequalification stage and calling tender is the second stage. Then, Incheon Airport Consortium is the successful tenderer which is announced in 10th August 2013. Yongnam-CAPE-JGC Consortium is announced as back-up tenderer. However, agreement negotiation is underway. Feasibility study is done by JICA and the target date for final report is on February 2016.

Myanmar's Department of Civil Aviation has also invited investors to help upgrade the Yangon International Airport in 2012. Successful Tenderer is Pioneer Aerodrome Services Consortium and concession agreement is signed in 6th January 2015. Myanmar has announced a tender to upgrade Mandalay International Airport into a logistics centre. The works will include improving and expanding the airport's terminal building and other facilities and managing its passenger and cargo operations, ground-handling and catering services. Private companies were invited to apply before October 15 2012 in order to pre-qualify for the tender. Mitsubishi- Jalux- SPA Consortium is announced as successful tenderer. Concession agreement is signed in 31 October 2014, then operation and maintenance development by Mitsubishi- Jalux- SPA is done in 1st April 2015. There is a 30-year concession with three possible renewals each for an additional ten years.

Energy Sectors

The government of Myanmar has requested support from the ADB to develop the framework, processes, and institutional management structure for public private partnerships (PPPs) in Myanmar. ADB focused first on the private investment initiatives of the Ministry of Electric Power (MOEP). Proven gas reserves in Myanmar total 11.8 trillion cubic feet (tcf) with huge potential for discovery (ADB, 2012b, p.2) Offshore gas is the country's most important source of export revenues, currently supplying Thailand, and with a new gas pipeline planned to the People's Republic of China. According to the ADB (2012b, p.2), one third of the country's \$13.6 billion in foreign direct investment is in the oil and gas sector (as of September 2011).

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Policy outcomes – The Foreign Investment Law of November 1988 resulted in joint ventures and production sharing in the oil and gas subsectors of the energy sector. Current MOGE is undertaking the majority of oil exploration and production with just a few private operators allowed to carry out projects under production sharing contracts (PSCs). Foreign operators were kept out by a strict nationalistic policy and the lack of an appropriate legal framework

and the majority of oil and gas foreign investment came from regional Asian countries such as Thailand and China.

Starting in 1990, the foreign companies to buy offshore natural gas concessions were Premier Oil (UK) and Total (France), Total Petronas Carigali, Daewoo, PTT Exploration and Production Public Company (PTTEP), the national oil company of Thailand. It has made a number of significant discoveries in the Gulf of Martaban (near the Yetagun gas field) and is planning to build a pipeline to Thailand that would carry natural gas. The pipeline could parallel the gas pipeline from the Yetagun and Yadana fields.

In June 2008, the China National Petroleum Corporation (CNPC) signed a MOU with the Government of Myanmar and a Daewoo-led consortium on the sale and transport of natural gas from the offshore blocks in the Rakhine Basin. Daewoo commenced development of the gas fields, targeting 2013 for the start of on-stream production. An Export Gas Sale and Purchase Agreement were signed in December 2008, and include a provision whereby the gas price will be reviewed quarterly to reflect global trends. Daewoo, CNPC, and Myanmar Oil and Gas Enterprise (MOGE) have agreed on a gas price for Daewoo's Shwe, Shwe Phyu, and Myu fields. Gas from the fields will be sold to the People's Republic of China at a rate of about \$7.73 per million British thermal units (MMBtu), inclusive of a tariff of \$1.02 per million British thermal units. The contract is valid for a 30-year period and is indexed to the inflation rate in the United States (ADB, 2012b, p.10)

MOE and CNPC signed an MOU on joint development of a crude oil pipeline, under which CNPC will finance almost the entire cost of the project in 2007. The construction of the Kyaukphyu deep-sea port (Rakhine State) started in late 2009 was the first step of the project. The total investment amount of the project is estimated over US\$ 2.0 billion. The construction works of the oil and gas terminal should be completed in 2013. Construction of the Work-boat Wharf at the project area was completed in May 2011 (Myanmar Port Authority). Two oil and gas pipelines across Myanmar from the Bay of Bengal coast to south western China, which will make Myanmar the newest trade hub in South East Asia, were completed at the end of May, 2013. The two parallel pipelines which run from Kyaukphyu in Myanmar's Rakhine state to Ruili in China's Yunnan province are being built by a joint venture between Chinese state-owned China National Petroleum Corp (CNPC) and Myanmar Oil and Gas Enterprise (MOGE). CNPC holds a 51 per cent stake in the venture with the remaining held by MOGE. The oil pipeline will have a total length of 2,402 km to Kunming (PRC), including a 771-km section in Myanmar to the border city of Ruili (Shan State) at an approximate cost of \$2.5 billion. One of the pipelines is designed to transport natural gas from Myanmar's Shwe gas field off the country's west coast, and is expected to become operational by mid-year 2013. The other will transport part of China's crude oil imports from the Middle East, Africa and South America, and is likely to go on stream towards the end of 2013.

Concurrently, another consortium - Oil and Natural Gas Corporation Videsh, GAIL India, Daewoo, and the Korean Gas Corporation - are planning to invest approximately \$2.8 billion to develop the fields, with first gas production also scheduled for 2013 (ADB, 2012b, p.12). The consortium planned to spend a further \$936 million to lay an undersea pipeline to transport the gas to shore. Upon landfall, the gas (80 per cent) will be transported from Myanmar to Yunnan via an 870-kilometre 40-inch pipeline, to be constructed by Daewoo, CNPC, and MOGE, with 100 MMCFD (20 per cent) kept for domestic use.

The Myanmar government guarantees the safety of the pipeline and guarantees the ownership of CNPC, which holds a 50.9% stake in the Myanmar section of the project with the remaining stake being held by the MOGE. CNPC has also signed an agreement with Yunnan

Province to cooperate in oil refining, and, in 2010, CNPC began constructing the Myanmar section of the pipeline. CNPC's subsidiary, Southeast Asia Crude Oil Pipeline, is in charge of design, construction, operation, and maintenance. Insurgency by the KIA is likely to be problematic. In 2013 saw the successful auction of 18 onshore blocks in Myanmar which market the first steps by western Companies into a market traditionally dominated by Chinese, Thai and Indian Companies. March 2014, further blocks were awarded, 10 deep water and 10 shallow water offshore. In onshore area, 19 contracts are active in 19 onshore blocks with 22 foreign companies from 9 countries. In offshore area, 24 contracts are active in 25 offshore blocks with 19 foreign companies from 11 countries.

Moreover, Switzerland's Puma Energy International (PEI) has been selected to build harbor facilities and oil storage facilities in the Thilawa Special Economic Zone. Puma's participation is subject to approval by the Myanmar Investment Commission. Puma will take an 80% stake in a new joint venture company with Myanmar's Asian Sun Group Company Limited holding the remaining 20%. The development is scheduled for completion by the middle of 2015. A jetty, with docking capacity for med-sized vessels will be constructed within the harbour together with storage facilities to hold up to 88,000 cubic meters of bitumen and other petroleum products. Puma has also announced it is considering developing up to 150 specialised petroleum product retail sites around Myanmar. Puma is the first foreign company granted permission to develop oil storage facilities in Myanmar and was selected to build the facilities at Thilawa via a tender process that commenced in 2013.

Policy Reform in Energy Efficiency - To promote energy efficiency, the pricing mechanism for electricity and petroleum products should be reassessed because they are too low domestically due to government subsidizes to energy consumption especially electricity by setting price below the cost of production According to the Asian Development Bank, the corporatization and privatization of various energy enterprises should also be considered (currently all enterprises are within the ministries), in line with the public sector reform program in Myanmar (ADB, 2012b, p. 39).

Electricity

Electricity consumption per capita in Myanmar is amongst the lowest in Asia and has been growing very slowly since the 1980s. Per capita energy consumption of electricity in Myanmar is next to Nepal in being among the lowest in Asia, reflecting the poverty-level per capita incomes and an electrification rate of only 26% - and much less than this in most rural areas. Its connection rate is a major constraint to economic development and national integration.

National Electricity Plan (NEP)-Myanmar is now at the mid of critical in changing whole country policies to improve and make develop by reforming in every sector of the government including Energy Sector that exist in priority position. National Energy Management committee (NEMC) was formed as a country focal agency for all Energy matters of Myanmar in 2012 to produce Policy guideline. After that, Energy Development Committee (EDP) under the Ministry of Energy and Renewable Energy Work Group (REWG) were formed under the Ministry of Science & Technology (MOST) to produce necessary Laws and Regulations in 2013.

Current Country Electrification rate of Myanmar is very low and its OFF GRID area is about 70% of the country. Due to remoteness and uneven topography with many water ways (rivers, creeks), forests and mountains, extension of the present 30% National Grid coverage to 100% has many challenges. Another factor of economic feasibility for poor areas with

small industries will make face many difficulties in practical implementation of Main Grid extension works.

But above two problems has clear answer of PPP attempts in previous decades ago before present National Electrification Plan is launched. It is Self-Help Electrification practice of Myanmar. There is a well known term in Myanmar of “Ko-Htu-Ko-Hta Mee-Lin-Yay” that popular phrase was widely familiar among not only people, but also in government atmosphere even before the recent Electrification Law with official permission to private sector was launched in late 2014.

It was surprisingly found that such significant situation of real ground practices in entire Myanmar has been neglected when country electrification plan was prepared by the aid of International assistance. Presently launched country electrification planning with national grid extension is focused as main function and for off grid areas, government leading Pre-electrification function is included to support the newly established Grid extension project.

Actually real existing Off Grid electrification by PPP practices are not under consideration as considerable source of country electrification activities in Myanmar. It is composed of enormous numbers of small sources, but in lump sum, it is large enough to support current SME sector of Myanmar.

Contract Procedure; Unlike the oil and gas sector, there is no standardized procedure for open tender or direct hydropower contract negotiations with the Government, and steps vary on a case-by-case basis. However, based on discussions with relevant officials, the awarding of contracts for hydropower projects in Myanmar generally follows the following steps:

1. MOEP or the Department of Electric Power (DEP) will publish an invitation for bids to implement a hydropower project in state-owned newspapers
2. The bidder will have the following documents endorsed for authenticity by the Myanmar Embassy of country of incorporation
 - a copy of the company's Certificate of Incorporation
 - a copy of the by-laws or the memorandum and articles of association
 - a copy of the most recent annual report
 - a copy of a financial statement or financial report
 - a profile of the company and its past experience
 - a profile of the project manager, engineering manager and site manager (who would be in charge of the power project) including academic qualifications and past experiences
3. The bidder will prepare an Expression of Interest
4. Submit the Letter of Expression of Interest and the documents mentioned above to MOEP or DEP
5. Complete the initial technical and legal due diligence
6. Meeting with the relevant Government entities to discuss proposal for development of power plant
7. Buy the tender form and pay the deposit to MOEP or DEP
8. Conduct feasibility study
9. Submit the proposal with the tender form

10. MOEP will assess the proposals, and will select one of the bidders

Furthermore, Government has mandated that once a power project has been awarded through the direct negotiation or open tender processes, the project investor should submit a complete project proposal to the Department of Environmental Conservation (DEC) for consideration. The DEC will then inform the project investor if a preliminary environmental impact assessment (PEIA) or a full environmental impact assessment (EIA) is required. With regard to hydropower generation projects, any project of less than 15 MW or with a water storage capacity of less than $200 \times 106\text{m}^3$, or with a reservoir area of less than 1500 ha only requires a PEIA; any project with specifications greater than any those listed requires a full EIA. However, the DEC may take other considerations into account when deciding on the environmental assessment requirements. Project investors should conduct either investigation by consulting with a third party organization that is qualified under Myanmar law. Once the assessment has been conducted and submitted to the DEC it will, following approval.

Basic Legal Structure- There are three types of legal structures for hydro projects in Myanmar. The first and most prevalent to date is the state-owned model; specifically, projects implemented and owned by MOEP. The second are projects to be developed on a Build-Operate-Transfer (BOT) basis that are owned and implemented by Myanmar companies. The third category comprises projects to be developed on a BOT basis owned partially by foreigners, known as JV/BOT projects. The MEOP currently plans to develop 67 hydro projects over the next 20 years, as follows: 11 state-owned, totaling 2132 MW; 4 domestic BOTs, totaling 377 MW; and, 43 foreign JV/BOT schemes, totaling 41 655 MW. Current MOEP policy requires a maximum royalty to be paid to the Myanmar Government in the form of free shares in the project company, and the supply of free power to the MEPE. The Government requires 10 to 15 per cent of equity to be given to the MOEP in free shares and requires 10 to 15 per cent of free power to be supplied to MEPE. However, the Government caps the royalty at 25 per cent, meaning the percentage of free shares and free power should not exceed 25 per cent. It should also be noted that current policy is such that at least 50 per cent of the electricity capacity must be sold to Myanmar (MEPE). Concession terms are 30 years maximum.

Electricity Law: The Myanmar Government, in conjunction with the Asian Development Bank, is currently in an advanced drafting stage for a new electricity law that will replace the current law of 1984. It is widely expected that the new law will be passed during the next Parliamentary session set to begin in the middle of this year. Based on the stated objectives of the most current draft, the new law is significantly more focused on creating an attractive environment for foreign investment, while emphasizing transparency and the adherence to international norms and standards. Also, it provides for the establishment of training schools to promote modern technology and cultivate local technicians and experts, with a view to creating a knowledge base within Myanmar to further the Government's goal of universal electrification by 2030.

One of the major changes set to take place with regard to the governing structure of the electricity sector is the establishment of the Electricity Regulatory Commission. It is the stated duty of the Commission to create an environment conducive to investment into the power sector, and for compliance with electric power rules. Although the details as to its operational processes and relationship to the Ministries will not be clarified until the release of the implementing regulations, this is a significant step forward. The new electricity law will, at a minimum, create a semi-independent regulatory body to assist in the management of Myanmar's electricity sector, by increasing its effectiveness and credibility for international investors.

The draft Electricity Law also decentralizes some authority over the electricity sector by empowering regional and state governments to grant permission, regulate, or withdraw permission for medium- and small scale power generation and distribution projects (no greater than 30 MW) which are not connected to the national grid. The necessary infrastructure to provide grid access to the entire country is still 15-20 years away; therefore an opportunity exists nationwide for small- and medium-scale off-grid hydro projects to electrify rural areas. This represents major progress since the 1984 Electricity Law, which effectively limited foreign investors to projects of less than 500 kW unless express permission had been given by the Cabinet.

Although there are still revisions to be undertaken before the final version of the new electricity law is passed in Parliament, at this stage it appears that the Government is taking a number of progressive steps to provide a solid and transparent foundation for its electricity sector, to facilitate widespread domestic and foreign investment.

Policy outcomes – The Foreign Investment Law of November 1988 resulted in joint ventures and production sharing in the oil and gas subsectors of the energy sector. In the early 1990s, the State Law and Order Restoration Council invited foreign bids for offshore exploration rights in 18 concession blocks—13 in the Gulf of Martaban and 5 off the coast of Arakan State. Bidding on 18 onshore blocks was announced in July 2011. Proposals from interested investors were submitted in November 2011 and subsequently evaluated. Bidding on additional offshore and onshore blocks occurred following the Myanmar Oil, Gas, and Power Summits in March and September 2012 (ADB, 2012b, p. 10).

Electricity Generation and Distribution Projects in the Pipeline - Myanmar has identified 92 potential large hydropower projects with a total installed capacity of 46,101 MW (ADB, 2012b, p. 2). The ASEAN power Grid Networks – (16) Projects; Thai-Myanmar power grid projects (2016-2025); Thilawar Industrial Zone (500) MW Gas gas-fired plants projects in negotiation with Korea BKB Co.; and (543) MW Gas gas-fired plants Combine Cycle Projects with China-Hydro Laungcang Co.

DHPP has prepared a list of potential joint venture power projects and is soliciting interest from possible investment partners. The approval process for a foreign investor includes the following steps:

- (i.) the potential investor submits a proposal to MOEP, describing the investor's technical expertise and financial situation;
- (ii.) on acceptance by the government, MOEP and the investor would sign an MOU with a 30-month validity;
- (iii.) the investor begins preliminary investigation and pre-feasibility study;
- (iv.) following acceptance of the pre-feasibility study, MOEP and the investor sign a MOU with a duration of 18 months;
- (v.) the investor then carries out a full feasibility study to determine the technical and financial viability of the project;
- (vi.) once determined feasible, the parties will enter into negotiation of the joint-venture agreement (JVA); and
- (vii.) the JVA defines the responsibilities and duties of both parties, and it is reviewed by line ministries and the Myanmar Investment Commission (MIC), which makes the final approval decision.

For each joint venture, Myanmar is entitled to a “free share” and a “free power” (equivalent

to royalties), in addition to commercial and income tax revenues. Free share and free power are negotiated individually, but, as a general rule, free share is not less than 25%, and free power is not less than 10%. Myanmar is also entitled to buy up to 50% of the generated electricity. The purchase price for electricity is re-negotiated annually during the concession period - normally of a 30-year duration that can be extended for 5 years at a time. At the end of the concession period, full ownership must be transferred back to the government, with the facility in good condition as defined in the JVA. HPGE(Hyper-Pure Germanium Detector) takes part in the operation of joint ventures, contributing one-third to the operation costs and providing maintenance staff.

Table 3. Current Operation Summary of Hydro Power in Myanmar

Name	MW	Financing	Owner/Contractors	Off-Taker
Yeywa	790	China ExIm Bank, CITIC	MEPE / HPGE CITIC, Sinohydro, CHMC, CGGC, Siemens, Malcolm Dunstan, COLENCO, HTCT	Domestic Sale
Upper Paunglung	140	China ExIm Bank	MEPE COLENCO, Malcolm Dunstan, Yunnan Machinery ExIm	Domestic Sale
Shweli I	600	China ExIm Bank	Yunnan Machinery ExIm Datang United Hydropower Dev Co.; China Southern Power Corp; (BOT)	50% Exported to PRC; 50 to 35% Myanmar no costs, + 15% to Myanmar with tariff
Dapeyin I & II	408	China ExIm Bank	MEPE, Datang United Hydropower Dev Co.;	90% to PRC; 10% to Myanmar
Lower Paungluang	280	China ExIm Bank	MEPE, Yunnan Machinery ExIm, Sinohydro	Domestic Sale

Source: MOHP, 2014

Ta Nang, Wei Gyi, Seven Dams Project and Hat Gyi are under-developed status. Seven Dams Projects are Chibwe, Kaunglanphu, Laiza, Lakin, Myitsone, Pashe and Phizaw. These under development projects are shown in following table (4)

Table 4. Summary of Under-Developed of Hydro Power

Name	MW	Financing	Owner/Contractors	Off-Taker
Ta Nang	7110	Thai and Chinese Banks	EGATi; China Three Gorges Corp.	China Gezhouba Group, CSPG, Malcolm Dunstan
Wei Gyi	4540	Thai Banks	EGATi	EGATi
Kunlong	2400		Goldwater Resources Co.; Hanergy Holding Group	
7 Dams Project:	13,360	China BFI	Asia World Company, MEPE	China Power Investment China Gezhouba Group, Sinohydro
Hat Gyi	1200	Thai and Chinese Banks	EGATi, Sinohydro, MEPE	EGATi, Sinohydro

Source: World Bank, Jan 2015

Over the past five years, some 26 micro- and 9 mini-hydropower power projects have been developed by MEPE (capacity ranging from 24 kilowatts (kW) to 5,000 kW), including projects in border areas, aimed at improving the social and economic conditions of poor rural households and remote communities, facilitating cottage industries and enhancing agricultural productivity through improved irrigation. Five additional projects are at the planning stage (ADB, 2012b, p. 16). 7 mini-hydropower power projects will finish in 2015-16 will produced 2,383 KW. In 2016-17 /2019-20 5 year plan, 28 projects (21,769 KW) are planned to construct under PPP scheme.

Constraints – A detailed and comprehensive energy sector assessment (medium and long term) is lacking. Demand projections and supply options (strategic planning and developing the business case for each proposal) have to be determined for power, petroleum, coal, and other sources of energy, together with the investment requirements. Hydropower is a special case given Myanmar’s huge hydropower potential: development should be guided by sustainable and least-cost principles, with environmental and social safeguards must also be

guiding principles (ADB, 2012b, p. 39)

Lack of contract negotiation and experience in the Ministry of Electric Power to achieve the financial closure when projects are proposed to be privately financed by domestic and international investors should be built as a matter of national urgency given the number of power cuts, especially in the dry season. We recommended in our meetings that the Ministry engage as short-term technical advisor a suitably qualified international transaction advisor such as PwC or KPMG – companies that have assisted ERIA in its capacity building programs as part of its broader research.

3.7 Posts and Telecommunications

Government Policy - The reform of telecommunication sector aimed to issue the telecom operating licenses, allowing international companies. The main telecommunications operator in Myanmar is Myanmar Posts and Telecommunications which is the state-owned enterprise in country. MPT begun Public Private Partnership (PPP) by attracting private sector to involve in implementation and maintenance of telecommunication equipment. At that time, MPT was sole service provider for all kinds of communications services. Encouragement from MPT shed light on private sector that they can make better of their human resource HR for the development of national communication networks. At first, local giant companies like Elite, Asia Mega Link, Red Link, Global Net and Tah Moe Nhae' Chan Thar were collaborated with telecommunications equipment manufacturers. MPT started a private company in the name of Hagan Cyber Tech which is now under the name of YadanarPon Teleport for opening the door to private sector into telecommunications field. Those pioneer companies got experience and skill from collaboration with their vendor-partners. By establishing YadanarPon Teleport, the flexible nature of private company has enabled faster deployments of new communications services to the people. New communications service like Asynchronous Digital Subscriber Line (ADSL), Fiber-to-the-Home (FTTH) and Colorful Ring-Back Tone (CRBT) has promoted tele-density and quality of services in advancements of telecommunications technology.

Through cooperation with vendor-partners and YadanarPon Teleport, local companies gained more skill and better understanding for more capable of doing more communication services. MPT started launching of PPP programs by fulfilling the service gap with the assistance of domestic companies. Mobile department from MPT opened invitation for maintenance services in Radio Access Network (RAN). MPT was implementing project roll-out and handed-over more Base Transceiver Stations (BTSs) form projects to Local Service Provider (LSP). As of 1st March 2015, in every region and state, MPT has already bestowed 9 Companies for 2109 BTSs. By allowing LSPs, MPT expected to raise quality of services to its subscribers.

Mobile department aims to leap-frog tele-density by faster deployments of mobile network. Before 2011, tele-density was as low as 6.7 %. The new democratic government makes objectives of raising tele-density to 75~80% in 2016. Ministry of Communication, Posts and Telegraphs (it was called then) started workshops at regional level and national level as to find out the strategies how that great expectation of new government can be realized.

Through countless discussions and invaluable suggestions from various perspectives of many honorable scholars, MPT had decided to allow international competitors in telecommunications field. At that time, MPT had confidence in the capability of LSPs. Those companies and skillful technicians will be ready and can take over the job responsibilities if new comers arrive in Telecommunications fields of Myanmar. MPT has made selection of LSPs in open bidding process. Before issuing Request for Proposal (RFP), MPT made

discussion meetings with potential companies to collect opinions for what MPT should assist and which requirements are necessary to LSPs.

After that, MPT issued RFPs for frame contracts to bidders. MPT had the guidelines from the Ministry to make firm and fair steps for choosing the right LSP in each selected area. And MPT formed monitoring mechanism for controlling the works of LSPs in order to align with expected responsibilities. But PPP is just at infant stage and MPT is watching carefully and advices from LSPs to meet more with its subscriber's expectation. In order to satisfy its mobile subscribers, MPT and LSPs are agreed to reach acceptable Key Performance Indicators (KPI) to match with international practices. Although the expected QoS(Quality of Service) cannot be reached at the moment, much of service interruptions had been solved through MPT and LSPs collaborations.

LSPs have the expected Scope of Work and Responsibility Matrix to fulfill to deserve its name and reputation. Responsibility Matrix is shown in Appendix 1 and Scope of Work which is necessary to perform routinely has been shown in Appendix 2 (Scope of Work). Long Distance Communications department also followed Mobile department's example as it owns much more Microwave and Fiber Transmission stations than its Human Resource capacity can handle. Due to LSPs' responsibility sharing with MPT for its vital maintenance, MPT can emphasize more on much needed faster deployments of backbone communication infrastructure. Myanmar had been left behind due to several limitations which was imposed on Myanmar in the last decades are trying to be relieved by energetic implementation scheme for National Backbone network. Spreading its high-speed broadband backbone network throughout the country enables MPT to upgrade its services and can become ready for fierce competition with international outstanding operators.

As 1st March of 2014, MPT are currently providing Plain Switching Telephone Network (PSTN) to its subscribers which accounts 0.5 million. Though PSTN's capacity is increased significantly comparing with as of 1988 capacity, the maintenance personnel cannot cover for the whole effective and efficient maintenance measure. In 2012, MPT decided to launch several pilot areas to LSP's maintenance responsibility. Three maintenance areas are Hanthawaddy (HTD), Bayintnaung (BYN) and Thingyangyun (TGG) OSP areas are awarded to Asia Mega Link and Myanmar Telecommunications Network (MTN). The subscriber capacity are 36,000 in HTD, 10,000 in BYN and 16,000 in TGG. At first, to assist for smooth transformation of service to private sector, MPT hires its technicians and expertise to LSPs. Both parties worked hand-in-hand and LSPs were gaining more skill and experience, MPT can relieve its employees of LSPs' collaboration work after 6 months. This type of PPP have benefited to each party, MPT and LSP. MPT can more emphasize on larger critical works and LSP can take over of the responsibility for operation and maintenance.

After granting two foreign operators for integrated license for communication services, Posts and Telecommunications Directorate (PTD) allows international and national companies for implementing and redistributing communication services. This allowance booms for greater growth of telecommunication services.

One of the key provisions in the new law is the establishment of an independent regulator, the Myanmar Telecommunications Commission (MTC), by 2015. The Regulatory Authority is envisaged to be transformed into an independent entity by 2015, according to the new Telecom Law. Regarding democratic transition, the new government initiated many changes not only in political sector but also in economic liberalization. Among several economic sectors, modernization of telecom sector became one of the first to be targeted. Telecom sector plays an important role in economic development of the country. And it is also directly interacting with the living standards of ordinary people.

Reform Needed – To policy objectives are to create competitiveness in the telecom sector; to generate growth in employment opportunities in the sector to provide an efficient and cost-effective telecom service; to improve infrastructure through private-sector support; to meet ever increasing demand of telecom services; to improve public access in rural and urban areas to telecom services; and to increase choice of providers and services.

National Economic Planning for Myanmar (2011-2030)

Policy Reform - According to the government's economic reform strategy of 2012, Myanmar must reform its annual plan, short-term plan and long-term plan. The government is in the process of formulating a National Comprehensive Development Plan from 2011 to 2030. Despite a 5-year economic development plan under preparation (together with its "bottom up approach" with inputs from each of the divisional / state Ministers) there is a current lack of capacity across the country to undertake this strategic planning work (for urban development, for infrastructure and for rural planning and poverty alleviation).

This lack of capacity in the national and divisional/state ministries was confirmed subsequently in all of our meetings. These meetings confirmed that strategic planning of infrastructure based on the evaluation of options on economic, environmental criteria (the pillars of sustainable development) was very limited and even at the project level there was lack of capacity in proper project planning (developing the business case), project appraisal, an understanding of procurement options, contract negotiation and implementation and monitoring (whole of life cycle analysis was never mentioned in meetings).

Nevertheless there have been a series of workshops on aspects of formulating a national comprehensive economic development plan, and progress is being made during until the end of 2013. Appendix shows the capital works projects, township location, the amount and source of funding for the provinces / states (Saigang, Yangon and Shan) that we visited during our ERIA research, although this information is available for all jurisdictions.

Special Economic Zone Policy - The popularity of special economic zones (SEZ) as a national government policy instrument has taken off since the 1990s. The International Labor Organization's database of special economic zones reported 176 zones in 47 countries in 1986; by 2006 this had risen to 3,500 zones in 130 countries (Boyenge, 2007). Recently promulgated are: the Myanmar Special Economic Zone Law of the Republic of the Union of Myanmar; and the Dawei Special Economic Zone Law. The Kyauk Phyu Economic Zone is a specially-designated area in which foreign companies can construct and operate petrochemical plants and oversee the export of Chinese made products. This SEZ will serve as the endpoint for the Yunnan-Arakan railway, and will be the site of new naval facilities and a deep-sea port. A Feasibility Study for a deep-sea port and a railway project was conducted and on 20 December, 2009 a MoU was signed between the CITIC (China) and the Ministry of National Planning and Economic Development. On 16 February 2011, a supplementary (6-month) MoU was also signed, but this has since expired and the project had been dropped.

Policy Outcomes. Myanmar's government has agreed a deal with a Japanese consortium to develop jointly a special economic zone on the edge of the commercial capital, Yangon, as part of moves to expand industry and bring in investment. Mitsubishi Corp, Marubeni Corp and Sumitomo Corp will team up for a 49 percent share in the 2,400-hectare (5,900-acre) estate in Thilawa, close to a deep-sea port, with the government set to invite private domestic firms to get involved. Japanese government would provide financial assistance to support the development of infrastructure for the industrial zone, which will include factories and a gas-fired power plant. Japan is expected to invest in some of Myanmar's other planned economic

zones, such as Kyaukphyu on the Bay of Bengal and Dawei, a \$50 billion project on the southern peninsula with access to the Indian Ocean and mainland Southeast Asia. Dawei has struggled to gain traction and the Thai construction firm leading the project, Italian-Thai Development Pcl, has lobbied Japanese companies to invest there,

5. Barriers for PPP Preparedness in Myanmar

Myanmar's historically weak macroeconomic management has not allowed the government to have the resources to support the private sector's development (e.g., by providing the necessary infrastructure and social services). Myanmar has been undertaking major reforms in the public domain, including revenue management and tax collection and administration, and reform must continue to provide fiscal stability and sufficient money to allocate to the infrastructure sectors of the economy. A second round of reform in Myanmar might focus on the state economic enterprises: rationalization and downsizing by reducing the state's role in many sectors and encouraging more private-sector participation in the economy.

The Myanmar government, through its Privatization Commission, has already begun privatizing a number of state economic enterprises, including many buildings; factories that produce textiles, consumer goods, and electronic and electrical goods; warehouses; and cinemas. Further privatization and deregulation of public utilities can be considered given the government's limited resources and capacity. This will also facilitate foreign investment in these segments of the economy. A modernized financial system is required that would facilitate effective intermediation of domestic saving to investment and support broad-based growth, as detailed by the Asian Development Bank (ADB, 2012, pp. 37-39).

With respect to the on-going formulation of the 5-year economic development plan it is apparent that a lack of experience and expertise in strategic planning is a major constraint, especially given the government's aspiration of a "bottom up" approach to development planning. Currently, there is no national vision for infrastructure – the priority sectors to development and project priorities in those sectors because of a lack of capacity in project planning and evaluation.

The Ministry of Planning and Economic Development has tabulated social and economic infrastructure projects by division and state, and the sources of funding assistance, but needs to formulate comprehensive national and regional economic development plans as part of the next cycle of 5-year plans and this will require massive manpower development. Each future economic development plan should be underpinned by a corresponding national infrastructure development plan.

Across the economic infrastructure sectors that we have investigated projects have been procured under a variety of mechanisms: traditional government procurement; loans from foreign governments: the build-own-transfer (BOT) model in the case of roads and the Nay Pyi Taw airport; and joint ventures (primarily in the energy sector). Lack of credit culture in public infrastructure operations – the establishment of a credit culture in public service operations is emerging as a priority for governments globally. In particular, State Owned Enterprises (SOE's) are taking the lead through 'crowding in' into key national infrastructure projects. However, these SOE's will be limited by their ability to raise finance in the global capital markets due to an absence of solid debt monitoring systems and debt management capacity. The needs considerable capacity building across all line agencies to understand the fundamentals of infrastructure planning and procurement and the building blocks necessary for the involvement of the private sector.

Foreign governments - notably the People's Republic of China, India and Thailand – have

strategic interests in various infrastructure projects in Myanmar ranging from transport and communications to integrate the country into a wider geo-political economic system (see Thant Myint-U, 2011) to buying electricity and gas from Myanmar. In their contract negotiations with foreign powers or with foreign companies, members of Myanmar government departments are at a disadvantage given the years of isolation from mainstream global developments, and this is yet another constraint on national development.

The key institutional weaknesses in Myanmar can be summarized as follows. There is an absence of a credible infrastructure planning and procurement framework – clear legislative provisions are necessary issued formally by the national government spelling out the roles and responsibilities of all key public sector ministries and agencies, and the private sector including investors (public monies, ODA flows and private investments), lenders, construction and operations contractors. There is insufficient capacity for project design and implementation – the public sector agencies will need to have strong capacity based on a combination of in-house skills and private sector advisers (transaction, legal and financial) to prepare projects and negotiate effectively with the private sector to create appropriate risk sharing and reward contractual arrangements. There is poor accountability, performance and contract management.

Political constraints can be summarized as follows. Currently, there is poor understanding of planning and infrastructure procurement and hence lack of political ownership and commitment – this commitment to putting the necessary building blocks in place to achieve transparent, competitive tendering must be from the highest levels of government. This requires leadership and a committed team of public servants with a clear separation of political and technical responsibilities and clarification of specific institutional roles and responsibilities removing lack of coordination amongst agencies and duplication that bloat project costs leading to delays and private sector investor disinterest. Establishing inter-ministerial project committees can overcome the issue. The management of unsolicited bids must be required with the development of a clear and transparent framework to clear the backlog of critical projects in Myanmar.

Conclusion and Recommendation

It is clear that capacity building in the public and private sectors of the Myanmar economy for infrastructure planning is the number one priority. There are also sector specific needs that were communicated to us for capacity building: Effective policymaking, strategic planning, implementation, and monitoring require reliable, timely, and relevant information on the country's social, economic, and environmental conditions. In the view of the Asian Development Bank most government ministries in Myanmar are endowed with some statistical abilities to meet the data requirements in their sector; however, the absence of adequate institutional arrangements poses profound challenges in coordinating statistical activities and maintaining uniform statistical standards across ministries (ADB, 2012, p. 42). Based on our assessment of stakeholder needs in Myanmar one early deliverable by government should be a road map for reform in the institutional space for infrastructure and the financing space. The road map should identify clear targets (key performance indicators) and the dates by which those targets should be achieved by all agencies.

The implementation of recommendations on capacity building will lead to a greater practical understanding of procurement of infrastructure and the role of privatization and PPP in financing infrastructure. What follows is a brief introduction to some of the factors that governments must consider. A clear responsibility of governments is in the area of strategic infrastructure planning.

In recognising the lack of experience in Myanmar because of the previously closed economy to international developments in infrastructure planning, implementation and financing suggest that any longer-term plans (perhaps the next 5-year economic development plan) for the use of a full PPP (that will always remain a small proportion of all infrastructure procurement in any country) adopt the following principles.

- a. Adoption of a government communications strategy with capacity building directed towards all key stakeholders at national and provincial/state levels, including community representatives, to advance an understanding of the PPP model and awareness of the potential benefits of PPPs within government, assuming the government can commit to a roadmap with the various supportive reforms and that the necessary building blocks have been put in place.
- b. Incremental change to present investment and procurement policies, as required which will allow some immediate progress to be made
- c. Improve procurement capacity in line agencies through targeted training and capacity building programs accompanied by improvements in accounting and reporting standards and requirements. The early introduction of e-procurement via an intranet system and/or using the cloud that uses centralised record keeping and business case templates should be explored.

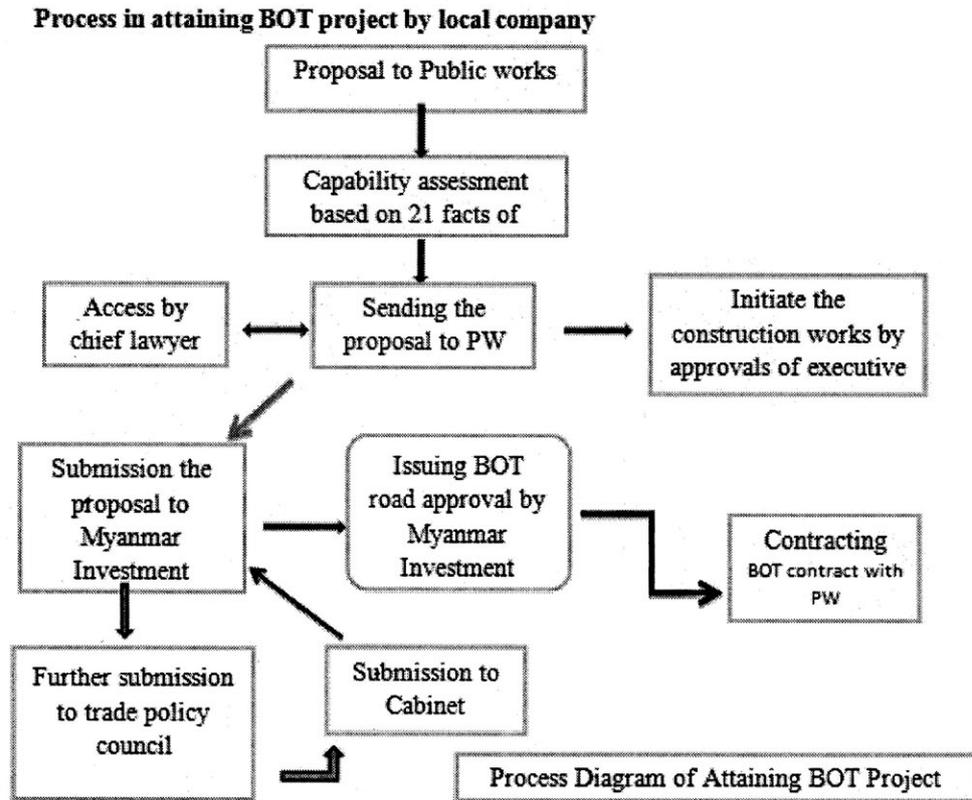
It is suggested that governance arrangements for the PPP Centre in Myanmar include: a board drawn from both public and private sectors; defined approval stages for projects using the Gateway (Lord Browne of Madingley, 2013) process (project selection, project appraisal, bid process and bidder selection), affordability of unitary payment arrangements; reporting and transparency arrangements; adoption of standard commercial principles; treatment of unsolicited, non-conforming bids; and progressive adoption of value for money principles. In the formulation of a specific PPP infrastructure project the PPP Centre will inevitably be confronted with the issue of the contribution by government for viability gap funding from the private sector.

Complementary reforms in Myanmar are essential to advance the work of the PPP Centre. For example, internal government contract regulations require the establishment of an alternative dispute resolution agency, contract managers must be selected and trained, there needs to be documentation of project experience, *ex post* reviews, and lessons learnt, an overhaul of accounting standards (IPSAS compliance), and performance audits to help transparency.

Capacity must be built up in the private sector. There must be a strong private-sector institution representing the major infrastructure companies and financiers in Myanmar that can engage productively in an on-going dialogue with government on infrastructure policy and reform. It is also recommend the major bi-lateral trade countries establish Business Coordinating Committees with priority on infrastructure investment in Myanmar. University research in Myanmar needs nurturing.

Procurement and PPP capacity building also needs to be developed in the longer term in the regional and state governments and other jurisdictions as well as the private sector. It is essential that corresponding agencies be set up in the divisions and states. In the procurement of infrastructure, competition and bid processes must be fully understood in the line agencies of Myanmar given the historical way that projects have been procured, including risk management associated with unsolicited, private-sector infrastructure proposals.

Appendix 1.



Source: Ministry of Construction

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