

Supplement to

***ELECTRICAL INDUSTRY OF BURMA/MYANMAR* (Fourth Edition)**

Articles for September 2012

This is the fifth in a series of supplements to the fourth edition of *The Electrical Industry of Burma/Myanmar* which was published in April 2012. Approximately 350 cross-linked articles in the original cover many aspects of the industry including the development of the hydro and thermal power resources of the country, the increasing intervention of foreign and national companies in this economic sector, the production of electrical and electronic goods, government plans and regulation of the industry, the development of the national power grid and alternative and sources of electricity, among others. This supplement covers articles published in September, 2012, but also includes a couple of articles that were published earlier. The fourth edition of the compendium can be accessed using the following URL: <http://www.burmalibrary.org/docs2/ELEC-Burma-4th-edition.pdf>. Previous supplements for April-May 2012, June 2012, July 2012 and August 2012 are available at <http://www.burmalibrary.org/docs13/Elec-Sup-April-May2012.pdf>, <http://www.burmalibrary.org/docs13/Elec-Sup-June2012.pdf>, <http://www.burmalibrary.org/docs13/Electricity-Sup-3July2012.pdf> and <http://www.burmalibrary.org/docs14/Elec-Sup4-August-2012.pdf>. Note that the titles of some of the articles included in the supplements have been altered to indicate with more precision the contents of the item or article. Summaries of some of the articles are included.

Union Electric Power Minister inspects Yeywa Hydropower Plant

New Light of Myanmar, 29/09/12. (p. 7 of the print edition)

<http://www.burmalibrary.org/docs14/NLM2012-09-29.pdf>

Shwedah Village-tract illuminated with electricity

New Light of Myanmar, 28/09/12 (p. 2 of print edition). Edited and revised.

<http://www.burmalibrary.org/docs14/NLM2012-09-28.pdf>

The people of Shwedah village tract on the Yangon-Mandalay highway in Yamethin township celebrated the arrival of electricity on the 12th of September. The village is now illuminated at night through the installation of lamp-posts. U Mya Win, the chairman of the electricity supply committee, said there had been much difficulty in arranging for the supply of electricity. For the past five years, the local people have been saving their money and over K 40 million had been deposited in the bank for two years. But due to the small amounts of electricity being generated, the installation could not be implemented. So the local committee had returned their deposits to the villagers. However due to the continuing efforts of the the local power supply committee, electricians led by Township Electrical Engineer U Kyi Win completed and inspected the installation of 161 electric meters in the homes of Shwedah Village and electricity was turned on at 5 pm on September 12th.

Korea eyes further investment in Myanmar's energy sector

New Light of Myanmar, 26/09/12 (p. 2 in the print edition). Edited.

<http://www.burmalibrary.org/docs14/NLM2012-09-26.pdf>

A meeting of the Energy and Natural Resources Joint Implementation Committee Meeting between Myanmar and Korea took place in Nay Pyi Taw on 25/09/12. It was attended by officials of the Energy, Mines and Electric Power ministries and a delegation led by Deputy Minister Moon Jaedo of the Ministry of the Knowledge Economy of the Republic of Korea. The two sides discussed proposals for the joint-venture Shwe natural gas project, a worksite proficiency training course for the staff, co-operative measures for technical development in oil and gas tasks, further co-operation of Korean companies in the oil and gas sector in Myanmar, co-operation in the exploration of natural resources, a refinery for sustainable development in the mining sector, hydropower generation and construction of a natural gas-fired hydropower plant.

Electric Power Ministry lures investors

New Light of Myanmar, 25/09/12 (p. 2 of the print edition) Edited and abridged.

<http://www.burmalibrary.org/docs14/NLM2012-09-25.pdf>

The Ministry of Electric Power wooed local and foreign investors at an electricity development seminar held in Nay Pyi Taw on 21/09/12. The seminar was attended by several Ministers and deputy ministers as well as representatives from local and foreign companies. Union Energy Minister Than Htay said energy deposits in Myanmar should be tapped as soon as possible as energy exploration has to be done in a limited time period, pointing out that hesitation could delay the country's development. Electric Power Minister Khin Maung Soe highlighted the need for environmentally friendly investments and for comprehensive legislation related to privatization. The meeting focused on electricity sufficiency, incorporation of public companies and privatization.

Upper Paunglaung Hydropower Project to generate 454 kwh million on completion

New Light of Myanmar, 25/09/12 (p. 2 of the print edition). Edited and abridged.

<http://www.burmalibrary.org/docs14/NLM2012-09-25.pdf>

Union Minister for Electric Power Khin Maung Soe together with Deputy Minister Myint Zaw arrived at the gravel production site of the Upper Paunglaung Hydropower Project on the Paunglaung river 26 miles east of Pinyin and inspected work being carried with the use of roller compacted concrete (RCC). The Union Minister looked into installation of machinery and civil works being carried out at the plant and progress in the construction of roller-compacted walls and works at sites 5B-1 and 6A and concrete work on the conduit. On completion, the power station will have two 7-magawatt turbines capable of generating 454 kwh million annually.

Asian Development Bank: Interim Country Partnership Strategy: Myanmar, 2012–2014 Sector Assessment (Summary): Energy

[undated, but appears to have been issued in mid-September 2012.] Highlights.

<http://www.adb.org/sites/default/files/mya-interim-2012-2014-ssa-02.pdf>

This interim six-page report summarizing Myanmar's energy resources was issued by the ADB at a time when it along with other international bodies like the IMF and the World Bank and dozens of countries is reconsidering its relationships with Myanmar following the move from military rule to more open and democratic institutions in the country. The report is summary in nature and is currently available in draft form only. A couple of sentences at the beginning of the second paragraph summarize cogently the current situation with regard to the energy resources of the country. "Despite sitting on huge energy resources, Myanmar has one of the lowest commercial per capita consumption in Southeast Asia. This low energy demand is due to its low per capita income and insufficient energy infrastructure, as reflected by its total electrification rate of only 26%." As of 2007, biomass, [mainly wood], accounted for 66.3% of total energy supply, followed by gas with 19.6%, and oil and petroleum with 11.3 %. Hydro and coal accounted for only 2% and 0.8% of total energy supply. Although the report considers briefly the country's oil and gas, coal and renewable energy resources, the main focus is on the electric power sector. Separate sections deal with current and future development of the country's generating potential, the transmission and distribution systems, power demand, planning and tariffs, energy efficiency and core sector issues and restraints facing the electric power sector. Probably, the most interesting section is the Problem Tree at the end of the report. It identifies several main causes for the "very low electrification ratio" and "unreliable power supply" in Myanmar. These include poor long term planning, ineffective energy institutions, inadequate and ill-prepared staffing and lack of legislative safeguards for the environmental and economic sustainability of the resources as major drawbacks. Lack of sufficient investment, however, must surely be identified as the key cause and the greatest need at the current time. The report does not identify any immediate solutions to the problems it points to.

ADB highlights planning needs for Burma's electric power system

William Boot, The Irrawaddy, 25/09/12. Edited and abridged.

<http://www.irrawaddy.org/archives/14854>

The Asian Development Bank says there is an urgent need to streamline responsibility for development of Burma electric power potential and to draw up medium-to-long term planning strategies. The already limited power network is so old and poorly maintained that it "suffers from high transmission and distribution losses that need to be addressed urgently," the ADB says in a draft report on the state of Burma as it prepares to re-engage the country with financial and technical assistance. "Supply options have to be assessed for power, petroleum, coal and other sources of energy, including investment requirements for meeting growing energy demand," said the report. "Despite sitting on huge energy resources [Burma] has one of the lowest commercial per capita consumptions in Southeast Asia. This low energy demand is due to its low per capita income and insufficient energy infrastructure." Only 26 percent of Burma's 60 million people have access to mains electricity and yet the country is "one of the five major energy exporters in the region, particularly natural gas," said the bank. The ADB report says Burma's installed

electricity generating capacity is higher than previously estimated, at 3,361 megawatts (MW). However, full generating capacity is never achieved due to a catalogue of technical and other problems. These include natural gas pipelines which feed several power plants being so poorly maintained that insufficient compression reduces efficiency; dilapidated transmission cables and transformers; and reduced power from hydro-electric systems when water levels are low. The hydropower potential from Burma's rivers is more than 100,000 MW and 92 large scale projects with a total installed capacity of 46,101 MW have been identified, the report said. Proven gas reserves total 11.8 trillion cubic feet with "huge potential" for more. Burma also has an estimated 489 million metric tons of coal and produced 692,000 tons in 2011 but, amazingly, over 65 percent of the primary energy consumption in the country comes from biomass fuels such as wood, charcoal and agricultural waste. The ADB said the Ministry of Energy plans to construct 13 hydropower plants with a total capacity of 2,570 MW by 2020, but many more were planned by foreign investors. Four coal-fuelled and one gas-fuelled plant are planned in the next two years in the greater Rangoon region with a total of around 2,200 MW of capacity. "A 600 MW coal-fired plant is going to cost at least US \$700 million and most probably more like \$850 million if it has best-case anti-pollution technology," Bangkok-based energy industries analyst Collin Reynolds told The Irrawaddy on Monday. "The cost will be higher for a similar-sized gas-fired plant. "Gas would seem to be Burma's best longer-term energy source for power generation and in the short term coal systems would be quicker and avoid the need for new gas pipeline infrastructure," he added. "Hydrodam systems are costly, have slower development time frames and their delivery capacity will be seasonal and affected by climate.

Three villages in Ayeyawady Region connected to national grid

New Light of Myanmar, 21/09/12 Edited. (p. 9 of print edition)

<http://www.burmalibrary.org/docs14/NLM2012-09-21.pdf>

The supply of electricity was launched in Zeedaw, Mingan and Bok villages of Patheingyi township on 18/09/12. 11/0.4 KV (315) KVA transformers have been installed at each of the three villages to supply electricity to 69 households in Zeedaw, 73 in Mingan and 74 in Bok.

Kyaukhmaw village in Yinmabin township plugged into national grid

New Light of Myanmar, 15/09/12. Edited. (p.2 of the print edition)

<http://www.burmalibrary.org/docs14/NLM2012-09-15.pdf>

As self-reliant electricity supply tasks were undertaken in Kyaukhmaw Village of Yinmabin Township of Sagaing Region, the local people now enjoy fruits of power supply round the clock on 8 September 2012.

With the main sponsorship of U Win Myint and Daw Kyway Kywa of Tayoktan Road in Phayagyi Ward of Monywa, local people from 500 houses contributed to supply of electricity. At 5 pm on 8 September, a ceremony to launch the supply of electricity was held in the village. Sagaing Region Hluttaw reps U Kyaw Myint Thein and U Win Myint cut the ribbon to launch the supply tasks. A five-mile long power line was installed with ShwetaungU sub-power station, and the village is illuminated through two 200-watt trans-formers. The local people spent K 160 million on works.

Re-appointment of deputy ministers in Union Electric Power Ministry

New Light of Myanmar, 13/09/12 (p.1 of the print edition).

<http://www.burmalibrary.org/docs14/NLM2012-09-13.pdf>

Republic of the Union of Myanmar, President's Office

Order No. 35/2012, 11th Waning of Wagaung 1374 ME (12 September 2012)

Deputy Ministers reshuffled

Under Section 234, Sub-sections (A) and (D) of the Constitution of the Republic of the Union of Myanmar and Section 16, Sub-section (B), Para (9) of the Union Government Law, Deputy Minister for Electric Power No. 1 U Myint Zaw and Deputy Minister for Electric Power No. 2 U Aung Than Oo have been transferred to the Ministry of Electric Power as deputy ministers.

Sd/Thein Sein

President, Republic of the Union of Myanmar

Objections raised to coal-fired power plant in Kawthoung

Kun Chan, Mizzima, 11/09/12. Abridged.

<http://www.mizzima.com/news/inside-burma/7982-burmese-political-parties-object-to-coal-fired-power-plant.html>

Three Burmese political parties have agreed to raise objections against the coal-fired power plant in Kawthoung, Tanintharyi [Tenasserim] Region, according to party officials. The National League for Democracy (NLD), Democratic Party (Myanmar) and All Mon Region Democracy Party in Kawthoung Township held a joint meeting on

Aug. 26 to discuss the project. "We will submit a written complaint directly to the Industry Ministry, and we will give a photocopy to the [Tanintharyi] region's chief minister. We will also give speeches about it to the public," said Than Tun, a canvasser with the Democratic Party (Myanmar) in Tanintharyi Region. In addition to the three parties, officials with the Kawthaung natural disaster management committee and a charity school in Kawthaung attended the joint meeting at the office of Democratic Party (Myanmar). The power plant, which would generate 8 megawatts, is located between Shwepyitha and Ayeyeiknyein quarters in Kawthaung and owned by Than Phyo Thu Company Limited. Meanwhile, the authorities are conducting a signature campaign to demonstrate support for the power plant, according to residents. "They went to the quarters and told people that they will provide 150 units of electricity free of charge. Then they told the people to sign the petition in favour of the power plant's operation in return for their offer," said Maung Win, who lives in Shwepyitha Quarter, which is near the power plant. Some of the residents support the power plant because they want electricity at lower prices while others oppose it because of possible consequences, said Myint Maung, a leader of a NLD-supported social organization in Kawthaung. Opponents pointed out that the power plant is located just a few feet from some homes and the chimney of the power plant is just 40 feet above the ground. They said it is one-half mile from the Yinwa Reservoir, which people in Kawthaung rely on for drinking water. On the other hand, officials at the power plant claim that the power plant will use efficient Chinese technology, which will not damage the environment. "There cannot be too many disadvantages because it is not near people. We do it near the shoreline. Chinese technology is very good," an official at the power plant said. On Aug. 6, opponents applied for permission to stage a peaceful protest against the plan, but the local authorities did not grant a permit because the estimated number of protestors was too large. Organizers applied for permission again at the Tanintharyi Region level, but authorities also rejected the request.

Union Electric Power Minister inspects Ywama natural gas power station

New Light of Myanmar, 10/09/12 (p. 8 of print edition).

<http://www.burmalibrary.org/docs14/NLM2012-09-10.pdf>

Union Minister for Electric Power U Khin Maung Soe paid an inspection tour of Ywama natural gas power station in Insein Township in Yangon, yesterday afternoon. After he had viewed the chosen site for natural gas power engine to be jointly conducted by the ministry of electric power of Thailand and the ministry, he urged officials concerned to systematically find right location for the station with easy access to carry gas since before it starts to be under construction. He then looked into progress of generating electricity and distribution of electricity by two gas turbines running there. At the meeting hall of the power station, the Union Minister met with officials concerned and left necessary instructions on the extension of the power station installation with new turbines from Thailand. It is learnt that the new two turbines to be equipped with the power station would produce about 125 Megawatt of electricity for each. One will be generating in eight months after their arrival, and in one year for another. They are believed to fulfill the need of electricity supply in municipal areas of Yangon

Former EPM-2 minister appointed to head combined Union Electric Power Ministry

New Light of Myanmar, 08/09/12 (p. 16 of print edition).

<http://www.burmalibrary.org/docs14/NLM2012-09-08.pdf>

Republic of the Union of Myanmar, President's Office

Order No. 33/2012, 6th Waning of Wagaung, 1374 ME (7th September, 2012)

Reshuffle of Union Ministers

In accord with Section 232 of the Constitution of the Republic of the Union of Myanmar and Section 12 of the Union Government Law, following Union Ministers were assigned duties at the ministries shown against each.

(1) Lt-Gen Thein Htay Ministry of Border Affairs

(2) U Khin Maung Soe Ministry of Electric Power

Sd/Thein Sein

President, Republic of the Union of Myanmar

Hydropower on small scale for local people of Yamethin

New Light of Myanmar, 06/09/12 (p. 9 of print edition).

<http://www.burmalibrary.org/docs14/NLM2012-09-06.pdf>

A plan is underway to generate hydropower on a small scale from YeU waterfalls near YeU Hill, 12 miles southeast of Yamethin [in southeastern Mandalay Region]. On 27 August, officials inspected potentials to generate hydropower at the waterfalls. The waterfalls flow down from the hilly areas the whole year despite lesser volume of water in the summer. With the aim of using water from the waterfalls to be used for the people, feasibility studies

have been conducted. The findings of the study shows the hydropower to be generated from the waterfalls is expected to supply electricity to 1000 households in the region.

Thailand to subsidize two gas-fired generators at Ywama power plant

New Light of Myanmar, 04/09/12 (p. 9 of print edition).

<http://www.burmalibrary.org/docs14/NLM2012-09-04.pdf>

Union Minister for Electric Power No.2 U Khin Maung Soe and a delegation led by Deputy Minister of the Ministry of Energy of Thailand Dr Wichianchot Sukchotrat discussed installation of two 125-MW generators in Myanmar from Electricity Generating Authority of Thailand (EGAT) in order to implement bilateral cooperation as well as to provide electricity needs at the Ministry in Nay Pyi Taw on 03/09/12. The installation of the generators will be in time for them to supply electricity in full swing in 2013 when the Southeast Asia Games are held. The installation of the gas turbines will be provided by Thailand. The expenses of the urbanized area where the generators will be set up will be funded by Myanmar. EGAT will provide necessary assistance as well as technical assistance.

Four new ministries created in President's Office

Nyein Nyein, The Irrawaddy, 04/09/12. Excerpt.

<http://www.irrawaddy.org/archives/13275>

Burma's parliament on Tuesday approved the formation of four new ministries within the President's Office while at the same time voting to close the Ministry of Myanmar Industrial Development, and amalgamate the Ministries of Electricity 1 and 2 into one office.

President explains cabinet changes

Win Ko Ko Latt, Myanmar Times, 03/09/12 (Issue 642). Excerpt. Edited.

<http://mmtimes.com/2012/news/642/news19.html>

President U Thein Sein last week sent a letter to the Pyidaungsu Hluttaw speaker regarding a recent cabinet reshuffle and planned ministry reorganisation, explaining that the changes would improve implementation of economic reform, defence procedures and peacebuilding efforts. The August 31 letter to U Khin Aung Myint also outlined plans to reduce the number of ministries in the Union Government but increased the overall number of ministers. The ministries of electric power Nos. 1 and 2 will be combined into a single Ministry of Electric Power, while the Myanma Industrial Development Ministry will be abolished, leaving 31 ministries.

First digital electricity meters installed in Nay Pyi Taw

Su Hlaing Tun, Myanmar Times, 13/08/12. Edited and abridged.

<http://mmtimes.com/index.php/national-news/nay-pyi-taw/196-first-digital-meters-installed-in-nay-pyi-taw.html>

The first digital electricity meters in Myanmar have been installed in Nay Pyi Taw's Lewe township ahead of a national rollout that the government hopes will increase income from electricity sales. Installation of the meters began on July 15 and 100,000 units are expected to be added each year depending on budget allocation, said U Myint Aung, managing director of Electricity Distribution Enterprise under the Ministry of Electric Power. Altogether 4000 are to be installed in Lewe, with Yangon and Mandalay next in line to receive digital meters, he said. The digital meters are provided completely free of charge to customers and are produced by Union of Myanmar Economic Holdings Ltd (UMEHL) using "Korean technology", U Myint Aung said. He said six companies had applied for the contract but the ministry had selected the army-run firm because it had experience producing analogue meters and the South Korean technology in its digital meters was the best on offer. The meters also come with a one-year warranty. Each will cost the ministry K85,500 with cabling, making the contract to supply digital meters to replace existing analogue meters worth almost US\$250 million. The meters are assembled at a factory in Indagaw Industrial Zone in Bago Region, with the meter cover made in Myanmar and the components imported. Businesses in industrial zones will be the first recipients in Yangon, where 906,575 analogue units were being used as of May. Myanmar has a total of 2,453,856 analogue meters, with Mandalay accounting for 354,074 and Nay Pyi Taw about 70,000. U Myint Maung said digital meters would provide more accurate usage information and would make it harder for people to illegally bypass meters and save money on their electricity bills. Ministry staff will also be able to access usage data remotely up to 600 metres from a meter using a handheld computer, he said. "It will save time because we won't need to go from one house to another. Also, there will be less disputes arising because of discrepancies in power units recorded, either. Machine works by itself," U Myint Aung said. The Ministry of Electric Power 2 charges K35 a unit for households and K75 for businesses.

Chronology of events concerned with the aborted construction of Myitsone hydropower dam

Journal of Current Southeast Asian Affairs

Volume 31, No. 1 (2012).

www.CurrentSoutheastAsianAffairs.org

This issue of the journal features six research articles, a conference report and an editorial concerned with relations between the People's Republic of China and Myanmar. A 14-page appendix presents a chronology of events related to the aborted construction of the Myitsone hydropower dam at the confluence of rivers above Myitkyina in Kachin state covering the period 2001 - 2011. A map is included. Most of the information in the chronology is data presented in reports of the Kachin Networking Development Group. The chronology is available on-line at

<http://hup.sub.uni-hamburg.de/giga/jsaa/article/view/517/515>

Appendix (2012), Chronology of the Myitsone Dam at the Confluence of Rivers above Myitkyina and Map of Kachin State dams, in: Journal of Current Southeast Asian Affairs, 31, 1, 141-153.

ISSN: 1868-4882 (online), ISSN: 1868-1034