

"VDB Loi has worked on nearly 4,000 Megawatts worth of Myanmar power projects, some now in operation, some awaiting financial close, but most remain in various stages of approval. We have also assisted the Ministry of Electricity and Energy with many of its transactions and privatizations. However, in the last 12-month period, since 1 April 2016, no new Memorandums of Agreement or new Power Purchase Agreements have been signed."

We are a network of leading law and tax advisory firms with offices in Cambodia, Indonesia, Laos, Myanmar and Vietnam.

Our general areas of practice are corporate, finance, licensing and disputes.

Our principal specialized areas of practice are energy, infrastructure, real estate and construction, telecom and taxation.

There are three things you need to know about our approach:

1. We deliver the ultimate in ground connectivity.
2. Our quality is trusted by the most discerning.
3. We never give up.

FIVE FEARLESS WAYS TO SHAKE UP THE MYANMAR ELECTRICITY MARKET

Since first entering Myanmar in 2012, VDB Loi has worked on nearly 4,000 Megawatts worth of Myanmar power projects, some now in operation, some awaiting financial close, but most remain in various stages of approval. We have also assisted the Ministry of Electricity and Energy with many of its transactions and privatizations. However, in the last 12-month period, since 1 April 2016, no new Memorandums of Agreement or new Power Purchase Agreements ("PPAs") have been signed. Yet, we are entering another summer of rolling blackouts in Yangon with little more additional electric capacity installed over previous years. In the meantime, 65% of households remain unconnected to the grid.

One can't blame the Government for not finding a quick fix. There really is none. This is an incredibly difficult problem to solve. There is a perfect storm of circumstances which accounts for the continued uncertainty: (1) a sharp rise in demand driven by existing households using more and by new households getting connected, (2) a legacy situation of unsustainably low tariffs (at for example one third or half the rates people pay in Thailand, or one fifth of the more comparable Cambodia), not adjusted to inflation, resulting in unrealistic expectations among groups of the population; (3) delays and uncertainty in approving coal and hydro projects, the number one and two sources of cheap

Highlights of this note

- ▶ Smart Ways to Raise the Tariff
- ▶ State to Pay for Default of EPGE or YESC
- ▶ Allow Private and Foreign-Owned Electricity Distribution
- ▶ MPT Model: Bring in Private Sector Money, Management Know How, and Technology
- ▶ Faster Framework for PPP Projects

generation, following (some) social opposition and, to top it off, (4) a declining domestic gas production. Trying to navigate this with a state power apparatus that has only a few year experience with private sector involvement in the power sector (it was closed off until 2009 and we saw the first foreign Independent Power Producers ("IPPs") only come online in 2012) is a superhuman task.

It's not all bleak. Actually the long term prospects are fantastic. Another 6.5 million households to connect is a massive market. The country has abundant hydro, solar, wind resources and new offshore domestic gas reserves are likely to come into play within the next decade. A new investment law was passed last year updating the 2012 watershed Foreign Investment Law, but Myanmar already allowed 100% foreign ownership in most sectors and 80% in most of what is left since 2012. An Electricity Law was passed shortly before that. Myanmar has peacefully transitioned to a democratic Government, which came to power almost a year ago.

PROGRESS REPORT 2016 MYANMAR



<https://goo.gl/jfdQ4U>

So the fundamentals are good, but we need to get there. The time has come for bold reform. So, here are five bold ideas on how the Government can speed up reform, investment and electrification in Myanmar.

Smart Ways to Raise the Tariff

This is no surprise. It all starts with tariff reform. There is no doubt that the current tariff, which is for the most part well below the cost price of generating electricity (both by public or private sector) and making it available to consumers, and which is furthermore not indexed, is on its face unsustainable.

Cost to generate electricity, per resource.

	Rate (cents/kwh)	Build Time (years)	Fuel Cost (cents/kwh)	Lifespan (years)	Annual run-time (hours)	Total (cents/kwh)
Hydro	3.5	3-6	-	40	4,000	3.7
CC Gas	1.2	3	4.7	20	6,000	6.3
Gas turbine	2.6	1-2	6.3	15	2,000	9.6
Coal	2.0	4	2.8	30	6,400	5.6
Diesel	1.6	1	22.5	10	2,000	32.6

Residential tariff rates

kWh/month	Rate (cents/kwh)
0-100	2.5
101-200	2.9
201+	3.7

Commercial tariff rates:

kWh/month	Rate (cents/kwh)
0-500	5.5
501-10,000	7.4
10,001-50,000	9.2
50,001-200,000	11.1
200,001-300,000	9.2
300,001+	7.4

But how do you get tariff increases through without (too much) push back? Will the consumers accept the price changes? There is no one magic formula to get this through as smoothly as possible, but here are some ideas that have worked in other countries:

- Announce rate increases well in advance: set out a 10 year plan with gradual tariff increases
- Use temporary tariff increases: once generators have repaid their loans, you can lower their tariffs too and pass that on to the consumer
- Create a better match with the PPAs EPGE has with IPPs by charging a separate, annual fixed fee for the availability of the service, not based on usage
- Increase new connection fees as a way to raise initial capital
- Tie rates to inflation or consumer price index, some fixed annual increase to avoid having to resort to a large increase in the future
- Explain in-depth why rates have to be increased
- Show that tariffs in other countries are usually higher
- Allow input from and consultation with civil society, even some compromise
- Promise and deliver better services in return for higher tariff
- Use seasonal and "time-of-day" tariffs
- Consider a one-off "capital cost" tariff contribution which is offset over future energy delivery
- Improve management and transparency of the state-owned electricity enterprises and regulators

Pass a Law Saying the State is Responsible for Default by EPGE or YESC

In Myanmar, Government guarantees have mostly only been used in G to G situations, and rarely at that. Getting to some kind of Government undertaking to back up the single state off-taker in the IFC supported Myingyan power project was not easy, and it remains the exception. But, in a pioneer market where the single buyer sells the electricity to consumers, on average, at half of what it pays to generators, sponsors and lenders need additional assurances. Particularly for as long as tariff reform (see below) has not resulted in a financially self-sustainable single buyer, such a measure will be a condition for most large scale electricity projects.

It also makes good use of public funding. For 400 Million US\$, the price of one year of electricity subsidies, one could build one large power plant. Or, if carefully structured, one could use the 400 Million US\$ as guarantee for nearly 4 Billion US\$ worth of new power infrastructure.

There are several ways to achieve this. Perhaps the most comprehensive approach would be to create a detailed framework under the Public Debt Management Law of 2016 for sovereign guarantees, which explicitly provides for this possibility. One cannot implement a policy without first determining which projects would qualify, what the approval process is, how to account for guarantees in the budget and the state accounting, and other terms. Hence the need for such framework.



A quick shortcut to reach, in essence, the same result, is passing an “EGAT-type law”. In Thailand the law creating the state-owned electricity company EGAT provides that it is guaranteed by the State. In reality, the State cannot do otherwise anyway, and having such a law makes painful discussions and procedures on a case-by-case basis, to some extent, unnecessary.

Immediately Allow Privately and Foreign Owned Electricity Distribution, Especially for Industrial Parks and Remote Areas

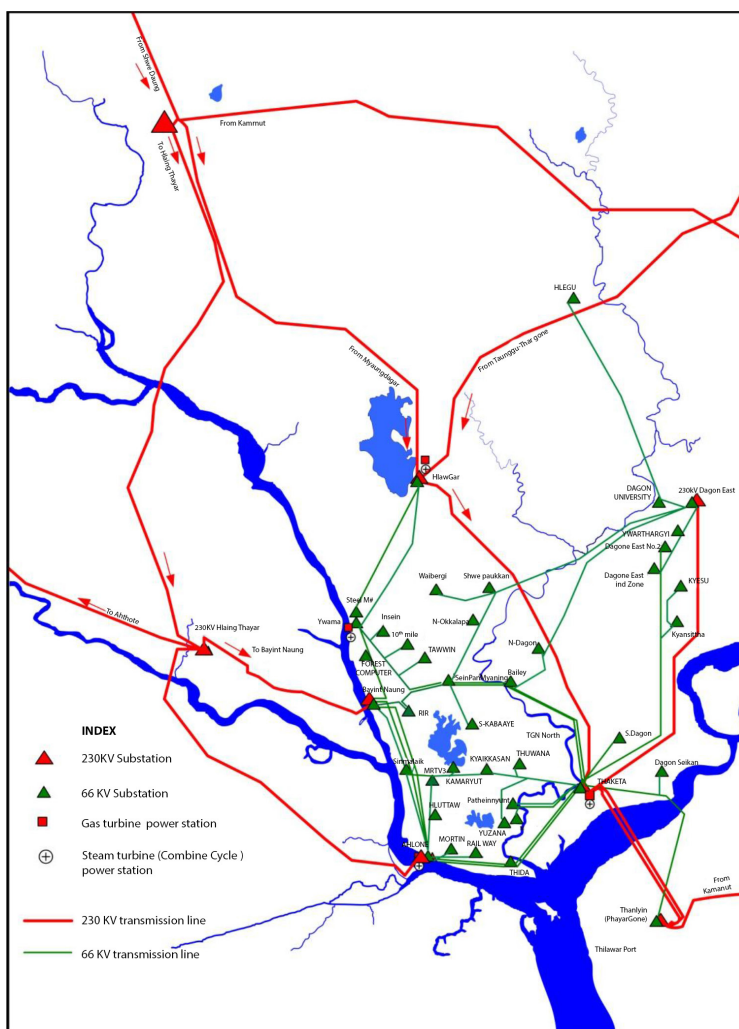
A quick win for everyone is for the Government to extract itself from the subsidized sale of electricity to industrial consumers. The top rate for industrials is 150 MMK, but this only applies to volumes which are nearly never actually delivered. In reality, most pay an average of 100 MMK, which is still a subsidized. However, a reliable supply would eliminate the need for expensive diesel generators, which may cost 270 MMK or so in Yangon, but prices may go up to 600 MMK for solutions in rural areas. As there is no need for the Government to be subsidizing industrial customers, one wonders why they should be involved at all, except as a regulator.

More than 65% of the households in Myanmar are not yet electrified. The National Electrification Plan calls for this to happen by 2030. Allowing more private sector involvement in this, including by foreign investors, will boost the access to know-how, funding and technology. For this to happen, one of the main challenges to off-grid power projects has to be removed: no one knows what happens to a costly off-grid power project when the grid finally does arrive. Generators and distributors need a reasonable IRR, villagers do not want to wait for another 5 years or more, and the Government does not have to be in the power business everywhere, in my view. So, a fair compromise has to be made with initial high tariffs, for example selling to consumers at 12 cents or more (still well below diesel gensets or buying power from small generators in India or Thailand, the current alternatives), rapidly decreasing to normal rates after the off-grid generator has serviced its lenders. This can be done through a regulation implementing the Electricity Law 2014.

YESC Should Do What MPT Did: Bring in Private Sector Money, Management Know How and Technology

The problem is not just that there is not enough generation. The transmission and distribution network creates a loss of 17%, equaling its own 425 megawatt power plant. To put it another way, if this loss could be eliminated, for one year no additional power plants would even be needed. Delays in modernizing the distribution network hold up new power generation investment. It has been reported that IFC has estimated that a rehabilitation of the existing Yangon distribution network would take over 5 to 7 years and cost over 1 Billion \$US. Improving and managing a grid very efficiently requires technology and know-how which needs to be acquired. To spread out the cost of that transfer, YESC could follow in MPT’s footsteps. The former state monopolist telecom operator, when the market was liberalized and Ooredoo and Telenor entered, signed a strategic partnership with KDDI and Sumitomo Corporation, resulting in a joint operation with access to new foreign cash and know how.

More specifically, I suggest that Yangon Region creates a new Grid Management Company with private sector stakeholders, essentially a Public Private Partnership. This company will provide grid improvement and management services for a results and efficiency based fee. This way, YESC, which currently has no budget for needed improvements in substations and grid lines, can give the people a new and optimal managed distribution network without an immediate cash out.



Launch a Faster Framework for PPP Projects, Perhaps at a Subnational Level

There are plenty of potential projects, projects underway, projects pending approval. No lack of opportunities. The problem is that not enough are getting through fast enough to financial close and COD. This is common in emerging markets, and Myanmar is no exception. What is slowing down the progress on projects in various stages of development and approval? In Myanmar, experience has shown, a major problem is that projects the Government makes available are often not scoped well in terms of business merits. There are too many loose ends at the outset, too many uncertainties

for bidders to cope with. For example, if the land for a power project or a site for an LNG terminal is not already lined up when the project is brought to the market, the risk of delays increases too much for many bidders who would be great partners for the Government but who have to now drop out at an early stage. If no one knows if the project will receive a Government guarantee or not, and the sponsors need one to make it bankable, we might all be wasting our time unless this is determined from the outset. In managing tenders for the Government, one often feels political pressure to jump ahead to get an RFP out to the public, and with very short reply times. It would actually be better to take more time to sort out the loose ends in advance and give big organizations more time to respond with a well thought out proposal. You need resources to run a better process, which takes know how and experience. This cannot be something that officials have to do as yet one more task, without any additional resources or

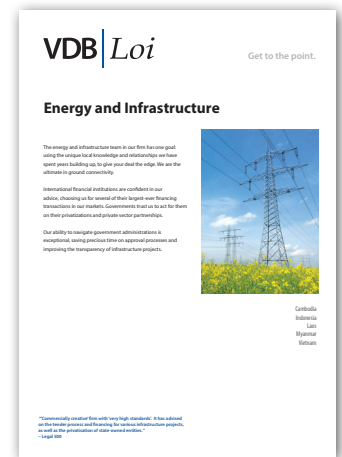
time. Confidence of potential investors in the process needs to be increased. We can do that by putting the projects better together and by running them with international best practices. So that funding becomes available and credibility increases, you need to lay down a clear framework in a law or a regulation. We have earlier proposed a "PPP Law", a silver bullet that can eliminate a bunch of problems with one swift stroke: procurement, costs, PPP unit, transparency and certainty, land use, guarantees, etc.

There is no reason we cannot do this at a subnational level, in the states and regions. There have been good experiences with PPP at state level in India, for example. Sometimes, a state or region can act faster and can get state assembly approval quicker, should that be needed. In addition, the state or region is usually the land owner, so that is another time saved.

RELATED VDB LOI PUBLICATIONS

- ▶ [Client Alert: Japanese Seek Entry into Myanmar Energy Sector, But How?](#)

DOWNLOAD OUR EXPERIENCE HERE



<https://goo.gl/BFMLEK>

CONTACT



Edwin Vanderbruggen
Senior Partner, VDB-Loi
edwin@vdb-loi.com

Edwin Vanderbruggen is one of the most prominent foreign legal advisers in Myanmar, and he is widely recognized for his experience in the energy and infrastructure space in Myanmar. Edwin's experience working with the Myanmar Government is second to none, as he advises the Government on privatization transactions and PPPs in energy, transport and telecommunications. He and his team have uniquely extensive experience in electric power, and were involved in four out of five of the Myanmar gas and renewable projects concluded in March 2016, and he advised the Japanese Government on their investment in the Thilawa SEZ. Edwin worked on the planning, negotiation, documentation and financing for projects of all types of power generation, including gas, coal, hydro, solar, wind and W2E in Myanmar. He also advises four of the 'super majors' on oil and gas interests in Myanmar and on the first LNG terminal in the country. He lives in Yangon.

YANGON

Level 8, Centrepont Towers
No. 65 Sule Pagoda Road & Merchant Street, Kyauktada Township
T: +95 137 1902 / +95 137 1635
F: +95 124 1238

ENERGY TEAM

VDB Loi has created a practice team to support the partners comprising foreign and locally qualified lawyers and regulatory advisers work exclusively on Energy matters.



Charles Magdelaine
Team Leader
charles.magdelaine@vdb-loi.com

The Energy team is led by Charles Magdelaine. Charles is a French lawyer qualified to practice in Paris educated in France, the United States and China. He has extensive experience in the documentation, financing and negotiation of energy projects in Southeast Asia, and Myanmar more in particular. Charles focuses on oil and gas, infrastructure, power and other natural resources projects.

NAY PYI TAW

No. S-204, Tha Pyay Kone Ward,
Zabu Thiri Township
T: +95 678 108 091
F: +95 678 108 092