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MYANMAR'S FIRST BILINGUAL BUSINESS JOURNAL

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Street Festivals Are Big Business, But Profits are Turning Thin



Morey, J Weston

TIN MG OO

In the week surrounding the full moon festival of Thadinggyut, neighborhoods around the country form night markets with food stalls, carnival rides and even human-powered ferris wheels. In Yangon, these have become a high-stakes business for street vendors, as well as a large source of cash for township governments.

Behind the festive mood of the event, the life and struggle of people who make a living selling food, running carnival games or building and powering rides in recent years as the cost of materials, labour and space has risen greatly.

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Myanmar Summary

မြန်မာ့ရိုးရာအစားအသောက် အစုံအလင်ကြော်လှော် ရောင်းချ

နေတဲ့ဆိုင်များလမ်းရဲ့တစ်ဖက်တစ်ချက်ပြည့်နှက်နေပါတယ်။ အဆိုပါနေရာတော့ရန်ကုန်မြို့ရဲ့အကြီးအကျယ်ဆုံးပွဲဈေးတစ်ခုဖြစ်တဲ့ ရေကျော်ညပွဲဈေးတန်းမှာပါ။ နိုင်ငံခြားဧည့်သည်တွေအပါအဝင် များပြားလှတဲ့လူတွေလည်းလှုပ်ရှားတိုးဝှေ့ပြီးလျှောက်လှမ်းလို့နေပါတယ်။ ယခုလိုပျော်ရွှင်မှုတွေရဲနောက်ကွယ်မှာတော့မိသားစုဘဝစားဝတ်နေရေးအတွက် ရုန်းကန်နေရသူများလည်း တွေ့နေရပါတယ်။

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Businesses Hesitant in Prelude to Elections

Tourism, investment, legislation expected to resume in late November

ZAYAR NYEIN

Uncertainty regarding the national elections on November 8 has caused many business decisions to be put off until later in the year, members of the business community told Myanmar Business Today.

Dr Myo Thet, vice-chairman of UMFCCI said, "Everything depends on the results of the election. If the country goes forward and forms a new government peacefully, the country's economic situation will be good. Business leaders are hesitant to invest now, but can make informed decisions at that time. We can't predict the country's situation even a few weeks into the future, as so many things depend on the results of the election."

Many issues facing the country will have to be resolved after the elections.

According to U Than Soe, an economist and political candidate, "Myanmar's economy cannot be separated from the

country's political situation. A lack of rules and regulations in business and the extremely high land prices are barriers to investment. The country's economy largely depends on how much we can improve these weaknesses."

US engagement with Myanmar will be heavily influenced by the next few weeks. Assistant Secretary of State Daniel Russel was reported last week by Reuters as saying, "It is critically important that all parties accept the results of the polling. Our ability to assist the new Burmese government, let alone to look at relaxation of sanctions... will depend on our assessment of the integrity of the overall process. The conduct and results of these elections will fundamentally shape our engagement with the Burmese government in 2016 and beyond."

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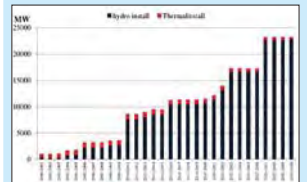
Myanmar Summary

ရွေးကောက်ပွဲအခြေအနေကို

စောင့်ဆိုင်းနေခြင်းများကြောင့် စီးပွားရေးလုပ်ငန်းရှင်များသည် အဓိကကျသည့် စီးပွားရေးဆိုင်ရာ ဆုံးဖြတ်ချက်များကို ရွေးကောက်ပွဲပြီးမှသာ ချမှတ်ရန်ရှိနေကြောင်း စီးပွားလုပ်ငန်းရှင်အသိုင်းအဝန်းက Myanmar Business Today သို့ ပြောသည်။

Contd. P 10...

Inside MBT



Geothermal Energy in Myanmar: Securing Electricity for Eastern Border Development P-6



Can Pearls Be Southern Myanmar's New Big Industry? P-11



Health Care Spending on the Rise in Myanmar P-21

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10

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Business News in Brief

Myanmar imports palm oil to meet cooking demand

Myanmar imported 400,000 tons of palm oil annually to fill demand of edible oil as an alternative, an official report said on Sunday. The most common domestically produced cooking oil is produced from peanuts and totals 500,000 tons per year, while edible oil consumption now exceeds 900,000 tons, the Edible Oil Dealers' Association was quoted by Xinhua News Agency as saying. The association attributed the low edible oil production to a low number of peanut oil mills in operation nationwide. Since 2011, Myanmar has granted private companies licenses to import palm oil from Malaysia and Indonesia in a bid to meet the demand.

Ooredoo Myanmar to receive IFC loan

Qatari telecom provider will receive a \$150 million loan from the International Finance Corporation (IFC), the investment arm of the World Bank, to expand its network infrastructure, the Gulf Times reported. Ooredoo currently operates 2,800 towers, and the company claims that its network can cover 85 percent of populated areas.

Myanmar to receive attention from satellite providers

Pending reconfirmation of a new broadcasting law and further commitments to the development of Myanmar's infrastructure, the global satellite industry will hold a Myanmar Satellite Forum for the second year. With broadband offering an opportunity to make rapid advances in social and economic development, Myanmar could develop as one of Asia's fastest-growing markets. The Satellite Forum runs as part of Communicast Myanmar 2015, held at the Myanmar Event Park in Yangon on November 17 to 19.

India to prioritize commercial ties over security in border area

In a strategic shift, the government of India will prioritize commercial links over security concerns in the border areas in India's northeast, unnamed government officials told the Indian newspaper The Assam Tribune. The officials said that previously they had emphasized only safety in the region, which has been torn by insurgencies. The Indian government is working towards the development of a highway from India to Thailand as part of their government's Look East policy.

Telecom tower boom is not over yet- report

The telecom tower market in Myanmar is projected to witness fastest compound annual growth rate of over 28% between 2015-2020, according to a report titled, "Telecom Tower Market Forecast & Opportunities, 2020 - Indonesia, Malaysia, Cambodia and Myanmar."

Indonesia remains the largest market in Southeast Asia. Factors driving growth in Myanmar will include growing smartphone penetration, declining tariffs and the anticipated entry of a fourth telecom operator in the market.

Caterpillar denies jade connection

Construction equipment manufacturer has stated that they appropriately screened mining companies in Myanmar before doing business. The Irrawaddy magazine reported. This comes in the face of allegations that the company has been connected to sanctioned jade mining companies. The report by watchdog group Global Witness claimed that Caterpillar's, "local dealership is linked to a group of companies which appears to be controlled by US-sanctioned narcotics kingpin Wei Hsueh Kang."

AYA Bank gets IT upgrade

Myanmar's Ayeyardwady Bank (AYA Bank) has contracted systems integrator NEX4 ICT Solutions to overhaul the financial service provider's IT infrastructure. From banking, trading to payment services, AYA Bank's employees across the country create and manage high amounts of data ranging from customer information, financial records and more daily. With increasing growth in business, AYA Bank needed the ability to provision the necessary support to manage the rising data volumes at a cost-effective and efficient manner.

Myanmar Summary

အိန္ဒိယအစိုးရသည် မဟာဗျူဟာကျသည့် အပြောင်းအလဲတစ်ခုအဖြစ် လုံခြုံရေးအရ စိုးရိမ်စရာများရှိနေသည့် နိုင်ငံ၏ အရှေ့မြောက်ပိုင်းဒေသ များတွင် စီးပွားရေးလုပ်ငန်းများ ဦးစားပေးဆောင်ရွက်သွားမည်ဟု အစိုးရတာဝန်ရှိသူတစ်ဦးက အာသံတိုင်းမိသတင်းစာသို့ ပြောခဲ့သည်။
မြန်မာနိုင်ငံရှိ ဆက်သွယ်ရေးတာဝါတိုင်လုပ်ငန်းများသည် အလျင် အမြန်တိုးတက်လာပြီး ၂၀၁၅ ခုနှစ်မှ ၂၀၂၀ ခုနှစ်အတွင်း ၂၈ ရာခိုင်နှုန်း ကျော် တိုးတက်လာဖွယ်ရှိသည်ဟု အစီရင်ခံစာများအရ သိရသည်။
စားသုံးဆီလိုအပ်ချက်ကြောင့် မြန်မာနိုင်ငံသည် နှစ်စဉ် ဆီအုန်း တန် လေးသိန်းကျော် တင်သွင်းခဲ့သည်ဟု သိရသည်။ မြန်မာနိုင်ငံရှိ စားသုံးဆီ အများစုကို မြေပဲမှထုတ်လုပ်ပြီး နှစ်စဉ် တန် ငါးသိန်းခန့် ထုတ်လုပ်နေ သည်ဟု သိရသည်။
ကာတာဆက်သွယ်ရေးလုပ်ငန်း အူရီဒူးသည် နိုင်ငံတကာဘဏ္ဍာရေး ကော်ပိုရေးရှင်း (IFC) မှ ချေးငွေ အမေရိကန်ဒေါ်လာ သန်း ၁၅၀ ရရှိ ခဲ့သည်ဟု သိရသည်။
ဆောက်လုပ်ရေးပစ္စည်းကိရိယာများထုတ်လုပ်သူ Caterpillar သည် စီးပွားရေးပိတ်ဆို့ခြင်းခံထားရသည့် ကျောက်စိမ်းတူးဖော်ရေးကုမ္ပဏီများ နှင့် ပတ်သက်မှုမရှိကြောင်း ငြင်းဆိုခဲ့သည်။
ဧရာဝတီဘဏ်သည် ဘဏ်လုပ်ငန်းဆိုင်ရာဆောင်ရွက်မှုများ၊ ကုန်သွယ် ရေးအတွက် ငွေပေးသွင်းမှုဆိုင်ရာဝန်ဆောင်မှုလုပ်ငန်းများအတွက် အိုင်တီ လုပ်ငန်း NEX4 နှင့် စာချုပ်ချုပ်ဆိုခဲ့ကြောင်း သိရသည်။

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Geothermal Energy in Myanmar: Securing Electricity for Eastern Border Development

DAVID DUBYNE & HISHAMUDDIN KOH

As the world has seen over the last 15 years, solar panels and wind turbines for grid scale power have limits due to the lack of continuous wind or sunlight. These renewable energy sources are great for developed economies with 24/7 electricity availability as an-add in electrical source, but what about Myanmar, which is only just beginning to modernize an insufficient power grid from 1960s infrastructure?

Coal has a place in Myanmar's future thermal power generation plans, but where delivery by rail to remote destinations which is economically impractical, for example in the remote eastern border with Thailand, electricity for rural economic growth needs to be re-thought.

Additionally, add in right of way disputes along every meter from point A to point B through rural areas for power projects. Villagers are well aware of their rights for land compensation and have severely inflated land prices, in which farmers are asking as much as \$50,000 per acre to place line towers above dirt track accessible farmland.

Coal field/thermal power plant development in Kalawa, Lashio, Tigyt and Eastern Shan areas will connect major dry zone population centers and newly established industrial zones along the Irrawaddy River with 500kV Double Circuit lines. However remote eastern areas sharing a border with Thailand will need years until steady electricity by way of grid expansion reaches towns, villages and factories.

Geothermal power production in Eastern Myanmar will localize electrical production, shortening delivery distances reaching the end user, with secondary agricultural processing uses speeding rural development. Villages will experience socio-economic improve-

ment of rural productivity and income as well as enhancement of farmers' skills and capabilities in adopting new technologies and managing bio-resources.

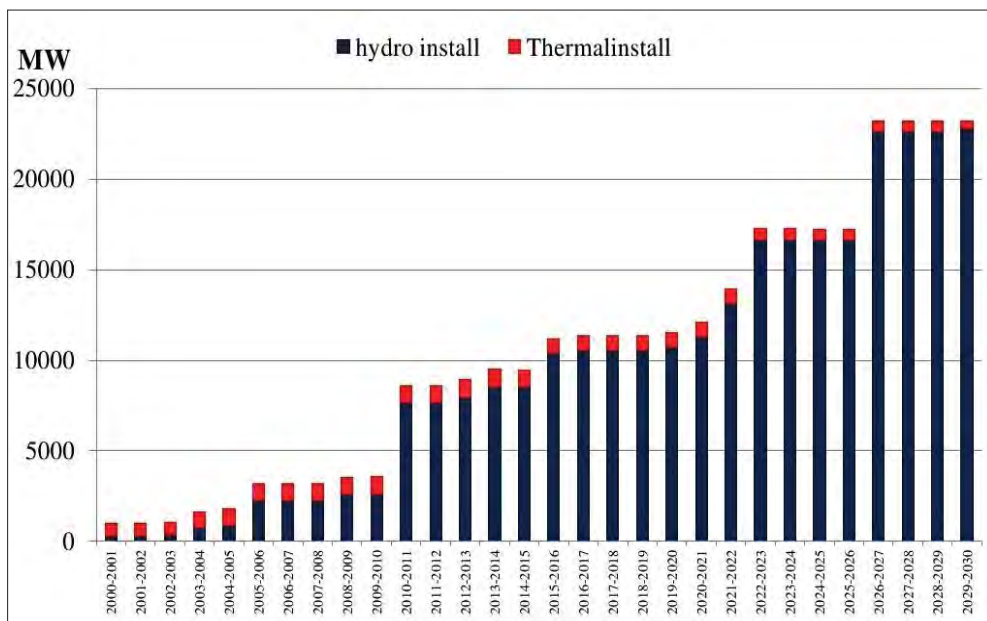
Building Blocks

Rural and Livelihood Development is a key building block in the Central Government's national development plan, which plans to position the country's agriculture industry as the food basket of Asia within two decades. These ambitious plans will require tenacity and a steady flow of investments to upgrade machinery, seed stock, fertilizer input, crop handling & storage methods, refrigeration, secondary processing & dehydrating.

The bio-village conceptualized by Hishamuddin Koh envisions active participation by farmers in villages with low income and productivity. They can be brought out of poverty if villages have significant acreages of land under crop or animal production for food or biofuels and access to reliable electricity even at minimal levels for processing bulk products higher up the value chain.

The proposed project must be cost-effective and capable of promoting self-reliance among the farming community in the pilot village or subsequent close proximity villages. There must be a need for agronomic and technical inputs to enhance greater productivity with a model having a multiplier effect for subsequent similar development in other villages. Technical (including training) is also a key component of self-reliability training to get villages away from continually needing financial support due to poverty.

Current development plans or bio village concepts are meaningless unless there is a reliable power supply. So the next question to be raised is: How will geothermal power stations and rural livelihood development



The Ministry of Electric Power has introduced plans to greatly increase hydroelectric and geothermal power generation.

integrate and co-benefit each other?

Hot Water

2015 Photius.com electricity consumption per capita rankings put Myanmar at 109.3 kW and USA at 12,185 kW. Myanmar consumption is low, not because citizens do not want to use electricity, but because it's simply not available.

With roads leading to the newly constructed geothermal power plants, agriculture transporters can bring necessities to boost agricultural output and transport processed crops to market. In reality, if you can't move people or crops you sure can't move income and the economy stagnates. Geothermal Power will provide upgraded transportation routes, steady electricity along with rural & tourism development.

There are at least 39 locations in 1986 by Myanma Oil and Gas Enterprise (MOGE). Additionally in 1990 UNOCAL in cooperation with (MOGE) conducted analysis of geothermal data from sampling of 15 hot spring sur-

face discharges of 57°C or higher.

Surface exploration revealed a total of 93 thermal springs identified in Kachin State, Shan State, Kayah State, the southern part of Rakhine State in Kyaukphyu, central Myanmar, Shwebo-Monywa area and especially in Mon State and Taninthayi Division. Drilling and testing of confirmation wells is the next step.

The Strong Dollar

Hot spring systems with surface temperatures near or greater than 50°C have potential for Binary Cycle Power Plant Generation, with an estimated break even power cost of 5.3-8.6 U.S cents/kWh or in Myanmar Kyat 53-86K per kWh. This pegs a non-fluctuating 1\$=1000K, which is a main concern for power project funding.

Between June 2012 and October 2015, the Myanmar Kyat depreciated by approximately 35%, from 850 down to 1300 against the US Dollar. Local businesses with foreign denominated loans from abroad suddenly found themselves rushing for a strategy to mitigate currency risks. Myanmar's current lack of available currency hedging solutions presents a real challenge for these firms.

With the IMF forecast including Myanmar's economic growth at 8.25% in 2016, demand for credit is increasing, yet, the bulk of SME's remained credit

deprived. Myanmar's forward-thinking Union Government wanting to stimulate economic development by addressing this problem, issued a new draft of the Public Debt Management Law aimed at restating and clarifying some of the existing rules with respect to Government loans, bonds, borrowing & guarantees.

States and regions may obtain foreign financing, but only with union government approval. In the same law, foreign banks will be able to issue loans to State Owned Enterprises (SOE's) and there are nine clauses describing when the Union Government can obtain foreign financing.

The main drawback with these proposed changes is that along with depreciation pressures, in the current FX derivatives market there are no currency forwards for long term foreign denominated loans on the Kyat leaving only the option of Political Risk Insurance to cover currency losses, if at all.

Currency volatility is clearly a risk. Hedging solutions backed by a basket of currencies to mitigate risk and offset losses not effectively covered by commercial markets, should be included in Myanmar's central risk mitigation strategy by diversifying exposure over a number of currencies worldwide.

In USD terms, un-hedged loans using a basket of emerging market currencies and major trading partner's currencies will minimize the impact of an un-hedged position when spread through USD, THB, & SGD for example. This will allow the borrower at disbursement to receive funding denominated in local currency and is a local currency loan liability. All cash flow movements are actually still done in USD offshore.

This will minimize currency risk from Myanmar borrowers and reduce non-performing loans to under 1% for foreign firms able to fund and finance machinery and services. This must be a core part of any discussion involving machinery loans for infrastructure build outs countrywide, especially on longer term projects such as geothermal energy, ports and water treatment.

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Myanmar Summary

ပြန်လည်ပြည်ပြုရေးအဖွဲ့အစည်းအဖြစ်များဖြစ်သည့် လေအားမှ လျှပ်စစ်ထုတ်ယူခြင်းနှင့် နေအားမှ လျှပ်စစ်ထုတ်ယူခြင်းတို့ကို ကမ္ဘာနှင့်တစ်ဝန်း အသုံးချလာသည်မှာ အချိန်ကာလအားဖြင့် ၁၅ နှစ်ကျော် လာပြီဖြစ်သည်။ သို့သော်လည်း စဉ်ဆက်မပြတ် နေရောင်နှင့် လေအားရရှိနေပုံရိပ် အကန့်အသတ်ရှိခြင်းများကြောင့် ပြန်လည်ပြည်ပြုရေးအဖွဲ့အစည်းအရင်းအမြစ်တွေကို ထပ်ဆောင်းစွမ်းအင်အရင်းအမြစ်အဖြစ် သာ အသုံးပြုသည့် ဖွံ့ဖြိုးရေးနိုင်ငံများအတွက်သာ အဆင်ပြေနိုင်သည်။

လျှပ်စစ်စွမ်းအားထုတ်လုပ်မှု အခြေခံအဆောက်အအုံများမှာ ၁၉၆၀ ခုနှစ် ခေတ်အခြေအနေ လောက်သာရှိနေသည့် မြန်မာနိုင်ငံအတွက် မူနှစ်ဆယ့်တစ်ရာလျှပ်စစ်ထုတ်လုပ်မှုအခြေအနေကို ရောက်ရှိဖို့ရန်အတွက် မည်ကဲ့သို့လုပ်ဆောင်ရမည်နည်းဟု မေးခွန်းထုတ်စရာဖြစ်နေသည်။ ကျောက်မီးသွေးသည် မြန်မာနိုင်ငံတွင် အပူစွမ်းအင်ထုတ်လုပ်မှုအတွက် အခြေအနေကောင်းများရှိသော်လည်း သယ်ယူပို့ဆောင်ရန် အခက်အခဲရှိခြင်းနှင့် စက်ရုံတည်ဆောက်ရန်အတွက် နေရာအခက်အခဲများရှိနေသည်။

Contd. P 7...

From page 6...

Side Effects May Include Shrimp

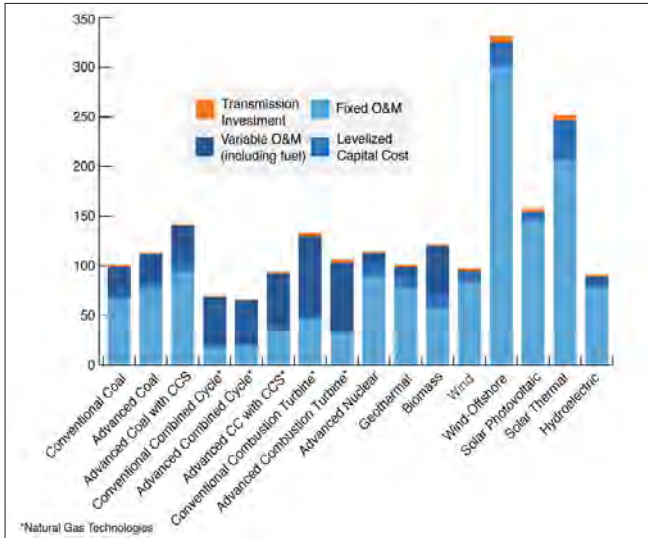
An inclusive approach bio-village based around geothermal power will increase rural productivity and income alleviation, environmental protection and improvement, as well as capacity building of farmers' skills and knowledge through technology transfer, management and maximizing the use of rural Bio-resources. Its success will provide impetus and impact in developing other villages. It also addresses the crucial issues of energy and food crisis at the village level. The 3A's (availability, accessibility and affordability) are crucial to increasing farmer's income and productivity.

Binary Cycle Geothermal Power Plants use more common hot water resources (200-300°F/100-148°C). Hot water is passed through a heat exchanger in conjunction with a secondary (hence, binary plant) fluid with a lower boiling point (usually isobutene or isopentane). Secondary fluid vaporizes, pushing the turbines, which drive the generators. Enclosed secondary fluid is simply recycled through a heat exchanger. Geothermal fluid is condensed and returned to the reservoir. Binary plants use a self-contained cycle, nothing is emitted.

Exhaust water from power plants can be used in greenhouse applications, heating water to speed the growth of fish/shrimp, drying process heat for dehydrating agricultural crops and processing higher up the value chain than a simple bulk commodity. These benefits would reduce farmer's production costs and speed rural development with other options of "Zero Waste" utilizing all forms of biomass, from crops waste to grass and weeds and converting these into energy sources.

Keeping Up With Demand

Direct heating applications can use much shallower wells with lower temperatures, so smaller systems with lower cost and risk are feasible. Residential geothermal heat pumps with a capacity of



Estimated leveled cost of new electric generating technologies in 2017, in 2010 dollars per megawatt hour.

10kW are routinely installed for around \$1,000 per kW which is affordable for townships.

According to the Ministry of Electric Power (MOEP), new capacity must increase at 15% per year to stay even with forecast electrical consumption country wide. Also from MOEP's figures, total combined electrical generation from hydro, natural gas and coal was 3,495 MW in 2012, but by 2030 the maximum demand will increase to 18,900 MW.

This is a five fold increase in 18 years so the obvious questions are:

How will the required electricity demand for economic development be produced?

Which sources and options are available for sovereign, state or municipality to fund and finance projects with forward hedging strategies against Kyat devaluation and repayment in foreign currency?

Looking out to 2030 Geothermal is not mentioned in MOEP's installed capacity forecast increases. The question is why not?

Experts estimate older equipment and infrastructure throughout Myanmar currently result in about 40% of generated power not reaching its ultimate destination due to both technical and non-technical losses. This is the exact reason localized power systems are needed for regional areas which will install fully functional smaller kV transmission lines.

Build out and ROI calculating leveled cost of electricity are incredibly important in Myanmar's emerging economy. Levelized cost of electricity (LCOE) is a measure of a power source which at-

tempts to compare different methods of electricity generation on a comparable basis. It is an economic assessment of the average total cost to build and operate a power-generating asset over its lifetime, divided by the total power output of the asset over that lifetime. LCOE is the cost at which electricity must be generated in order to break-even over the lifetime of the project.

The Energy Information Administration (EIA) 2017 levelized costs put Geothermal at \$100/MW hour, equivalent to

combined Cycle Thermal Coal with Carbon Capture Storage. LCOE is for power generation only; it does not take into consideration rail lines for delivery of coal or associated MRO costs and periphery inputs in the fuel/coal delivery system. Geothermal has significant advantages in that it does not require delivery of fuel.

There are two available geothermal power solutions for Myanmar's power dilemma in rural communities: Binary Cycle Power Plants of 50-100MW and Small-Scale Geothermal Power Plants under 1MW. This means area specific needs can be addressed and programs designed to fit bio-village requirements in a variety of circumstances allowing rural development to take place. It's the best of two worlds, clean non-polluting power and constant electricity supply which will preserve the landscape for tourism and boost farming community incomes.

This is what Myanmar needs to insure it stays "a jewel of nature" in our

modern world, protected environment but at the same time provides opportunities and potential for accelerated economic growth, by addressing the crucial issues of energy and food crisis at the village level for localized rural development.

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From page 6...

ထိုပြင် တောင်သူများသည် မိမိတို့ မြေအတွက် လျော်ကြေးတောင်းဆိုရန်အတွက် အသင့်ရှိနေတတ်ကာ အလွန်တရာဖောင်းပွနေသောမြေဈေးနှုန်းတို့ကြောင့် ၎င်းတို့၏ မြေလျော်ကြေးတောင်းဆိုမှုမှာ ဓာတ်အားလိုင်းတိုင် တည်ဆောက်မည့် တစ်ကေလျှင် သိန်းငါးရာအထိပင် ရောက်တတ်သည်။ အပူစွမ်းအင်သုံးလျှပ်စစ်စက်ရုံများကို တီကျစ်၊ လားရှိုးနှင့် ရှမ်းပြည်နယ်အရှေ့ပိုင်း တို့တွင် ဖော်ဆောင်နေပြီးဖြစ်သည်။ အရှေ့ပိုင်း မြန်မာပြည်တွင် အပူစွမ်းအင် သုံး လျှပ်စစ်စက်ရုံများ တည်ထောင်လာနိုင်ပါက ဒေသအတွင်းလျှပ်စစ်ဓာတ်အားထောက်ပံ့မှုကို အကူအညီဖြစ်စေကာ ကျေးလက်ဒေသဖွံ့ဖြိုးမှုကိုလည်း ပိုမိုအားပေးရာရောက်သည်။

ကျေးရွာများအနေဖြင့် လျှပ်စစ်စွမ်းအားပြည့်ဝစွာအသုံးချနိုင်ခြင်းဖြင့် ဝင်ငွေများ ပိုမိုတိုးတက်လာနိုင်သလို လယ်သမားများသည်လည်း နောက်ဆုံးပေါ် နည်းပညာများနှင့် ခေတ်မီစက်ကိရိယာများကို ရရှိလာ တဲ့ လျှပ်စစ်စွမ်းအားဖြင့် အသုံးချလာနိုင်မည်ဖြစ်သည်။ ကျေးလက်ဒေသဖွံ့ဖြိုးရေးဖော်ဆောင်မှုသည် မြန်မာနိုင်ငံအစိုးရ၏ အဓိကရည်မှန်းချက်များထဲတွင် တစ်ခုအပါအဝင်ဖြစ်သည်။

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