GLOBAL BUSINESS REPORTS

INDUSTRY EXPLORATIONS

INDONESIA POWER & MINING

2014

Economy | Regulations | Export Ban | Coal | Renewables | Minerals
Coking Coal | Smelting | Shipping | Explosives | Services

G-RESOURCES
MARTABE GOLD MINE

PATH TO GROWTH

A Sustainable Contribution to Indonesia

OUTSTANDING QUALITY OF DEPOSITS

Resources: 8.1 Moz of gold and 73.8 Moz of silver - **Reserves:** 3 Moz of gold and 31.9 Moz of silver

LOWEST GOLD COST PRODUCER

2013 NAGIS cash cost: $483/oz - 2013 WGC All-In Sustaining Cost (AISC): $799/oz

GROWTH IN CONFIDENCE AND QUALITY

First year full production: 281,477 ounces of Gold and 1,515,228 ounces of Silver - Excellent safety performance

STRONG COMMITMENT TO GROWTH

Recognised as key investment in the MP3EI Strategy (the Master Plan for Acceleration and Expansion of Indonesia's Economic Development)

SUSTAINABLE STAKEHOLDERS ENGAGEMENT

A State-owned Enterprise managed by the North Sumatra province and South Tapanuli regency hold 5% of Martabe Gold Mine's shares

In 2013, in order to provide ongoing support for established local businesses, over $1 million was spent on locally provided goods and services

Approximately 2,500 employees, more than 95% from Indonesia, and 65% of them come from South Tapanuli and North Sumatra

PT AGINCOURT RESOURCES

(A Subsidiary of G-Resources Group Ltd. SEHK Stock Code: 1051)

MARTABE GOLD MINE
Jl. Merdeka Barat Km. 2,5
Desa Aek Pining, Batangtoru – Tapanuli Selatan
Sumatera Utara, Indonesia 22738
T: +62 634 370 330 F: +62 634 370 333

JAKARTA OFFICE
Wisma Pondok Indah 2, Level 12 – Suite 1201
Jl. Sultan Iskandar Muda Kav V-TA
Pondok Indah – Jakarta Selatan, Indonesia 12310
T: +62 21 7592 2808 F: +62 21 7592 2818

www.g-resources.com

Dear readers,

The island country of Indonesia is changing in every sense of the word. Favorably situated in fast-growing Asia and with an enviable reserve of natural resources, Indonesia has experienced rapid urbanization, rising incomes and an exploding population. Much of the country's success can be attributed to strong growth within a historically key pillar of the economy, the mining industry, which contributes approximately 12% to the country's GDP. But with all of this growth has come an associated strain on the power sector, the proverbial engine of growth.

Today, these two vitally important areas of the Indonesian economy are at important stages in their development but in two very distinct ways. As the result of an evolving regulatory environment, the Indonesian mining and power sectors hold drastically different future prospects. Wanting to keep more value derived from the mining industry within the country, the government in 2009 passed several mining-specific regulations that have greatly impacted the expectations for the industry. Most significantly, these changes include an export ban on unprocessed minerals, in-country processing requirements, and divestment requirements for IUP or Contract of Work holders. While these new regulations will take several more years for industry participants to feel their full force, commodity exports have fallen significantly and foreign investors are already exhibiting apprehension. The mining industry continues to work through the government-mandated changes and their concomitant challenges.

While the outlook for the mining industry remains to be seen, growth in power generation in Indonesia is imperative. Possessing one of the lowest electrification ratios in the region and with demand expected to increase by 7.4% per year, Indonesia is already starting behind. Fully aware of the situation and the potentially damaging consequences to the country's rising industrial sector and burgeoning population, the government in recent years has instituted new laws and incentive programs that will allow Indonesia to increase power generation by utilizing its bountiful natural resources. Power generation has indeed increased significantly in the last several years, but the government must continue to do so for decades to come.

In October 2014, a new president, Joko Widodo, better known as "Jokowi," was inaugurated into office. A champion of the people, Jokowi understands that the strength of the economy is pivotal to achieving his goals for the population, including initiatives to significantly reduce the country's growing inequality. As such, Jokowi has targeted 7% growth by 2018, up from the 5.2% slowdown experienced in the first half of 2014, a downturn largely the result of the government ban imposed on the export of unprocessed minerals. To achieve these results, part of the solution will be the government's reinvigoration of the mining sector and a continued effort to ensure that foreign investment will continue to flow into power related projects.

It is the objective of this book, Industry Explorations Indonesia Power & Mining 2014, which has resulted from intense research conducted with executives of Indonesian and multinational companies and members of key government bodies and associations established in Indonesia, to clearly show the international investors the array of challenges, risks, threats and, most importantly, the opportunities for investment within the Indonesian mining and power sectors. We would like to extend our gratitude to all those who shared their insights and expertise with us to produce this guide.

Vanessa Acuna Chapela,
Josie Perez and
JP Stevenson

CONTENTS

This research has been conducted by Vanessa Acuna Chapela, JP Stevenson, and Josie Perez.
Edited by John V. Bowlus
Graphic Design by Leigh Johnson and Gonzalo Da Cunha

A Global Business Reports Publication
"Please visit our website at gbreports.com, subscribe to our newsletter, or follow us on Twitter: @GBReports."

Exclusive Interviews

Major players in Indonesia's power and mining industries discuss Indonesian policies, politics, and market dynamics. Interviews include the Ministry of Finance, the Indonesian Mining Association, and many more.

Analysis

GBR's on-the-ground journalists provide editorial analysis on all facets of Indonesian power and mining.

Maps and Quantitative Data

Maps and quantitative data help readers understand Indonesia's economy and how its power and mining industries compare to peers and fit into the global context.

Special Topics

Analysis on special topics, such as coking coal, smelting, shipping, and explosives, is provided to paint a more complete picture of these complicated markets.

Final Thoughts

Leading business figures provide final thoughts on the future of the power and mining industries in Indonesia.

A Dark Horse: An Introduction to Indonesia and its Power and Mining Industries

"The fact that often goes missed by industry participants is that the establishment of the 2009 Mining Law, and its subsequent enforcement in 2014, followed a four-year period of public consultation prior to the law's introduction wherein regulators consulted with the industry over the structure of Indonesia's new mining law. Those involved in the production of nickel and bauxite, (commodities whose export was recently banned), had eight years to organize themselves; eight years to, at a minimum, show a commitment to the conditions that Indonesian mining henceforth would be based. The industry's lack of preparation is not for a lack of awareness."

- Tamba Hutapea, Deputy Chairman for Investment Planning, Indonesian Investment Coordinating Board (BKPM)

Image: Kalimantan Gold

An Introduction to Indonesia

A Brief Overview of the Country and Economy

2014 marked a major political transition for Indonesia, as the country elected a new president, Joko Widodo. Susilo Bambang Yudhoyono, a former army officer, had won Indonesia's first direct presidential elections in 2004 and was reelected in a landslide in 2009. Yudhoyono is considered to have ruled effectively and authoritatively, but was barred from standing for office again in 2014. The leadership change may also bring about a new style of leadership than the top-down approach of the past ten years. During the campaign, Widodo endeared himself to ordinary citizens by being accessible and eager to listen to their stories and views. Widodo is also not from the army like his electoral rival, Prabowo Subianto, which further adds to his credentials as a potentially transformative leader. In this respect, the country's non-violent transition from Yudhoyono to Widodo is a victory for Indonesia's future, regardless of political stripes.

However, Widodo's campaign magic will likely fade after he is sworn into office in October 2014 and begins to face the far more difficult balancing act of governing. His party, the Indonesian Democratic Party-Struggle (PDI-P), holds only 37% of parliament, while the opposition party of Subianto controls a majority. Moreover, Widodo's 53% victory in the presidential election was actually a disappointment, as he had lead in some polls by as much as 30% at one point. The former governor of Jakarta, Widodo was especially popular with urban and young constituents during the campaign and promised to fight corruption and to harness education and technology to build a better future for Indonesia, but ushering in this vision will be challenging to execute.

Structurally, Indonesia faces constraints. The most immediate challenge will be to increase its energy generation capacity, wean its people off expensive fuel subsidies, and transition from diesel fuel to coal or renewables to power remote, rural communities that are off-the-grid. Indonesia has a historic reliance on commodities and natural resources, which dates back to its colonial experience under the Dutch and specifically the relationship with Royal Dutch Shell in the late nineteenth and early twentieth centuries. Just

$867.5 billion

GDP
Official Exchange Rate 2013

Source: CIA World Factbook

5.3%

GDP
Real Growth Rate 2013

Source: CIA World Factbook

as Indonesia's oil was the engine for growth in the Far East in the first half of the twentieth century, so too can its resources power the region. China and India are already massive importers of Indonesian coal, and the natural abundance of the country makes it a mineral bonanza. There is undeniable potential to harness coal and renewables to close the generation gap.

In recent years, resource nationalism has dampened the enthusiasm of foreign investors and placed the country's future in uncertainty. Nonetheless, in the short- to medium-term, Indonesia will continue to rely on natural resources and must find a way to generate greater investment and development if it wants to free itself from its resource dependency. Despite Yudhoyono's authoritarian rule, the country instituted a program of rapid decentralization, and one of the chief frustrations of companies is that local governments interpret and apply laws differently. The government has taken steps to centralize authority in Jakarta once again, and Widodo's focus on education and technology could streamline and clarify the country's regulatory regime, but these changes will take time.

Indonesia is by nature a disparate grouping of peoples owing to its geography, and, in the past, centralization has produced the greatest economic welfare for its citizens, at least according to those in Jakarta. In such a country, infrastructure is key, but, according to the World Economic Forum, Indonesia ranked 82nd in quality of overall infrastructure in 2013.

The power and mining industries can only hope that the government undertakes a new commitment to infrastructure. Investors must separate the political noise from policy. This is not easy to decipher, but the election cycle brought out rhetoric that the ruling government has no intention of backing up. It is a new era in Indonesia, but history and structural constraints will not disappear overnight. For those willing to brave these challenges, the rewards are there. •

INDONESIA AT A GLANCE

Source: Statistics Canada, BC Stats, British Columbia Ministry of Finance

Population: 253,609,643 (July 2014 est.)
Capital: Jakarta
Chief of State: President Joko Widodo (takes office 20 October 2014)
Religions: Muslim 87.2%; Christian 7%; Roman Catholic 2.9%; Hindu 1.7%; other, including Buddhist and Confucian, 0.9%; unspecified 0.4% (2010 est.)
GDP (official exchange rate): $867.5 billion (2013 est.)
GDP – Real Growth Rate: 5.3% (2013 est.)
GDP per Capita: $5,200 (2013 est.)
Economic Sector Breakdown: Agriculture: 14.3%; Industry: 46.6%; Services: 39.1% (2013 est.)
Exports: $178.9 billion (2013 est.): Oil and Gas, Electrical Appliances, Plywood, Textiles, Rubber
Imports: $178.6 billion (2013 est.): Machinery and Equipment, Chemicals, Fuels, Foodstuffs.
Major International Trade Partners: China, Japan, Singapore, South Korea, United States, Malaysia, India, Thailand

$5,200

GDP PER CAPITA
2013

Source: CIA World Factbook

Bambang PS Brodjonegoro

Vice Minister of Finance
REPUBLIC OF INDONESIA

Can you provide us with an introduction to the role of the Ministry of Finance in relation to the energy sector?

The Ministry of Finance performs many functions in respect to the energy sector, but the most important relates to the energy subsidy, which takes the form of an electricity subsidy to the national electricity company Perusahaan Listrik Negara (PLN) and also a retail fuel subsidy. For 2014, the government has allocated IDR 350 trillion, which is nearly 20% of total spending of the national budget for this purpose. It is very important that the Ministry manages this position carefully; otherwise, there are two serious ramifications for the country. The first is that the Ministry runs out of money and cannot pay the energy subsidy for the remainder of the year. The second is that it does not pay the electricity subsidy at the right time, which would result in problems with energy delivery, namely blackouts. In the case of the fuel subsidy, people would line up at fuel stations just to receive the subsidized fuel.

The second important role of the Ministry is the provision of guarantees for power plants. Whenever an investment is being made for a power plant, the Ministry will provide a limited government guarantee through the PLN. The PLN will sign a Power Purchase Agreement (PPA) with Independent Power Producers (IPPs) and the Ministry will make sure that the PLN fulfills this commitment to the private sector.

Discussions to reform the country's subsidies have been discussed for several years, but there now seems more urgency to tackle the issue. How will the government alter the current system?

A reform to the current system of subsidies must occur to make the budget sustainable and to better target the people who need the governmental support. The current framework will be amended to move from a price subsidy to more of a people assistance mechanism. These reforms are taking place slowly and the electricity subsidy has a better chance of being reformed than the fuel subsidy, as you can easily classify the customer based on energy consumption, e.g. targeting households, commercial enterprises or manufacturing and industry. This transformation will be slow and politically difficult but must be done. The reforms should also encourage more private investment. By releasing the price subsidy and moving to targeted assistance, the price of electricity will be more attractive to investors.

The government is keen to alter its energy mix so that there is more use of renewables. How will Indonesia achieve this?

Indonesia is a collection of islands, many of which are remote and have difficulty generating power. In these areas, a coal-fired power plant cannot be built because it is not economical. Currently, the only way to generate power for them is through diesel fuel, which is costly not only because of the price of the diesel, but because it must be transported to the islands by plane. The government sees alternative or renewable energy, such as solar, as a solution to these off-grid islands because these options are at least competitive to diesel fuel.

For the larger islands, renewable fuel depends on pricing policy. If the price of electricity continues to be heavily reliant on the price subsidy, then coal will be the most viable option and gas will be a secondary choice if available. If the price is more relaxed, adjustable based on the energy cost, then geothermal will have a place, especially in Sumatra and Java, which are the main sources of geothermal.

For foreign investors considering the power sector in Indonesia, why is now a good time to invest?

Indonesia is a growing emerging market with bright growth prospects: a large population base, a growing middle class, natural resources, and an effort to transform the economy from natural resource-based reliance to a natural resource-based economy. Indonesia needs power and once the pricing policy becomes more flexible, the sector should be attractive for investors interested not only in traditional power plants like coal, hydro or gas, but also renewable power solutions, such as wind, solar or even biomass.

The appetite of foreign investors is evident in the composition of the final bidders for the Central Java Coal-Fired Power Plant, which was awarded in 2011. Of the final bidders, there were two Chinese and two Japanese companies with the final winner being Japanese. The heightened interest of foreign investors is evident and it is not only from Asia, but from Europe and the United States as well.

When GBR Returns in two to three years, how will the power sector be different?

The government is eager to increase the electrification ratio from its current level of 76% to hopefully 90%, if not more. The second change that will occur within this time period is that the pricing policy for electricity will be more flexible. The country also will see an improved energy mix: diesel and non-renewable consumption will be a bit lower and renewable energy usage will see an increase. Indonesia is still a potential market for the energy sector, particularly power, and we encourage any interested investors to consider the opportunities that this country has to offer. •

Ir. Syahrir Abubakar

Executive Director
INDONESIAN MINING ASSOCIATION

There have been substantial changes in Indonesia's mining industry since we last spoke in 2012. Could you describe how the industry has evolved, in particular with regard to shifts that have occurred in the political attitude towards it?

There has been a shift in the political attitude toward mining since 2012. From 2009 to 2012, there was heavy-handed governmental action: the government wanted to pursue downstream integration regardless of the cost for the industry. Since 2012, the industry has battled with the obstacles associated with development of ore beneficiation facilities. Insufficient infrastructure, inadequate electricity supply, poor administrative oversight, high capital costs, and downstream industries made it ill-prepared or incapable of using refined ore. Although the government seemed bull-headed in its enforcement of the 2009 Mining Law's downstream requirements, it understands the implications that full enforcement would have on the economy. Now businesses must only commit to downstream integration by January 1, which is a positive development.

What role did the private sector play in forcing this realization upon the government? What implications would full enforcement of the January 1st export ban have had on the industry?

The private sector has played a pivotal role in communicating the impact that the full implementation of the January 1 export ban would have on Indonesia's economy. If a full export ban were implemented, Freeport McMoran anticipates a loss of 22,000 laborers and Newmont 8,000 laborers. The impact of these losses would be highly regionalized. In West Sumbawa, the area surrounding Newmont's Batu Hijau mine, and Mimika, the area surrounding Freeport's Grassberg mine, 45% and 25% of the region's inhabitants are employed through mining, respectively. Yet the impact of a full shutdown would be larger than this. In the case of Grassberg, if Freeport were forced to halt production, Pt. Smelting, one of Indonesia's four smelters, would close, which would in turn prohibit them from supplying Petrokimia Gresik with an important side-product produced from refinement, in effect causing one of Indonesia's largest fertilizer producers to decrease production. This would translate into job losses across East Java. Were the January 1 export ban to be implemented, the government would experience a loss of between $7 billion and $8 billion in income.

Under the government's new commitment to downstream processes, what is required of companies?

A mining company must commit to downstream processing by selecting the location of a beneficiation facility. This, however, is still an imperfect solution: the government has not made a much needed commitment to support the development of regional infrastructure and the development of access to electricity, two important criteria in the selection of plant location. By still requiring that all industries move downstream, this solution ignores that the profitability of refining ore is felt unequally across different commodities: there is margin in refining bauxite, but not in copper. Furthermore, it is still unclear when the private sector must lay down capital for these beneficiation facilities and how the industry might acquire the technology required to beneficiate ore.

In 2014, what is the stated mission of the Indonesian Mining Association?

The mission of the Indonesian Mining Association in 2014 is two-fold. Foremost, we seek to encourage a greater level of consideration for how the government interacts with the private sector in developing ore processing facilities. A greater level of localized value-added is necessary for the mining industry, as is a different approach than the one being taken currently. Second, we seek to encourage greater levels of collaboration in policy-making. Mining affects many industries, but regulation has not yet harmonized across ministries.

In drafting the 2009 Mining Law, Dr. Simon Sembiring spoke of how the regulation would positively affect foreign direct investment (FDI). Have we seen this materialize?

The 2009 Mining Law generated a greater level of FDI, but at a cost to the industry and its most important stakeholders: the Indonesian people. The law created ambiguity in regulatory structures, which has reduced oversight in areas such as community relations and the environmental impact of mining. This has increased the perceived attractiveness of investing to some, as little commitment must be made to what some perceive as unnecessary costs. Under the law, 10,642 licenses have been granted: many of which have wrought considerable damage to Indonesia's environment and local communities. Furthermore, the lack of oversight has increased informal participation in the sector, the immediate cost of which is millions of dollars in funding that would otherwise be captured by the government.

If we were to meet again in two years, where would we see the industry?

The government has taken positive steps, and a better industry will emerge. However, the timeframe in which we will see the government act is another matter. •

Can Growth Continue?

An Introduction to Indonesia's Power and Mining Sectors

Megamalls galore, roads teeming with vehicles, Starbucks stores found at every strategic location, to an outsider, Indonesia's capital of nearly 10 million people, Jakarta, shows every sign of a country well on its way to becoming an economic powerhouse. Years of GDP growth consistently in the 5% to 6% range have pulled the country into the bracket of middle-income countries, but its ability to continue this growth is by no means guaranteed.

Although endowed with a plethora of natural resources and favorable

> "From an investment perspective, Indonesia is a gem in the region: it is the largest democracy in Asia, providing a very stable operating environment and in terms of power demand, the country's current situation must be addressed for the country to remain competitive."
>
> - Fazil E. Alfitri, President Director, Pt. Medco Power Indonesia

Image: Indonesian Mining Association

demographics, Indonesia's upward mobility could be hampered by several key factors. These include reforms to limit foreign participation in key resource sectors of the economy, such as mining and plantations, energy subsidies that chew up an unsustainable 20% of the national budget and a looming energy crisis that could hamstring industry and undermine urbanization. While the effect of the resource sector reforms to the country's economy will take years to understand and ending the energy subsidies, a thorny issue for any country to tackle, will take time to achieve, there is a near universal understanding that the government must act to address multiple issues related to the country's power situation.

Indonesia must work to increase the 75% electrification ratio, one of the lowest in the region, to reach the entire population; boost generation capacities to keep up with a staggering energy demand increase of 7.4% per year; and alter the current energy mix to ensure energy security for the nation's future. Failure to achieve these goals could compromise the country's ability to continue to lift millions out of poverty and compete on both a regional and global level.

Despite lacking basic infrastructure, Indonesia's mining industry has claimed a prominent position in supplying international commodity markets. Shrouded in regulatory uncertainty, Indonesia still attracts speculation.

Touring Jakarta's Rawa Bening, the largest gem market in Southeast Asia, the importance of minerals to Indonesia is evident. A love of precious stones is engrained in local culture. Yet like the stones of Rawa Bening, brought from various corners of the world before being peddled locally, Indonesia's mining industry has long been controlled by foreign hands: the Dutch under colonization, and then later, the foreign investor under Suharto. The Indonesia of today – outspoken, nationalistic, and wildly democratic – is acutely aware of this.

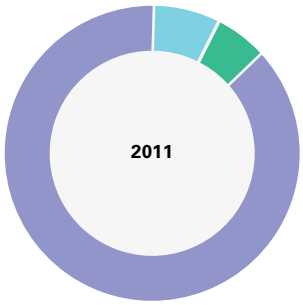
Indonesian regulators would do well to recognize that their country's mining industry is a dark horse. Lacking in basic infrastructure, it has claimed a prominent position in supplying international commodity markets; shrouded in regulatory uncertainty, it still attracts speculation. If handled with care, mining may allow the Indonesian government to accomplish its goals, many of which are, at the heart of it, admirable. Under proper resource governance, Indonesia could become one of the world's last great mining frontiers. If beaten too hard, though, the country may see what has been its best source of economic development – far more democratic in distributing wealth than the country's oil – collapse.

Indonesia's mining service providers of today must contend with two opposing forces: the demand to help clients reduce costs and the need to increase efficiencies in a country marked by logistical headaches. To not only survive, but to thrive in such an environment, service providers must rely not only on their depth of understanding of the local Indonesian context but also on their ability to provide creative solutions.

Despite the challenges, investors have every reason to be bullish on Indonesia. As Fazil E. Alfitri, President Director, Pt. Medco Power Indonesia, elucidated: "From an investment perspective, Indonesia is a gem in the region: it is the largest democracy in Asia, providing a very stable operating environment and in terms of power demand, the country's current situation must be addressed for the country to remain competitive." •

INDONESIA'S ELECTRICITY GENERATION BY FUEL TYPE (BILLION KILOWATT HOURS)

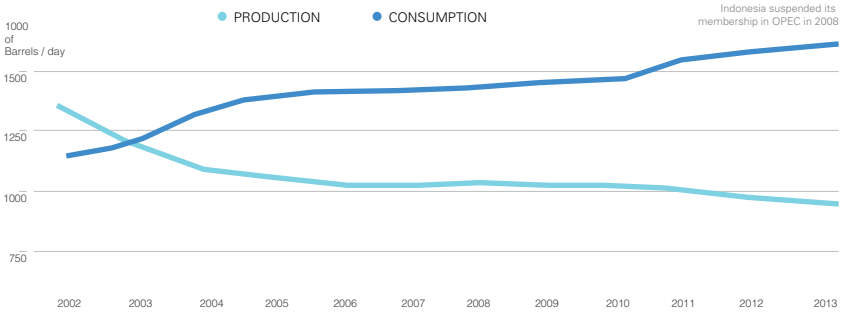
Source: U.S. Energy Information Administration, International Energy Statistics



Hydroelectric	7%
Non-hydroelectric Renewables	6%
Fossil Fuels	87%
Nuclear	0%

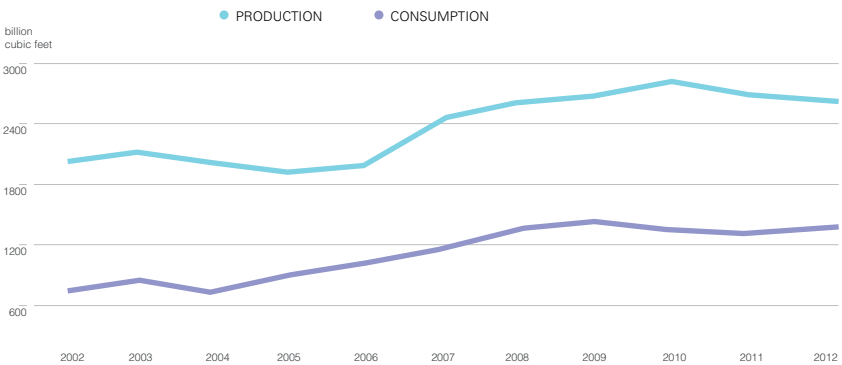
INDONESIA OIL PRODUCTION AND CONSUMPTION, 2002-2013

Source: U.S. Energy Information Administration, International Energy Statistics



INDONESIA DRY NATURAL GAS PRODUCTION AND CONSUMPTION, 2002-2012

Source: U.S. Energy Information Administration, International Energy Statistics



INDONESIA MINING AREAS MAP

LEGEND

- Major Coal Fired Power Plants (CFPP) Existing (PLN)
- Major Coal Fired Power Plants (CFPP) Existing (IPP)
- Coal Terminals / Anchorage points

RESERVES

- Coal
- Gold
- Zinc
- Copper
- Iron
- Nickel
- Bauxite
- Tin

pwc

www.pwc.com/id


120°E
125°E
130°E
135°E
140°E
PHILIPPINES
PALAU ISLANDS
5°N
Pacific Ocean
0°
SULAWESI UTARA
Molucca Sea
SULAWESI TENGAH
SULAWESI SELATAN
SULAWESI TENGGARA
MALUKU
PAPUA
5°S
Banda Sea
MALUKU
PAPUA NEW GUINEA
Arafura Sea
NUSA TENGGARA TIMUR
East Timor
10°S
Timor Sea
500km
AUSTRALIA
120°E
125°E
130°E
135°E
140°E

Source: PwC

Sacha Winzenried

Technical Advisor
PRICEWATERHOUSECOOPERS INDONESIA (PWC)

Can you provide us with a brief history and introduction to PwC's operations in the Indonesian power and mining industries?

PwC opened its office in Indonesia in 1971 and has a full service firm of 1,600 employees, including more than 50 partners and technical advisors, both Indonesian and expatriate. In the power industry, PwC is advising prospective investors during the bidding process. Working with lawyers and utilities advisors, PwC is helping clients to understand the structuring and investment options, including the tax and accounting implications of the various structures and then providing the valuation and modeling components for the project itself. As the projects move past the bidding stage, PwC will assist with audit, tax, structuring considerations and putting project financing in place. We also have a dedicated Capital Projects and Infrastructure team based in Jakarta, which includes specialists who have experience in structuring public-to-private partnerships all over the world and in arranging financing and feasibility studies for power projects.

In the mining industry, PwC's services are brought to market on industry lines, which are consumer and industrial products, financial services, technology and communications, and energy, utilities and mining (EU&M), which is one of PwC's areas of focus. In addition, PwC publishes thought leadership pieces, producing regularly updated investment guides on the regulatory and tax environment in these industries, newsletters on topical matters, as well as surveys of stakeholder views on these sectors. These materials have proved to be valuable sources of information to investors, as publicly available information is not always readily available in Indonesia. In addition to the investment guide, PwC annually publishes mineIndonesia, a survey of CEOs to ascertain the main challenges facing the sector and analyze financial trends in the performance of mining companies.

With over four decades of experience serving mining clients in Indonesia, what trends in the demand for services have emerged?

Prior to the issuance of the new mining law in 2009, when no new Contracts of Work ("CoW") had been issued to foreign investors for a number of years, we saw significant merger and acquisition activity in the sector, including restructuring of investments in both mining licenses and existing CoWs. From 2007 to 2010, a number of large clients, particularly in the coal mining sector, were looking to expand their operations, much of it funded through initial public offerings ("IPOs") on the Indonesian stock exchange. Following a flurry of IPO activity, mining companies, with strong cash flows, then turned to international bond markets to raise debt to continue their expansion efforts. More recently, with coal prices and other mineral prices taking a dip, mining companies have been less focused on expansion and more on the stabilization and efficiency of the business. As a result, PwC has seen increased requests for consulting services around operational efficiency and effectiveness, internal controls and information systems improvement and tax advisory.

Welcoming foreign investors to the mining sector for decades, Indonesia has recently put in place new regulations, which negatively affect foreign investors already present in the country. Are we likely to the see same thing occur in the power sector?

We currently view most of the government initiatives in the power sector as effective in encouraging investors. Indonesia has put in place a Public Private Partnership (PPP) law, as well as supporting regulations, as one step in providing legal certainty to investors. There appears to be a realization that the country is facing a power crisis and that it needs to encourage investment: local market funding is insufficient to meet this level of build-out and the technical know-how from large international partners is needed. Foreign investors can become comfortable investing in the power sector in Indonesia as long as the following conditions are met: the terms of the Power Purchase Agreement (PPA) with PLN are sufficient and investors have enough legal certainty that their power plant will have a long enough operating horizon so that they can see a reasonable return on their investment. If the government decides 20 to 30 years from now that the power sector can be supported by local investment and know-how and amends regulations to reduce foreign ownership, this is fine, if an adequate return has been earned on capital invested. Issues arise when there are rule changes that affect the investor within the investment period; however, given that the demand for power is likely to grow continuously over the next several decades, the probability that this scenario will take place is minimal.

When GBR returns in two to three years, how will PwC have evolved in relation to the the power and mining industries in Indonesia?

It is imperative to Indonesia that power-generating capacity increases quickly and significantly and all parties can see the potential for economic development that this brings. In mining, PwC expects its services to the sector to continue to grow. The next one to two years will be challenging for the industry globally, the impact of which will be felt greater in Indonesia because of the ongoing regulatory changes. However, Indonesia is endowed with abundant mineral and coal reserves, and the long-term prospects remain positive. •

Sherman Rana Krishna & Lukas Lauw

SRK: President Director
LL: IT & Trading Division Head
JAKARTA FUTURES EXCHANGE

Can you provide us with a brief history and introduction to Jakarta Futures Exchange?

LL: Jakarta Futures Exchange was established in 1999 by 29 shareholders: 11 from the palm oil industry, eight coffee exporters, eight financial service companies. Two state-owned companies, Pt. Danareksa and BTPM, are also shareholders. From the very beginning, the Jakarta Futures Exchange was designed to be independent in that all 29 shareholders have only one share so that there are no majority shareholders. The Jakarta Futures Exchange is regulated by the Commodity Futures Trading Regulatory Agency, with which we work very closely.

The Jakarta Futures Exchange provides facilities for its members to trade futures contracts based on the price determined through the efficient interaction of supply and demand via an electronic trading system. The products that the Jakarta Futures Exchange offers are for the commodities gold, olein, cocoa and coffee. Gold currently contributes over 50% of the exchange's trading volume and in March of 2014 the Jakarta Futures Exchange will be offering a physical coal contract.

The government of Indonesia had considered establishing a commodity exchange since the early 1980s. What were the circumstances under which the Jakarta Futures Exchange could be successfully established in 1999?

LL: In the 1990s, in the midst of a booming stock market, the Indonesia Stock Exchange, which was formerly operated under the government, went private. The government, which was then performing commodity trades through the regulator, wanted to emulate the Indonesia Stock Exchange's success in the futures trading market. Unfortunately, in 1997, after Law No. 32 1997 On the Commodity Futures Trading passed allowing for the creation of this exchange, the Asian Financial Crisis occurred, and the government did not have the financial means to establish this institution. Consequently, the government approached the current shareholders, asking if they would contribute to the development of the Jakarta Futures Exchange.

The Jakarta Futures Exchange will introduce physical coal contracts by March 2014. What are your expectations for this new product?

SRK: As an exchange, the Jakarta Futures Exchange can engage in physical contracts, which is what we are now pursuing with coal and coffee simultaneously. As the Jakarta Futures Exchange introduces this new product, we will be working with one seller, the state-owned company PT. Bukit Asam, which will have multiple buyers. Once this product has been tested on the market and we address any issues, the Jakarta Futures Exchange will be looking to find additional sellers who can benefit from it. By including this new product on the exchange, the public will have increased transparency of prices.

In 2010, the private Indonesia Commodity and Derivatives Exchange (ICDX) was launched because Commodity Futures Trading Supervisory Board (COFTRA) suggested that in the 10 years since the Jakarta Futures Exchange was founded there had not been satisfactory results. How did the Jakarta Futures Exchange respond to the creation of the ICDX?

SRK: The government's goal in establishing the commodity future exchange was to make commodities products more liquid, which is a very difficult process. How do you create liquidity without having liquidity? My predecessor tried to develop these commodity contracts to increase the volume, but until now volume was keeping steady and not increasing. Many companies were not interested in hedging in Indonesia, but rather overseas. The government was pushing to increase the transactions in the commodities sector but there were no results because of the liquidity issue. Several years ago, the ICDX was given the license to operate as it promised to develop commodities transactions in Indonesia. However, the ICDX was not too successful, facing many of the same issues that the Jakarta Futures Exchange had faced previously. As a result, the Ministry of Trade Regulation issued Decree 32/2013 allowing the ICDX to exclusively offer futures contracts in tin. The government is committed to seeing these futures markets develop for each product and has taken on the strategy that each market will have its own commodity. As such, Jakarta Futures Exchange will be working exclusively in coal.

When GBR returns in two to three years, where will we find the Jakarta Futures Exchange?

SRK: The Jakarta Futures Exchange expects to grow and see more companies participating in the activities of the exchange. The Jakarta Futures Exchange has strong support from the government, which earnestly wants to establish a thriving commodity price market within its own country. Indonesia is one of the top three or five producers in the commodities that we offer products for and as such the government is keen to create places of transaction for these products that will benefit the country. In this way, the Jakarta Futures Exchange is looking to grow its product offering and within the mining industry, offering Indonesia more price control in products that are so integral to the country's economy. •

Ito Warsito & Hoesen

IW: President Director
H: Director
INDONESIAN STOCK EXCHANGE (IDX)

Can you provide us with a brief history to the Indonesian Stock Exchange (IDX) and its role in Indonesia's financial markets?

H: The Jakarta Stock Exchange (JSX) was first established in 1992, as the result of the privatization of the government-owned stock exchange. In 2007, the JSX and the Surabaya Stock Exchange (SSX) merged to form the Indonesian Stock Exchange (IDX) as it exists in its current form. The integration of the JSX and the SSX was very successful in that the former JSX was equity focused and the SSX was debt focused so together they formed a strong capital markets exchange.

IW: The IDX is a self-regulated, private, not-for-profit organization. It is a limited liability corporation that is owned by 113 active brokers that each possesses only one share. The mission of the IDX is to serve as a market facilitator.

How significant is the presence of the mining industry on the IDX and how has it evolved over the years?

IW: The IDX currently has 489 companies listed on the exchange, of which 39 are from the mining sector. The majority of the mining companies that we see listed today joined the exchange in the early to mid-1990s before the Asian Financial Crisis. Following that event, the market rebounded and the coal industry boomed, as a number of coal miners issued IPOs. However, the industry has not performed well in the last year, as evidenced by the falling price of Newcastle coal. The IDX's current priority is to encourage mineral mining companies to list on the exchange.

How does the IDX encourage mineral mining companies to IPO?

IW: In March 2014, the IDX introduced a new listing rule for mining companies, similar to the one applied to oil and gas companies. Previously, the IDX did not accept companies that did not yet have operating revenues. The new rule will allow the IDX to accept miners that do not yet have revenues, but have completed the exploration phase and are entering production. To qualify, mining companies will have to provide data on proven reserves and submit forward-looking business plans.

What does the IDX seek to achieve through this new listing rule?

H: The new listing rule has two objectives. The first is to facilitate Indonesia's mining industry, which can benefit from investors via the IDX. The second goal is to cultivate domestic investment. In order to create more investors, there needs to be a reciprocal increase in the supply of stocks.

IW: In the past, mining companies that were in the initial stages of production would go abroad to find capital by listing in Hong Kong, Canada or Australia. IDX is offering mining companies the opportunity to list here and is therefore aligning the interests of mining companies with those of investors, both individual and institutional. Now is an opportune time for mineral mining companies to list. The IDX is trading at close to four-month highs and with the export ban requiring the construction of smelters.

The new listing rule expands the range of mining companies that can list, but what are the benefits to IPO on the IDX rather than on other regional exchanges?

IW: In addition to the simpler and more cost effective listing process, the Indonesian markets are much more developed today. During the 1990s, Indonesian markets were relatively small and investors looking to introduce themselves had few alternatives but to list on neighboring exchanges. After 2000, there was little need to list outside of the IDX, as Indonesia had adopted a free flow of capital regime, meaning that there are no restrictions on capital entering or exiting Indonesia.

H: Foreign companies have the additional incentive to IPO in Indonesia given the political or nationalist sentiment that exists in the country. Indonesia is still a developing nation with social and political pressures regarding foreign ownership in the natural resources sectors. A company involved in the natural resources space can temper these issues through domestic ownership or participation from retail or institutional investors.

Where will we find the IDX in two or three years?

IW: IDX expects the number of companies listed, especially those from the mining sector, to increase significantly. Right now, commodity prices are low indicating that now is the right time for investors to enter the market. The IDX will be able to push its mission forward with more mining companies listed. From a legal standpoint, IDX is a private company but it is not authorized by the government to pay dividends to shareholders. As such, IDX is a development agent that must use all of its profits to grow Indonesian markets. It does this by increasing the number of investors and the suppliers to those investors, the companies listed on the exchange.

H: Before 2008, the market capitalization of the IDX was $100 billion; today the market capitalization is over $400 billion. The priority of the IDX is to increase the participation of the domestic investor so that they can reap some of these gains. The IDX will achieve this by educating the Indonesian investor and encouraging more companies to list on the exchange. •

Lawrence Wong & Foong Chong Lek

LW: Executive Vice President, Head of Listings
FCL: Associate Director, Marketing and Business Development Listings
SINGAPORE EXCHANGE (SGX)

Can you provide us with a brief history of Singapore Exchange (SGX) and its role within Asian financial markets?

LW: While there has been an exchange in Singapore dating back to the 1960s, Singapore Exchange (SGX) has experienced significant change and growth in the last 15 years following its demutualization in 1999 and listing in 2000. SGX has transformed into an international exchange, offering several key pillars of business: equity listing, fixed income listing, derivatives and commodities and financial futures, which is the most recent addition. The largest contributors to revenue are equity and debt listings and also derivatives. Commodities and financial futures are growing quickly, but these products were introduced just three to four years ago.

SGX seeks to be the exchange of choice for Asian companies as well as those outside of Asia that are looking to the region for investors. SGX also wants to be the platform for investors to reach out to the Asian growth curve. SGX offers an efficient and transparent platform that provides efficient risk management to those seeking capital and wanting access to Singapore's financial markets.

How significant is the presence of mining companies, in particular Indonesian mining companies, on SGX and how will this evolve going forward?

LW: SGX currently lists 20 mineral and oil and gas companies, some of which are Singaporean companies that have mining assets in the region and others are miners from neighboring countries, such as Malaysia and Australia.

Foong Chong Lek (FCL): SGX lists five Indonesian mining companies, which are either pure mining companies or have mining assets as part of their operations. SGX has seen a steady increase in the number of mining companies listed on the exchange in recent years.

LW: SGX expects that this upward trend will continue based on interest from Indonesian, Asian and even North American mining companies, which see Asia's prospects for growth and its growing investor base.

What are the advantages for an Indonesian mining company to list on SGX as opposed to other regional exchanges, such as the Indonesian Stock Exchange (IDX)?

LW: The decision to list on SGX depends on the company's business direction, where its customers are located and what kind of investors it wants to attract. For Indonesian mining companies, Singapore has connections that perhaps the IDX does not have. When a company is considering SGX, it must also take into account what Singapore as a whole has to offer: an international financial center with leading banks; the number one foreign exchange hub in Asia; a location with $2.1 trillion in funds under management, not counting retail; and a retail sector that is regional, not localized. In addition there are positive economic features that Singapore enjoys, including suppliers, customers, possible joint venture partners and, most importantly, people for hire. A company must determine whether an Indonesian listing will offer advantages. Companies can always dual-list, though this option is not for every company.

How prevalent is it for mining companies to dual-list and what are the advantages?

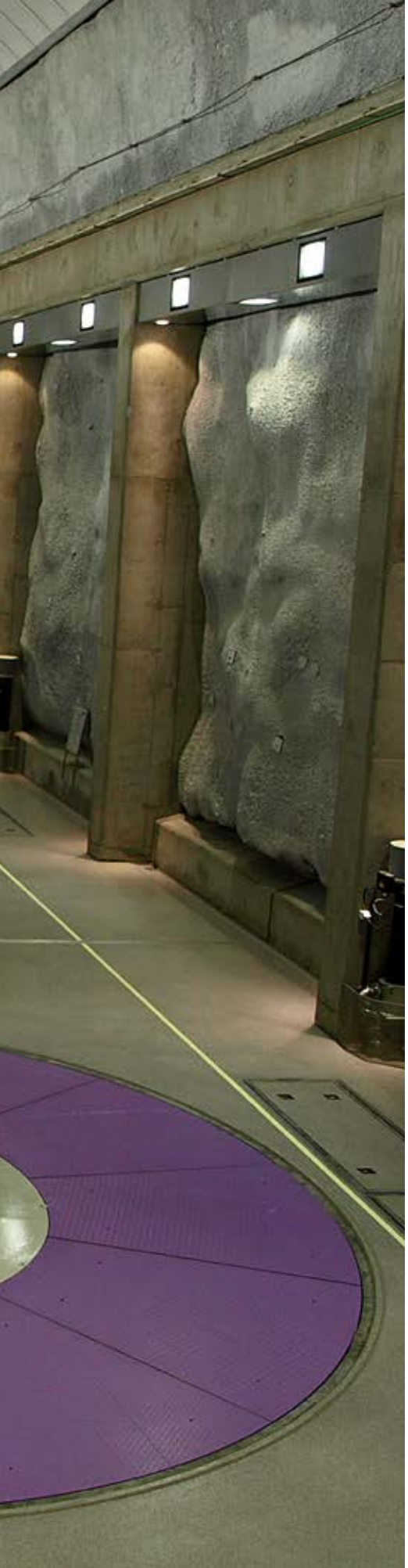
LW: The trend for mining companies has been toward single listing, although the potential to list on multiple exchanges exists. When deciding where to list, companies are ultimately considering two strategic factors: the investor base and the opportunities for trading. For an investor, listing in Europe or the United States and then also listing in Singapore may make sense because the regions tap into different pools of investors. From a trading point of view, this also makes sense due to the different time zones. If a business is largely in Asia, companies want to be trading in the same time zone. Dual-listing on SGX and the IDX may benefit a mining company because an exchange may be too local to reach international investors.

How have mining companies listed on SGX fared compared to those listed on other exchanges?

FCL: The trading velocity of mining companies on SGX is above 200%, whereas on the Toronto Exchange (TSX) and the Australian Securities Exchange (ASX), it is about 100%. The London Stock Exchange (LSE) ranges from 60% to 80% while the Hong Kong Stock Exchange (SEHK) and the IDX are around 30%. Mining companies are performing very well on SGX due to scarcity and increasing investor knowledge due to our education program. The high turnover velocity indicates that investors are clamoring for mining assets. Since there are so few mining companies listed, those on the exchange attract a lot of attention. There is a lot of room and opportunity for growth on SGX for mining companies.

When GBR returns in two to three years, where will we find SGX?

LW: SGX looks at Indonesia as an integral part of the Association of Southeast Asian Nations (ASEAN). SGX wants to position itself to help Indonesia where there are gaps and where SGX can make a difference, whether that is in mining or other segments of the economy. Investors should look carefully at SGX, as it is demonstrating that it is an exchange for raising capital while offering a window to business opportunities in Singapore. •



Where Crisis Breeds Opportunity: The Power Sector in Indonesia

"The government has ambitions to replace diesel fired power generation with natural gas, but to do so the government will need to accelerate the development of gas pipeline infrastructure. Indonesia does have very large reserves of natural gas, but pipelines, transmission lines and distribution lines are lacking. However, there are plans to improve the infrastructure, as illustrated by the Trans Java pipeline, which is planned to be completed in 2014 and will ensure the flow of natural gas across Java."

- Montty Girianna,
Director for Energy, Mineral Resources, and Mining, National Development Planning Agency, Bappenas

Image: Andritz Hydro

Ambitious Plans, but Mixed Execution

Regulations and New Coal-Fired Power Plants in Indonesia

As Kishore Dass, the president director of Pöyry Indonesia, the global Finish consulting and engineering firm, made clear, the energy challenge facing Indonesia is great. "Power shortages are endemic in Indonesia. The country's total electricity generation touched 47 gigawatts (GW) as of the end of last year. According to PLN's electricity procurement plan for the 2013-2022 period, there needs to be an additional capacity of 31.5 GW for the Java-Bali grid. This amounts to about 3.2 GW per year. At the national level the power requirement translates to around 6 GW per year," he said. The government owned Perusahaan Listrik Negara (PLN), which has a monopoly on electricity distribution and accounts for 80% of the country's generation capacity, forecasts that the national generating capacity will increase to 60 GW by 2022, but this is no small feat. The government has succeeded in enacting regulation in 2009 for renewable power projects of 10 MW that stipulates feed-in tariffs for investors and that assigns to the PLN the obligation to buy this power.

The government must, however, encourage projects of a larger scale. To help increase power generation in 2006, the government introduced the fasttrack program (FTPI) in 2006, which mandated that the PLN build 10,000-MW coal-fired power plants by 2011, a deadline that was later extended to 2014. In 2010, the government launched a second 10,000 MW fast-track program (FTPII), aimed at encouraging investment from Independent Power Producers (IPPs), which sell electricity to the PLN, and separately the development of renewable energy, focusing on geothermal and hydro power. The FTPII program was to be completed in 2014, but this target has been pushed to 2020. To construct and commission power plants under FTPI and FTPII and additional power plants that do not fall within the purview of these programs, the government has turned to the private sector, particularly toward foreign investors. National sentiment helped breed the recent regulations, which have negatively affected foreign investors' interests in other segments of the economy.

Nonetheless, the current regulatory structure for the power industry is favorable to foreign investors looking to enter, as Guy Des Rosiers, senior foreign legal consultant at the Indonesian law firm, Makarim & Taira S., noted: "Overall, the current environment for foreign investors is positive thanks to a legal framework that allows bankable projects to come to the market, and a generally favorable attitude from PLN and relevant government stakeholders, all of whom share a strong incentive to ensure the smooth development of future power projects."

Noting a discernable change in how the market perceives the attractiveness of investing in the power sector in Indonesia, L. David Rimbo, managing partner within the Transaction Advisory Services group at Pt. Ernst & Young Indonesia, explained: "Within the last five to six years, there is greater understanding about the prescribed investment structure and operational set-up of an IPP project in Indonesia under the PPA scheme, primarily under a BOO (Build-Operate-Own) arrangement. With such a scheme, the returns will continue to accrue to the asset owners beyond the tenure of the initial PPA, with a renewal or extension of the PP; this has investors rethinking the value of their assets."

In addition to providing investors with an enhanced understanding of the IPP framework, the government has evidenced further commitment through the passage of a 2009/2010 Public Private Partnership (PPP) Law that creates a specific framework for a subset of investments to give legal certainty to investors. While the PPP framework has been touted as the proverbial winning ticket to solving Indonesia's various energy concerns, the uncertain outcome of the flagship PPP project, the 2,000-MW coal-fired Central Java Power Project (CJPP), renders the idea of relying on PPPs an inadequate solution for the present. Owned and operated by Bhimasena Power Indonesia (BPI), a joint venture between Japan's J-Power, trading house Itochu and Adaro Power (a subsidiary of Indonesia's coal mining giant Adaro Energy), the $4 billion CJPP was initially scheduled for a 2016 commissioning, but

INDONESIAN ELECTRICITY GENERATION AND CONSUMPTION, 2002-2011

Source: U.S. Energy Information Administration, International Energy Statistics

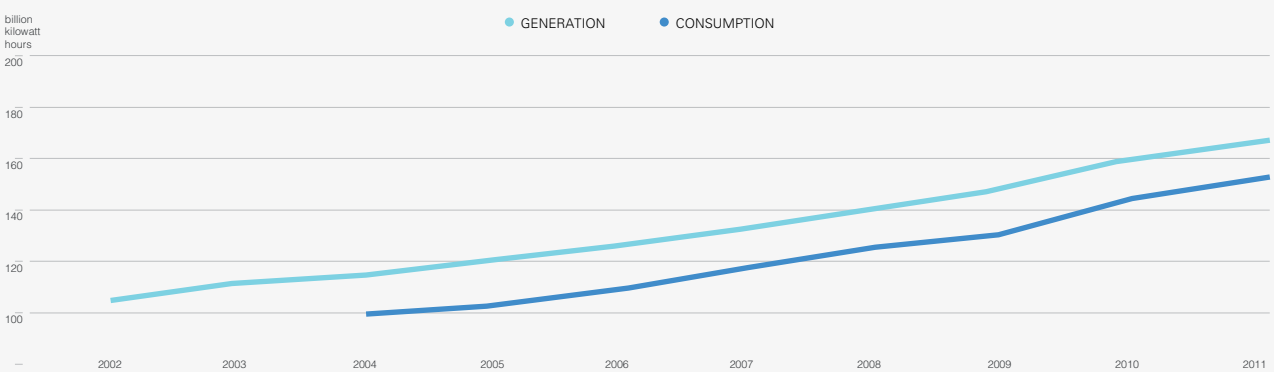


Image: Black & Veatch

construction has yet to begin as a result of land acquisition issues with the local governments and communities, a problem that plagues many large power projects in the country. These issues came to a head in July 2014 when Adaro Energy declared force majeure in light of the fact that after prolonged negotiations, the consortium was only able to acquire 85% of the land necessary.

Involved in outlining the processes and organizational structure for PPPs for the government, Michael Crosetti, director at Castlerock Consulting explained: "As with many sectors in Indonesia, the problem lies in the inability of the various authorities to coordinate, which is further compounded by issues at the regional level. Before Suharto [the country's second President who ruled for 31 years] stepped down, power was too centralized and in 1999, the first law devolving power to the regional level was passed. Successive laws followed and then sector specific laws were implemented. While it was a positive move for the country, the pendulum has perhaps swung too far. The regions lack the human resources to implement large-scale projects involving international investors and the risk of corruption and rent seeking is much higher at the regional level. This is a recognized issue, but the question then is how can the central government claw back some of this authority?"

While the CJPP serves as a cautionary tale, thankfully many power plant projects outside of the PPP scheme, both large and small, are moving forward and being completed by the PLN and those IPPs that know how to navigate Indonesia's complexities. Both foreign and domestic private investors have been helping to push these power projects ahead in part as a response to the PLN's multi-faceted approach to solving the energy issues, as Rimbo explained: "The PLN itself has implemented a firm long-term plan and strategy, with a very firm focus on rearranging the composition of primary energy sources away from dependence on oil and diesel fuel and more towards coal, gas and geothermal and renewables. This in and of itself creates opportunities for investment in the country." •

Kishore Dass

President Director
PT. PÖYRY INDONESIA

Can you please provide us with a history and introduction to Pöyry's work in the power sector on a global scale and its operations within Indonesia?

Pöyry is a Finish consulting and engineering firm that employs around 6,000 people worldwide and completes 10,000 projects per year on average. The company's roots have been in pulp and paper, but progressed into energy as the industry has a need for captive power plants. Pöyry's global power operations are managed out of both Helsinki & Zurich, but the company is increasingly looking toward the Asia Pacific region. Pöyry's Bangkok office, which was established in the 1970s, is the regional head office for energy, but Pöyry also has offices in Singapore, Kuala Lumpur, Hanoi, Manila and Jakarta, with more than 250 employees focused exclusively on energy and engineering. Pöyry has had a presence in Indonesia for 25 years, focusing primarily on energy, pulp and paper and management consulting.

What are some of the key challenges that Pöyry has identified in the Indonesian power sector?

There is great opportunity and many challenges. Pöyry sees a disconnect lies between the developer's vision for a power facility and the budget allocated. Power plant projects normally tend to have long gestation periods. Thus, beginning a project with the right budget is crucial to avoid cost overruns and project delay issues. Pöyry prefers to get involved with developers early on by performing feasibility studies, working with them to understand what can be done and at what cost to help them reach a certain comfort level. Pöyry has also encountered problems with delays in civil construction projects that affecting overall project schedules. There are many reputable and good civil contractors, but they need to enhance their expertise to ensure that projects are carried out on time and within budget. Finding people with the experienced skillsets to run the plants is an additional challenge that needs to be addressed. Finally, various developers have complained to us that many power projects are delayed due to tedious land acquisition processes or financing issues.

Indonesia wants to use its own coal reserves to supply new coal-fired power plants at a time when coal prices are depressed. For the medium- to long-term, are coal-fired power plants the most economical choice?

Indonesia is blessed with natural resources, may it be coal or other minerals. For a long time, most miners have been exporting ores in their raw form, which is good for export earnings but adds no long-term value to the country. The restriction on the export of various ores and increase in export taxes from the beginning of 2014 have made it more pressing to process ores domestically. To process ores domestically requires the construction of new smelter plants, thereby a resultant need for power. With coal prices depressed, it would be ideal for Indonesia to develop more coal-fired power plants and consume this coal domestically.

Power shortages are endemic in Indonesia. The country's total electricity generation touched 47 gigawatts (GW) last year. According to PLN's electricity procurement plan for the period from 2013 to 2022, the Java-Bali grid needs additional capacity of 31.5 GW. This amounts to about 3.2 GW per year. At the national level the power requirement translates to around 6 GW per year.

This presents a huge opportunity to utilize the domestically available coal to generate a fairly large proportion of power. The priority for the government would be to facilitate the development and construction of coal-fired power plants through legislation or incentives until such time that certain national energy related goals are met. Even if this policy were not in place, the decision to build coal-fired power plants based on a theorized future price of coal makes sense given certain market dynamics, such as a slowdown in the demand from China. At the same time, Indian coal stocks are running low and recently Australian miners began reducing exports. No one can predict the future price of coal, so it would be prudent for the government to utilize the resource for the domestic needs of today for the betterment of the overall electrification ratio nationwide.

When GBR returns in two to three years, how will Pöyry Indonesia be different?

Pöyry's office in Indonesia will have more competence and service offerings. The company will also work towards building on its various disciplines and attract more competent local talent. At present, the company carries out project management, civil and structural engineering work, but will be able to perform more detailed mechanical and electrical analysis, whilst still receiving support from the Bangkok office. We will expand into the renewables sector like hydro, biomass, wind, solar and geothermal, areas in which we are dominant in other countries, but still in its infancy in Indonesia. Thus, Pöyry is working to become more visible by building on its experience and its brand identity. We shall strive to complete successful projects thereby strengthening client loyalty.

Indonesia is Southeast Asia's largest economy and is set to become a top five global economy within the next decade or so. With this tremendous impending potential, Pöyry hopes to ride the wave in tandem with credentials as a preferred consulting and engineering partner for energy projects within Indonesia. •

L. David Rimbo & John Cheong-Holdaway

LDR: Managing Partner
JCH: Technical Advisor, Associate Director, Transaction Advisory Services
PT. ERNST & YOUNG INDONESIA

Ernst & Young is one of the leading professional services firms in Indonesia. Can you please provide us with an introduction to Ernst & Young's work in the power sector through the Transaction Advisory Services (TAS) Group?

LDR: Within the power sector, TAS is assisting Independent Power Producers (IPPs), which fall into two categories: on-line IPPs and hampered IPPs. Hampered IPPs are those that have already signed the Power Purchase Agreement (PPA) with PLN, but have failed to realize the development of the power plant. For on-line IPPs, Ernst & Young has helped them with restructuring requirements, whether in the form of corporate restructuring or debt restructuring. With hampered IPPs, Ernst & Young has assisted both PLN and the hampered IPPs with the restructuring of tariff arrangements. In Indonesia, determining the appropriate tariff is a sensitive point and so the process of resetting the tariff is arduous, involving the PLN as a party of the contract, state auditors, lawyers and state audit agencies.

JCH: In addition, Ernst & Young has been working to increase its capacity to assist government entities in Indonesia through establishing a local Infrastructure Advisory group as a part of our regional Infrastructure Advisory team based in Singapore. The big four consulting firms in Indonesia have long focused on the private sector given the expected strong participation by private project sponsors in tendering for IPP projects. There is now a push to develop a stronger team to assist the various government bodies. We have been working closely with PLN and a number of their subsidiaries for some time now.

Given its longstanding history in Indonesia, what are some of the key trends that Ernst & Young has seen in the power sector over the last 20 years?

LDR: There has been a discernable change in how the market perceives the attractiveness of investing in the power sector in Indonesia, which is the result of two trends in the sector. The first trend is that within the last five to six years, there is greater understanding about the prescribed investment structure and operational set-up of an IPP project under the PPA scheme, primarily under a BOO (Build-Operate-Own) arrangement. With such a scheme, the returns that will continue to accrue to the asset owners beyond the tenure of the initial PPA, with a renewal or extension of the PPA, has investors rethinking the value of their assets. The second trend is guided by the reality that the PLN itself has implemented a long-term plan and strategy, with a very firm focus on rearranging the composition of primary energy sources away from dependence on oil and diesel fuel toward coal, gas and geothermal, and renewables. This creates opportunities for investment in the country.

What are some of the challenges to increasing electrification in Indonesia that are different from other countries in the region?

JCH: Indonesia is a country, more so than others in the region, where averages can be deceiving. The country has a 70% electrification ratio, but this is concentrated in Java-Bali and Sumatra. In a country like China, you can simply build power grids across the country and get a relatively high penetration rate. Indonesia is an archipelago, where a much higher proportion of the population is more rural and remote than other countries in the region, and thus a larger proportion of the country must be served with much more expensive, small-scale, off-grid solutions. The Indonesian government guarantees a particular tariff to end-users and will cover any shortfall between PLN's cost of service and their revenues through their Public Service Obligation (PSO) subsidy, but increasing the subsidy is not generally viewed positively. Moreover, providing access to expensive remote consumers at a low tariff increases the PSO. So PLN, on the one hand is being asked to connect customers, but on the other is criticized for not decreasing the PSO, so you can see why they focus their investment dollars on other priorities like connecting regional grids and replacing larger, high-cost diesel generation that have a higher chance of decreasing the PSO. Despite this, there is an increasing understanding that Eastern Indonesia cannot be left behind as Western Indonesia develops. We have seen modest improvements in electrification in remote areas and, and as the power sector matures, we would expect this trend to accelerate.

When GBR returns in two to three years, how will the power sector in Indonesia be different?

LDR: Two critical points must be addressed regarding the current electrification ratio: increasing the electrification ratio to reach the whole population and also providing enough power for industrial development. Considering these elements together, Indonesia must realize much more in terms of power generation capacities, particularly those that are the most-effective from a value-chain standpoint, such as MMPPs. The country has very large deposits of low-rank coal, which would be uncommercial for conventional exploitation and are suited for mine-mouth power generation. However, renewable energy, particularly geothermal, will also play an important role and the government is starting to consider its potential more carefully, in terms of sorting out the existing regulatory, structural and commerciality aspects of geothermal developments. •

Rainier Haryanto

Country Manager of Indonesia
SMEC

SMEC is an Australian based international consultancy firm that focuses on major infrastructure projects, with a long history of work in the hydropower space. Can you provide us with a brief history and introduction to SMEC and the work that it does in the power sector in Indonesia?

Originally an Australian Government organisation, SMEC has been in operation for 40 years, beginning with the Snowy Mountains Scheme, Australia's largest infrastructure project. Once this project was completed, SMEC privatised and decided to go overseas. Indonesia is the second country we operate outside Australia and the company has seen strong growth in Indonesia in a number of sectors, including mining and power. The company worked on a number of hydropower and also related transmission projects, but between 2000 and 2010 SMEC activity slowed. In the last several years, interest in hydropower has started to accelerate and today power comprises 15% of revenues in Indonesia, up from zero just four years ago. While mining, the company's largest sectoral focus makes up 40% in the country. Recently, SMEC has been involved in the study and design of a number of hydro projects in Sumatera, ranging from 0.5 megawatts (MW) to 75 MW.

With lower commodity prices and regulatory uncertainty surrounding Indonesia's mining sector, does SMEC see an opportunity for power projects to make up a greater share of the company's work?

Power is expected to contribute 25% of SMEC's Indonesian revenues by 2015. There is a lot of work to be done in the mining sector, but mining is a cyclical industry that is also subject to political fluctuations. Power is different in that it is market-driven and the government understands that it needs to increase power infrastructure to meet Indonesia's on-going growth in demand. Given the demand for power in the market, the hydro resources available in the country and the company's long history of experience in this sector, SMEC has recently invested more heavily in its hydropower service offering. In addition, neighbouring SMEC in Malaysia operates a centre for excellence for hydropower that SMEC Indonesia is able to tap for resources and training.

A large portion of SMEC's work in hydropower is in Sumatera. Although there is a lot of demand for power in Sumatera, how would you describe the infrastructure to support hydropower development?

Transmission lines are not very well developed in Sumatera in that they are very far away from the hydropower potentials. PLN develops the grid, but, understandably, is not going to invest in transmission infrastructure to a power plant that is not yet there. It is the responsibility of the IPP developers to put in the transmission lines. When developers are looking to build a hydropower plant, the cost may appear lower than it actually is because the length of the transmission lines that need to be put in place are sometimes not accounted for in the initial feasibility studies.

While the availability of hydro for power generation has always been high, mini-hydro has had a better track record for development. How is this expected to change going forward?

Two key factors are going to lead to an even greater interest in mini-hydropower development in Indonesia. The first is that a new higher tariff for electricity purchased from mini-hydropower plants has been set by the government to make the sector more attractive for investors. Previously, the tariff was Rp 656 kilowatts per hour (kW/h) for medium voltage connection and this has now been increased to Rp 1,075 kW/h. This will be a game changer in the market when you consider that if the previous tariff was competitive, the new tariff is even more so. Another factor that has been and will continue to increase interest in hydro in particular is the introduction of technologies that can tap into hydro more effective such as VOITH StreamDiver. When you combine these two aspects, it is evident that the potential for mini-hydro development in Indonesia is huge. However, it is important to remember that while the fundamentals are there, these projects take time to develop and cannot be approved and constructed as quickly as many investors would like.

When Global Business Reports returns in two or three years, how will SMEC be different in terms of the work that it does in the power sector?

SMEC will be more involved in hydropower projects and associated power infrastructure and will hopefully see more micro-hydro projects taking place if there is a change to the current tariff scheme. The development of hydropower projects in Indonesia is at an infant stage and as long as participating parties are patient, they will be able to realize opportunities in this space.

Moreover, SMEC also has a lot experience in other renewable energy technologies for power generation such as biomass, solar and geothermal. We will also grow our market in these areas and have been in discussion with some potential projects. We look forward for SMEC involvement in these projects. •

Meizo Sahashi

President Director
SUMITOMO CORP.

Sumitomo Corporation is a leading integrated trading company engaged in a wide range of businesses, including electric power and energy. Can you tell us about Sumitomo's involvement in the power sector on a global scale?

Sumitomo Corporation first became involved in the power industry about 40 years ago with the export of related equipment from Japan. Wanting to expand the Sumitomo Corporation's participation in the industry beyond trading, so the company began offering engineering, procurement, and construction (EPC) services 25 to 30 years ago. It was just in the last 15 years that Sumitomo Corporation made initial investments into the power sector and reorganized to establish distinct departments for the company's investment and EPC business. To avoid any conflict of interest among the sponsors and EPC interests, Sumitomo Corporation needed to clarify for itself and to the market how the company was approaching any given opportunity. Around the world and in Indonesia, Sumitomo Corporation can evaluate each potential project and strategically decide how to approach it, as an investor or as a contractor.

How significant is Indonesia to Sumitomo Corporation's power business from a global perspective?

Globally, Sumitomo Corporation's net generating capacity is approx. 6,000 megawatts (MW) and the medium term target is to reach 10,000 MW by 2019. This is an aggressive scenario, but Sumitomo Corporation believes that it can be achieved, having completed all development objectives in the past. To meet this target, investments in Asia, including Indonesia, will be critical. At present, of the 6,000 MW generating capacity, 2,640 MW comes from Indonesia alone; this is expected to grow significantly. To do this, Sumitomo Corporation is considering a further expansion of Tanjung Jati B project or building other facilities in other regions, considering the ever-increasing demand created from Jakarta. These or other projects may be undertaken alone by Sumitomo Corporation or with partners.

Sumitomo Corporation's total generating capacity in Indonesia comes from one of the largest and strategically important power plants in Indonesia, Tanjung Jati B. How did Sumitomo Indonesia become involved in this project?

In 1995, Sumitomo Corporation won the order to provide EPC services for Tanjung Jati B, which was being developed by another investor. However, in the midst of the 1997 Asian Financial Crisis, the investor abandoned the project and construction was suspended; meanwhile, Sumitomo had no intention of reneging on its obligation in, as one of Sumitomo's core values is to commit to a market. Sumitomo Corporation then spent the next several years working with the Indonesian government to develop a new scheme (build, lease and transfer scheme) and then took full sponsorship of Tanjung Jati B. In 2006, Unit 1 and Unit 2 of Tanjung Jati B were commissioned, having been completed by Sumitomo Corporation's EPC services.

Tanjung Jati B's Unit 3 and Unit 4 were completed in October 2011 and January 2012, respectively, more than three months ahead of schedule. How was Sumitomo Indonesia able to accomplish this in an environment marked by its delays?

Given the power demands in the region, Sumitomo Corporation worked diligently with the stakeholders to complete the project as quickly as possible. One key advantage in our favor was that Unit 3 and Unit 4 sat just beside Unit 1 and Unit 2, easing EPC concerns, which were again handled by Sumitomo Corporation. However, more importantly, Sumitomo Corporation had the foresight to secure the land in advance and avoid the issues with land acquisition that hamper so many power plant projects in Indonesia.

In 2012, POWER Magazine named Tanjung Jati B as one of the world's Top Plants. What factors make Tanjung Jati B standout amongst other power plants in Indonesia?

Tanjung Jati B is differentiated by the quality of the operation and the low generation cost. The local regulator recognizes that Tanjung Jati B is very cost effective and provides high operation performance compared to other power plants and thus orders a lot of power generation from the facility, giving the power plant a very high load factor.

When Global Business Reports returns in two to three years, how will Sumitomo in Indonesia be different?

Sumitomo Corporation was one of the first Japanese companies to enter the power generation market in Indonesia but today sees increased interest from not only Japanese players, but from those elsewhere in the region, and Europe as well. As a clear Independent Power Producer (IPP) model exists in Indonesia, any company can enter this market and so for Sumitomo to remain competitive, it must think critically as to how it can add value. This added value may be financial, operational, innovative structure or through EPC services. As Sumitomo has illustrated through Tanjung Jati B, the company has strong capabilities in these areas. Going forward, Sumitomo must determine how best to apply its strengths in a way that is consistent with the company's ethos to create value for all stakeholders, from the people to the government to the financial sponsors. •

Diversifying from Diesel

Indonesia's Coal and Renewable Energy Success

Even as the government looks to increase the electrification ratio and keep up with soaring demand, the country is trying to diversify its energy mix, as evidenced by government incentives and initiatives such as the FTPII's focus on developing renewable energy. Most recently, in January 2014 Indonesia's legislature passed a National Energy Policy, formulated by the National Energy Board (Dewan Energi Nasional – DEN), that aims to end the energy and electricity subsidies, gradually reduce the exports of coal and gas, and increase the use of renewable energy as a primary source of energy. Ultimately, the primary goal of the government is to move the country away from its costly reliance on diesel fuel to forms of energy that it has in abundance, namely coal and certain types of renewable energy.

Coal-fired power plants have long been an important power source, with an estimated 23 gigawatts (GW) of such plants currently in operation, but coal will become even more prevalent in the years to come, as the market for Indonesian coal has shifted. Bill Park, technical manager of NRM, explained: "The Indonesian coal mining industry experienced an unprecedented boom between 2007 and 2012, but recently there has been a downturn in coal pricing due to an oversupply in the global market and a weakening of demand from China. In the near-future, Indonesia's ability to continue to export coal could be further compromised by the fact that much of the country's remaining coal is low grade, which is not desirable for export."

Some may argue that the variable price of coal could affect its cost-effectiveness as a primary source of energy generation, but Dass of Pt. Pöyry Indonesia, which provides its services for both coal-fired and renewable energy power projects in the country, countered that assertion: "The priority for the government would be to facilitate the development and construction of coal fired power plants, may it be through legislation or incentives, until such time that certain national energy related goals are met... The decision to build coal-fired power plants based on a theorized future price of coal makes sense given certain market dynamics, such as a slowdown in the demand from China. Though the Chinese economy might be slowing down, Indian coal stocks are running low and recently Australian miners too are easing back on their exports. Thus, no one can predict the future price of coal and so it would be prudent for the government to utilize this natural resource for the domestic needs of today for the betterment of the overall electrification ratio nationwide."

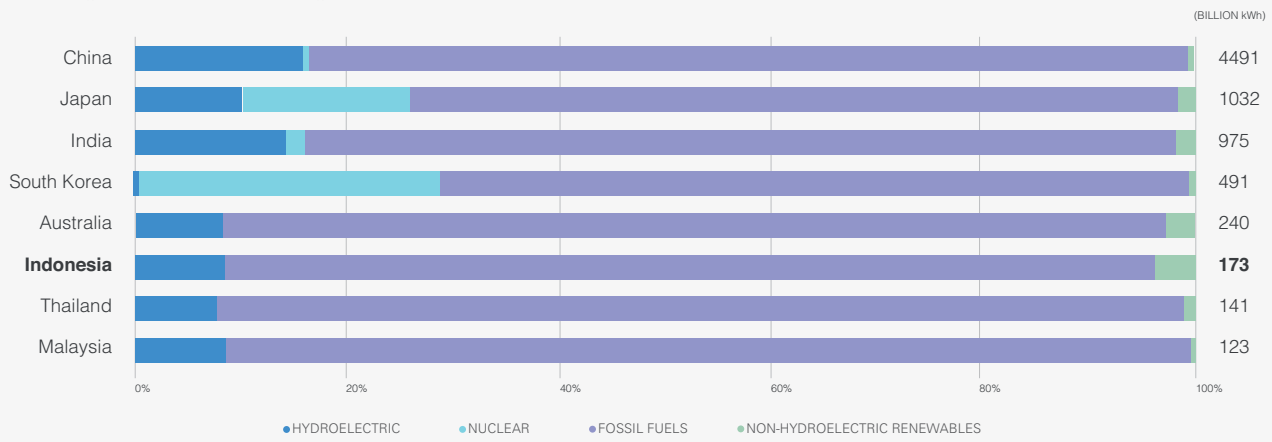
Though coal is here to stay for the short- to medium-term, the government recognizes that it must do more to assure the country's long-term energy security, as Barid Manna, principal advisor of Air Quality and Climate Change of the consulting firm Pt. ENV Indonesia pointed out: "Renewable energy is important for the country to achieve sustainability, increasing green energy usage and the capacity of future generations. With half a million barrels of oil produced per year and only 10 million barrels of oil left, oil and gas may only last for another 20 years. Coal may last another 80 years at current production levels of 400 million metric tons per year. Within two generations, these resources may be depleted."

While the country's projected reliance on renewable energy may seem overly ambitious, the country holds considers resources and its goals may be attainable. Situated within the ring of fire, Indonesia holds 40% of the world's geothermal resources, equaling 29 GW of electricity across the archipelago. Evidence of geothermal's enormous potential in Indonesia lies in the Sarulla project being developed by Medco Power Indonesia, a joint venture owned by Medco Energi Internasional, the largest national oil and gas company in Indonesia, and Saratoga Power.

A project under FTPII located in North Sumatra, Sarulla, on which construction began in June 2014, will be the world's largest geothermal power plant. Fazil Alfitri,

ELECTRICITY GENERATION BY TYPE, INDONESIA AND ITS PEERS (2011)

Source: U.S. Energy Information Administration, International Energy Statistics



president director of Medco Power Indonesia, explained the project: "Sarulla is one of the most ambitious power projects currently being undertaken in Indonesia with total capital expenditure amounting to $1.6 billion and total debt of $1.2 billion. The power plant's operations will come on line in three phases: 110 megawatts (MW) in 2016, 220 MW in 2017 and additional capacity after that point. From the proven reserve perspective, in the next twenty to thirty years, Sarulla could very likely double or triple its output from the initial 330 MW." Medco Power Indonesia is focusing on nine clean and renewable energy projects in addition to Sarulla, including a 75 MW natural gas power plant, a 30 MW combined cycle power plant, six 45 MW mini hydro projects scattered across Western Java and Sumatera and will be adding another 110 MW geothermal power plant in Situbondo, Eastern Java which is scheduled to begin drilling in 2015.

Geothermal has great potential, but even more promise lies in hydropower. Josef M. Ullmer, the president director of global electro-mechanical equipment supplier for hydraulic power generation Pt. Andritz Hydro, revealed: "The potential for hydropower in Indonesia is tremendous: 75,000 MW have been confirmed and if we include run of the rivers and mega sites for Hydro Power Plants, the real potential could be above 100,000 MW."

Although dozens of mini hydro plants have been undertaken by the private sector, the majority of large hydro power plants are being developed by the PLN, including Indonesia's largest hydro power project, the West and East Java 1,040-MW Upper Cisokan Pumped Storage Hydro Electrical Power Project, for which Pt. Andritz Hydro is in in the process of prequalifying for the Hydraulic Steel Structure Lot as well as for the Pump Turbine and Motor Generator Lot. Noting the difficulties, Ullmer said: "The largest issue facing private sector investment into large hydro power projects is related to permits and land acquisition. For large hydro projects, over 25 different permits are required. The Asahan III [a 154-MW run-of-river hydroelectric power plant in North Sumatera] project has been delayed for three years, not because the proper permits for the plants were not in place, but because permits and land titles for the access roads are not yet done. In most parts of the world, such an issue would have been resolved by a telephone conversation between two ministries; this is not the case in Indonesia." Though this fact is not meant to discourage private sector investment in large hydropower projects, it underscores the importance of partnering with those who know the lay of the land.

Large coal, geothermal and hydro projects are ideal for the larger islands where industrial development is concentrated, but as Indonesia becomes more prosperous, it must expand access to electricity to its citizens sprinkled throughout many of the smaller, more remote islands. The best way to achieve this is through smaller renewable energy projects, as Bambang PS Brodjonegoro, the Vice Minister of Finance, explained: "Indonesia is a collection of islands, many of which are remote and have difficulty generating power. In these areas, a coal-fired power plant cannot be built because it is not economical. Currently, diesel fuel is the only way to generate power for these islands but it is costly, not only because of the price of the diesel but because it must be transported to the islands by plane. The government sees alternative or renewable energy, such as solar, as a solution to these off-grid islands because these options are at least competitive to diesel fuel." The government, non-governmental organizations, and private sector companies have been working collectively to make renewable energy for the smaller islands a reality.

Cross-sector collaboration is best illustrated by the example of the island of Samba. Castlerock Consulting is one of the primary parties working on the project. Crosetti explained the initiative: "The government of Indonesia has identified Sumba as an iconic island that can serve as a model for other islands in Indonesia, and perhaps even for other countries. The idea is to move from a 30% electrification ratio and 15% reliance on renewables today to a 95% electrification ratio and 100% reliance on renewables by 2025. We are working with other stakeholders to identify, plan and implement both grid and off-grid solutions that utilize hydro, wind, solar and biomass resources." Samba's success could dictate how access to electricity is developed for the millions that live in the countries isolated islands. •

Josef M. Ullmer

President Director
PT. ANDRITZ HYDRO

Can you please provide us with a history and introduction to Andritz Hydro's global operations and its presence in Indonesia?

Andritz Hydro was founded over 170 years ago and is the leading supplier of electro-mechanical equipment for hydraulic power generation in the world. Andritz Hydro has supplied over 400,000 megawatts (MW) of hydro equipment globally, equal to one-third of the total installed capacity worldwide. Andritz Hydro first began supplying equipment to Indonesia in 1929 and established a permanent presence in the country in 1995. To date, Andritz Hydro has supplied 2,800 MW of hydro equipment of the 4,750 MW of total installed hydro equipment in Indonesia. The Indonesian office of Andritz Hydro also serves as the regional headquarters for South East Asia, Australia and New Zealand.

What are the main areas of focus for Andritz Hydro's operations?

Andritz Hydro's strategy in Indonesia focuses on four areas. The first is the supply, installation and commissioning of electro-mechanical equipment and hydraulic steel structures for large hydro power plants, for which our main clients are PLN, the Indonesian state electricity company, and other large mining companies. Currently, Andritz Hydro is executing two projects for PLN in Aceh, HEPP Peusangan 1 2x23.1MW and HEPP Peusangan 2 2x22MW. Andritz Hydro is also the designated supplier of Hydraulic Steel Structures for HEPP Asahan, located in North Sumatera, which is pending final permits. Andritz Hydro's second focus is on service and rehabilitation on installed equipment: performing proactive assessments, rehabilitation, preventative maintenance, enhancements and optimization of existing hydro facilities, and hence prolonging the life of the assets. The third area is small hydro, which we call "Compact Hydro" power plants and are mainly developed by private parties to sell the electricity to PLN under the Feed-In Tariff scheme. Finally, we act globally as an Erection and Commissioning Expert Staff Resource Provider that supports the planting up efforts of Andritz Hydro projects with our skilled and highly efficient engineering experts.

The Upper Cisokan Pumped Storage Hydro-Electrical power project is one of the PLN's most ambitious projects. Can you describe it and the equipment and services that Andritz Hydro will provide?

The Upper Cisokan Pumped Storage Hydro-Electrical facility will consist of two reservoirs connected by the Hydro Power Plant, which will have the ability to pump water from the lower reservoir to the upper reservoir in off-peak times and generate during peak load times. The powerhouse will accommodate four vertical shaft reversible pump-turbine/motor-generator units, each with a continuous rated output of 260 MW. The World Bank will fund the 1,040 MW-project, and Andritz Hydro is in the process of prequalification for the Hydraulic Steel Structure Lot as well as for the Pump Turbine and Motor Generator Lot.

The government requires the construction of smelters for downstream mineral processing, which will require investment in power plants. Should hydro be used to power these smelters?

The smelting facilities can only be economically operated with inexpensive electricity, which only hydro can provide. For a 200-MW large hydro facility, the kilowatt per hour (kWh) price ranges from 3.8 cents to 4.2 cents, whereas for a similarly sized coal-fired power plant, the price is 4.5 cents. Once you include the price of coal, the cost rises to 9.5 cents per kWh, and coal prices are currently depressed. Hence, hydro will play an important role in the development of smelters. Andritz Hydro is proud to have supplied the three Hydro Power Plants namely Larona 3x68MW, Balambano 2x70MW and Karebbe 2x64MW for the integrated Nickel Mining and Smelter operation of PT Vale Indonesia in Sulawesi.

While there is enormous potential for large hydropower plants, at present, PLN is building the vast majority of them, rather than private investors. Why has this been the case?

The largest issue facing private sector investment in large hydropower projects permits and land acquisition. For large hydro projects, over 25 different permits are required. The Asahan III project has been delayed for three years,not because the proper permits were not in place but because permits and land titles for the access roads have not been completed. All that is required is a telephone conversation between two ministries. The government needs to streamline permitting and land acquisition so that infrastructure projects can be implemented in time and on budget.

When GBR returns in two years, how will Andritz Hydro's operations in Indonesia have changed?

Andritz Hydro will continue to supply the same quality of services and equipment, but the company's presence will be much larger, doubling from 500 employees to 1,000 employees. The current pipeline of hydro projects from the private sector and the government already has financial commitments, and Andritz Hydro believes that it will be working on the majority of these projects. The potential for hydropower in Indonesia is tremendous: 75,000 MW have been confirmed and if we include run-of-the-river and mega sites for hydropower, the potential could exceed 100,000 MW. •

ANDRITZ Hydro

Hydro Power.

Sustainable development of worldwide power generation.

HEPP CIRATA, 8 x 125 MW
WEST JAVA – INDONESIA

HEPP LARONA, 3 x 68 MW
SOUTH SULAWESI – INDONESIA

HEPP KAREBBE, 2 x 64 MW
SOUTH SULAWESI – INDONESIA

PT. ANDRITZ HYDRO is the Market Leader in the field of clean, renewable Hydro Power Generation in Indonesia. We are active in marketing and sales, engineering and manufacturing supervision for our Large Hydro and Compact Hydro Plants.

Our Service & Rehabilitation activities are for our Fleet but also for different OEM's is supported by our site service experts as well as our engineering team, the only pure Hydro team in Indonesia. Our experienced site installation staffs are also used worldwide by utilities for their skills and dedication. PT. ANDRITZ HYDRO also coordinates and supports the marketing and sales activities for our offices in Myanmar, Thailand, Vietnam, Laos, Malaysia, Philippines, Australia and New Zealand.

PT. ANDRITZ HYDRO is part of the global ANDRITZ GROUP.

PT. ANDRITZ HYDRO
Jl. Talang No. 3 Pegangsaan, Menteng, Jakarta 10320, Indonesia
Phone: +62.21.3906929 **Fax:** +62.21.3905006

www.andritz.com

Fazil Alfitri

President Director
PT. MEDCO POWER INDONESIA

Medco Power Indonesia was established in 2004 and is owned by Medco Energi Internasional, the largest national oil and gas company in Indonesia, and Saratoga Power. What inspired the move into the power sector and what are Medco Power Indonesia's key operations?

Medco Power Indonesia was initially founded as the power arm of Medco Energi Internasional to monetize the company's oil and gas reserves by delivering gas directly to the customer through power rather than pipelines. However, the compnay moved beyond this initial design to focus on distributive generation through the development of small- to medium-sized Independent Power Producers (IPPs). The company owns and operates four gas-fired power plants, two in Batam and two in Palembang, South Sumatera. It also owns a minority share in the Sengkang gas-fired power plant in South Sulawesi and is building another gas-fired plant in Batam.

The company is focused on natural gas power plants but is also developing its nine renewable assets, namely geothermal and mini hydro power plants, which are currently under construction. For these projects, total capital expenditure is $1.3 billion. In addition, it has gained expertise in operation and maintenance as well as engineering, procurement, and construction work in order to service other power plants, including the Tanjung Jati B coal-fired power plant, one of the largest in Java.

In 2006, Medco Power Indonesia was awarded the development of the world's largest geothermal contract in Sarulla, North Sumatera, as part of the government's Fast Track II Program. Can you tell us more about this project and its challenges?

Sarulla is one of the most ambitious power projects currently being undertaken in Indonesia with total capital expenditure amounting to $1.6 billion and total debt of $1.2 billion. The power plant's operations will come on line in three phases: 110 megawatts (MW) in 2016, 220 MW in 2017 and additional capacity thereafter. From the proven reserve perspective, in the next twenty to thirty years, Sarulla could double or triple its output from the initial 330 MW.

While Sarulla will begin operation in the near term, the project has not been without challenges. According to Article 33 of the Indonesian Constitution, underground resources belong to the state, making the arrangement of financing nearly impossible. Previously, only large players such as Chevron completed megaprojects because they could deploy massive balance sheets. To bring in project financing, Medco Power Indonesia worked with the government to modify the regulations. This required making banks comfortable so that they could collateralize the asset during the repayment period while also assuring that the asset would return to the state. It took time, but Medco Power Indonesia was the first to approach project financing in this way and created a structure for future projects.

Can you tell us about Medco Power Indonesia's upcoming projects and plans for an initial public offering?

Medco Power Indonesia has under construction nine renewable projects in Indonesia, three of which will be completed by the end of 2014 and the rest in 2017 and 2018. These projects are fully funded, except the $450 million Ijen geothermal power plant. This project has already received the concession, the Purchase Power Agreement (PPA), the permitting license and most of the exploration and geophysics have been completed; the next stage is to begin drilling in 2015. To finance this, Medco Power Indonesia is planning to hold an IPO in the near future to bring in new partners.

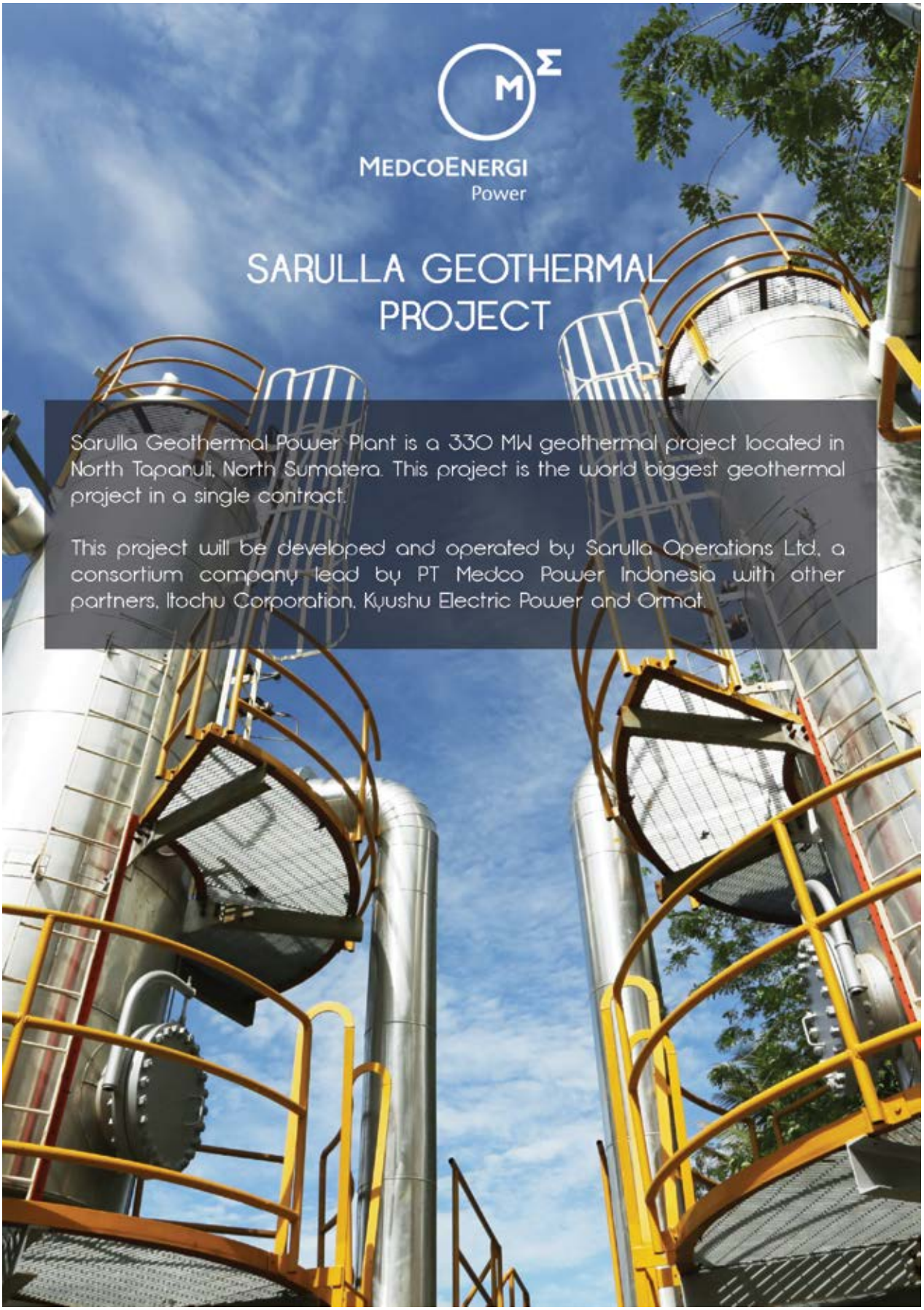
The geothermal industry in Indonesia is beginning to attract attention from both local and international investors. Why is Medco Power Indonesia an attractive partner?

Investors must consider Medco Power Indonesia's exceptional progress to date. Despite great potential, investments in the Indonesian power sector often fail to materialize because of the business environment. The company understands how to navigate the complexities in this field, from working with the various government ministries to local communities. Medco Power Indonesia has started it has completed every project that it has started.

When GBR returns in two to three years, how will Medco Power Indonesia have changed?

Medco Power Indonesia will have completed its IPO and will be a larger company, completing projects not only in Indonesia but also elsewhere in the region to diversify risk. Medco Power Indonesia has the expertise to move beyond small- to medium-sized IPPs, and Sarulla illustrates that the company is at a turning point. Going forward, Medco Power Indonesia will be doing larger, more selective projects in the renewables space, focusing on the niche market of providing a sustainable power supply.

From an investment perspective, Indonesia is a gem in the region: it is the largest democracy in Asia, providing a stable operating environment, and, in terms of power demand, the country's current situation must be addressed. 50 million Indonesians are without electricity and even if 100% electrification is achieved, the country's usage will only amount to one-tenth of what Singapore currently uses. Medco Power Indonesia is a growth platform and will work to address the country's energy needs and support the government. •



MEDCOENERGI
Power

SARULLA GEOTHERMAL PROJECT

Sarulla Geothermal Power Plant is a 330 MW geothermal project located in North Tapanuli, North Sumatera. This project is the world biggest geothermal project in a single contract.

This project will be developed and operated by Sarulla Operations Ltd., a consortium company lead by PT Medco Power Indonesia with other partners, Itochu Corporation, Kyushu Electric Power and Ormat.

Michael Crosetti

Director
CASTLEROCK CONSULTING

In 1996, Castlerock Consulting was founded as an energy and environmental consulting firm with a focus on utilities. What led to the company's shift to renewables?

When Castlerock Consulting was founded, we focused on providing technical expertise within the power sector, largely to PLN, the Indonesian national utility, as well as government agencies. This work included performance improvement analysis, tariff studies, regulatory reform consultation, work on the electricity law and so forth. Within the last five years, the government has issued a series of laws and regulations opening up interest in renewables, and Castlerock began to see activity in this market pick up. Castlerock became quickly involved, completing such projects as regulatory work for geothermal and market entry analysis for hydro. Today, though we work across Southeast Asia, 80% of Castlerock's work comes from Indonesia, most of which is related to renewable energy.

Castlerock is providing services to a project on the island of Sumba, which involves many stakeholders including NGOs, the Indonesian Ministry of Energy, PLN and private sector. Can you tell us about the project and Castlerock's involvement?

The government of Indonesia has identified Sumba as an iconic island that can serve as a model for other islands in Indonesia. The idea is to move from a 30% electrification ratio and 15% reliance on renewables today to a 95% electrification ratio and 100% reliance on renewables by 2025. We are working with other stakeholders to identify, plan and implement both grid and off-grid solutions that utilize hydro, wind, solar and biomass resources.

As part of this program, Castlerock has been providing high-level strategy and planning as well as on-the-ground preparations. We are identifying which areas are best served by off-grid solutions and others that can be supported by grid extension, determining for the grid the least-cost mix of generation technologies, maximizing the role of renewables, and finally assessing the transmission and distribution investments required to deliver power to where it is needed. Meanwhile, Castlerock's on-the-ground team focuses primarily on data collection, but now, having identified promising off-grid solutions, will work with local communities to implement them.

There has been a surge in hydro projects, but many are not getting financial closure or commissioning. Why is this the case?

For renewable power projects of 10 megawatts, the government successfully enacted a regulation in 2009 that stipulates feed-in tariffs for investors and assigns to PLN the obligation to buy this power. There have been subsequent improvements in this regulatory environment. However, it is the responsibility of the developer to realize projects. There is certainly room to improve permitting and approval processes, and in some cases these present significant obstacles to project implementation, but in the case of hydro development in particular, we often find a lack of sophistication amongst the developers. Many developers do not have the appropriate skills, financial resources or maturity to see these hydro projects to fruition, or feel they can save development costs and maximize project returns by foregoing additional technical analysis or prudent designs that can minimize project risks.

Castlerock Consulting was involved in assisting the government in establishing the public private partnership (PPP) framework to attract foreign investors to the power sector, but this has failed to materialize. What are the main issues?

Castlerock Consulting was involved in outlining the processes and organizational structure for PPPs but, like with many sectors in Indonesia, the problem lies in the inability of the various authorities to coordinate, which is further compounded by issues at the regional level. Before Suharto stepped down, power was too centralized and in 1999, the first law devolving power to the regional level was passed. Successive laws followed and then sector specific laws were then implemented. While it was a positive move for the country, the pendulum has perhaps swung too far. The regions lack human resources to implement large-scale projects involving international investors and the risk of corruption and rent seeking is much higher. The question then is how can the central government claw back some of this authority?

Castlerock Consulting has moved from first supporting infrastructure and utilities to servicing the renewables sector. When GBR returns to Indonesia, how will the firm have evolved further?

Castlerock will continue to provide strategy and advisory work to the government, multilateral organizations and private players, both in Indonesia and in the region, but also hopes to move into the development space. Castlerock Consulting has learned a lot during its 20 years in Indonesia about what works and what does not, about the main issues other investors have faced and how to actually deliver. Castlerock hopes to take this expertise and apply it to identifying projects, putting together joint ventures, either with other local and foreign investors, and then acquiring financing. •

Thomas Staley & Steven Furry

TS: CEO
SF: General Manager, Project Development
OTP GEOTHERMAL

OTP Geothermal is a joint venture between two important regional players, Tata Power and Origin Energy, and the local Indonesian company Supraco. Can you tell us about the vision behind it?

TS: Origin Energy has an extensive portfolio of power and energy assets in the Australia and New Zealand region. The company sees geothermal energy, as an opportunity to leverage its upstream capabilities within the renewable sector, particularly in Indonesia. Understanding the opportunity, Origin Energy formed a partnership with Tata Power, which contributes extensive experience in power generation and in Indonesia, to create OTP Geothermal. OTP Geothermal's local partner is PT Supraco Indonesia, which provides integrated logistic and base management services to the oil and gas industry, including manpower, accommodation and office area management, camp maintenance, vehicle leasing, office and logistics support, rental and catering services. It also provides production facilities, pipeline maintenance and offshore drilling services.

OTP Geothermal's Sorik Marapi project has seen several years of delays. Can you tell us about the resource and some of the issues that OTP has had to contend with in relation to developing it?

SF: Sorik Marapi is situated in a fault zone called the North Sumatera Fault, which is adjacent to Sarulla, one of the other large geothermal projects currently being developed. Sorik Marapi became available through the tender process in 2010, and OTP Geothermal's reconnaissance and geological and geophysical work revealed an attractive site.

TS: Regulatory hurdles have slowed progress since 2010. The first hurdle was that another company challenged our successful bid. After that challenge was solved, OTP Geothermal faced a second obstacle: negotiating the Purchase Power Agreement (PPA) with the PLN. Over the last three years, OTP Geothermal has been working to become comfortable with the company's original understanding of what it won in the tender and what it would receive through the PPA.

What is OTP Geothermal's strategy for Sorik Marapi going forward?

TS: Following the government's new feed-in tariff regulation, OTP Geothermal will conduct an exploration program allowing the company to evaluate and assess the quality of Sorik Marapi and then renegotiate the terms of the PPA with the government. OTP Geothermal will need approximately 12 months to conduct an exploration program of up to four wells, after which it can assess the development of the power station.

SF: The government's decision is a positive step. There is much unknown about the subsurface economics and resources for geothermal that until the holes are drilled and exploration conducted, it is difficult to understand the capacity of a potential power station.

With local players starting to develop geothermal capabilities, what place do international players have in this space in Indonesia?

TS: International companies have a great deal to offer in Indonesia, particularly their drilling and upstream expertise. OTP Geothermal works very hard to develop the capabilities of its Indonesian employees, but this expertise still exists largely with international companies. They also continue to succeed at building power stations and incorporating new technologies.

How does geothermal development impact local communities differently from other forms of power development and what initiatives does OTP Geothermal have in place to mitigate its effects?

TS: To differentiate between other types of power stations, to build a gas-fired power station with access to pipelines already in place, a developer would only need about 20 hectares of land. A geothermal project of comparable size could be spread over tens of square kilometers, when you take into consideration the footprint of the steam field infrastructure. The locations are spread apart and need to be connected so that the steam is centralized and a power station can be built. Given how spread out the projects are, developers must engage with local communities.

TS: OTP Geothermal has a three-pronged community engagement program. The first is to educate the community so that it understands that geothermal is one of the better forms of power development and that the exploration and development phase will ultimately lead to electrification benefits. The second is to show the community other ways in which it can participate in the local economy, such as in establishing farming workshops. The third is to facilitate communication so that the community understands exactly what is taking place near their land.

When GBR returns in two to three years, how will OTP Geothermal be different?

TS: OTP Geothermal will like to have completed its front-end engineering and design and if not having already started developing the power station, it would hope to be close to a final investment decision. Regulatory challenges aside, the geothermal opportunity remains the same: there is the need for electricity and geothermal stands on its own when compared to the cost of other fuel types. There are only three or four markets in the world where a developer can enter, build a geothermal power station, and the economics of doing so will make it competitive against the other types of fuel. •

Chris Caffyn

Senior Vice President
PT. UPC RENEWABLES INDONESIA

Can you please provide us with a history and introduction to UPC Renewables on a global scale and the opportunity that it first saw in Indonesia?

UPC Renewables is a medium-sized, international wind development company that was founded in 1997. The founder of the company Brian Caffyn began developing wind farms in Italy and then formed the UPC brand in the United States and expanded to North Africa, China and the Philippines. In each of these markets, UPC Renewables was an early entrant, one of the first, if not the first, utility scale wind power developers in each of these markets or market segment.

Pt. UPC Renewables Indonesia first entered the market through a partnership with Pt. Binatek Reka Energi. Binatek Reka Energi had experience in other forms of renewable energy, such as biomass, but the company was facing challenges to develop its 15-megawatts (MW) Samas wind farm, which is now called Pt. UPC Yogyakarta Bayu Energi, in Bantul regency in the Yogyakarta province on the island of Java. Pt. UPC Renewables Indonesia introduced ideas that would help move the project forward, such as increasing the scale of the project to 50 MW to take advantage of economies of scale. At present, UPC Renewables Indonesia and Binatek Reka Energi are negotiating the Power Purchase Agreement (PPA) with the PLN the Indonesian national utility and expect to begin construction in 2015. UPC Renewables Indonesia has other projects in development that can follow the Yogyakarta project quickly.

Given its location along the equator, Indonesia is known for having low wind speeds. How does UPC Renewables Indonesia overcome this issue?

The technology for wind power has evolved at such a rapid pace that it can now take advance of the light equatorial winds. In addition, equatorial weather is very constant, as opposed to weather patterns in Europe or the United States that are characterized by strong fronts. The lower, but predictable, winds in Indonesia allow the newer Class III wind turbines to get very high efficiency and productivity. Lastly, the lower winds are expected to bring about other benefits, such as leading to fewer high wind construction delays and less long-term maintenance for the turbines.

With a plethora of natural resources, Indonesia is not short of renewable energy sources. Why does wind power work well in Indonesia?

While there is a lot of potential for renewable power such as hydro and geothermal, these projects take longer to complete. Wind power deploys quickly and can be less costly than other sources of renewable energy. In addition, wind turbines do not cause many social issues, as only a small portion of land is used, and they do not change the existing primary use and revenue stream from the land users.

There are also other features unique to Indonesia that makes wind power a compelling option. In Indonesia, most wind power would be generated during the dry season, while hydropower would be generated during the wet season, creating a natural balance of these two zero pollution energy sources. Furthermore, at the Bantul site the wind power is made during the day and early evening, matching and producing electrical power at peak demand time for the Java grid, making it very valuable.

With wind farms all over the world, what are some of the unique features that UPC Renewables Indonesia has found in its operations in the country?

The work the UPC Renewables Indonesia carries out in the country is largely the same as what the company does in many other places around the world. Many of the variables, including the model of the size of project, the quality of technology and the permitting process, are the same. The one factor that does change depending on the location is cultural considerations. Indonesia is bureaucratic in the sense that there is a large focus on building coalitions and consensus, as opposed to a more top-down decision making processes in Europe or the United States. In Indonesia, there must be consensus right down to the villager in support of the project. As such, the culture is focused on building trust, which is why it was important for UPC Renewables Indonesia to find a good local Indonesian partner. UPC Renewables Indonesia has also been fortunate in that wind power seems to resonate with the people. Indonesians are very visual and the logic behind wind power and it benefits at reducing carbon emissions and global warming makes sense to them, making the initial stages of the wind projects easier.

When Global Business Reports returns in two to three years, how will UPC Renewables be different?

UPC Renewables Indonesia will likely have two to three more additional projects and will helped Indonesia step into a new industry and take advantage of an unused clean renewable resource to meet its aggressive clean energy goals. The company now has a staff of 20, but once these wind farms are operational, the staff will likely expand to 70. UPC Renewables Indonesia has not seen many constraints in its work and is anticipating steady growth in Indonesia. •

From Trash to Treasure

Biomass Gasification from Agro Waste in Indonesia

Image: Pixabay

With an archipelago of 17,000 islands, Indonesia displays many divergent characteristics, be it in the form of people's skin color, religious beliefs or spoken languages. However, one point of commonality evident throughout the many islands is the pervasiveness of agriculture.

Endowed with warm weather, rich soil and abundant rainfall, Indonesia is a true agro land. As such, the country's economy continues to rely heavily on the agricultural sector. Indonesia is the world's largest producer of crude palm oil and the third largest producer of rice. It is also a major producer of cassava (tapioca), groundnuts, cocoa, coffee, and copra.

According to 2012 World Bank, the agricultural industry contributed 14% to the nation's GDP and generates significant yields for both export and domestic consumption. But with these productive outputs follow the concomitant waste, which is known appropriately as agro waste. Often, this residual matter is used as fertilizer, animal feed or simply burned. While this might seem a more than adequate use for something that seemingly has no practical application, there is in fact a more efficient alternative: biomass gasification.

The conversion of solid biomass into a combustible gas mixture called "Producer Gas," biomass gasification is the next step beyond the burning of solid biomass fuels. Although natural biomass can be burned for direct thermal use such as cooking or for the generation of power, these applications are inefficient, and, in the case of the latter, capital intensive. The conversion of biomass into producer gas is more efficient, as the low quality fuel is transformed into high quality fuel. In addition, the resulting fuel requires no further alteration; it can be fed directly into an internal combustion engine.

Hoedani Hadijono, the President Director of Pt. SyRes Indonesia, an Indonesian alternative energy company, saw an opportunity to apply this concept in Indonesia. A mechanical engineer by training, Hadijono recognized that rice husk, the waste product resulting from the rice grinding process, served as an ideal feedstock, and took action: "In 2011, I approached the Bureau of Logistics (BULOG), the largest government institution for the distribution of food, such as rice, sugar and flour, to acquire the rice husk that is a byproduct of the rice milling process. Within just two weeks, Pt. SyRes Indonesia signed a contract with BULOG and later secured a grant through the Dutch government to build two rice husk power plants, one in Sulawesi and another in Java."

By using rice husk as feedstock for the gasification, Pt. Syres Indonesia was able to help BULOG reduce its operational cost by 70%, as the organization was no longer dependent on the more costly diesel fuel. Furthermore, environmental pollution was all but eliminated.

So successful was Hadijono's project that the Dutch government chose it as one of the most successful biomass projects that it has sponsored around the world. Consequently, the Dutch government has committed to providing Pt. SyRes Indonesia with funding for another 20 biomass projects, which will be constructed by the end of 2015.

While the biomass gasification from agro waste seems both an obvious and straightforward option that Indonesia can employ to help reach its ambitious power generation targets, there are several considerations that must be addressed for this type of power project to succeed. These include understanding the surrounding geography, the density of the rice paddy fields, the state of supporting infrastructure, alternative uses of the fuel by other industries, access to water, off-take agreements, complications tied to power plant construction and logistical factors. None of these considerations can go unexamined but the most crucial by far is logistics, namely securing the feedstock.

Though not without important considerations, biomass gasification from agro waste is a low cost, environmentally friendly solution that has the potential to be used throughout Indonesia, as there is agro waste in various forms in every corner of the country. As Indonesia looks to increase its generating capacity while also shifting its energy mix so that renewable energy makes up a larger piece of the pie, biomass gasification from agro waste could be one of the significant mediums by which the country meets its growing energy demand. •

Nationalizing its Minerals to Spite its Development: Politics and Regulation in Indonesia's Mining Industry

"If we look at history, most would agree that Parabowo would help create a better investment climate. Jowoki, at least at this moment, remains an unknown; his role in directing foreign investment would be determined by the role that Megawati plays in directing him. This said, nothing could be worse than SBY's regime and its natural resource policies. Even the Minister of Energy and Natural Resources seems to lack an understanding of how mining operates."

- Malcolm Baillie, Indonesian Forum for Mineral Exploration and Development

Image: G-Resources

The Great Divergence

The 2009 Law and the Politics of Mining

An archipelago of 17,000 islands severed from the Australian continental shelf thousands of years ago, Indonesia has incredible mineral wealth. The country is the world's largest exporter of nickel, thermal coal and refined tin. Despite an ever-evolving regulatory framework, the profitability of Indonesia's mines for all listed companies, surprisingly, has consistently stood above the average of the top 40 mining companies globally for all key metrics.

These glowing attributes were undermined by the announcement of "Law Number 4/2009 on Mineral and Coal," on January 12, 2009, which became one of the world's most ambitious plans for nationalization of its resource sector. Not only did the country seek to substitute the mining industry's foreign base with nationals but it sought to eradicate the presence of the foreigner entirely, and attempted to do so, ironically, under the guise of facilitating foreign investment.

Bill Sullivan, licensed foreign advocate at Christian Teo Purwono & Partners, wrote: "The great irony of recent Indonesian mining policy is that when the 2009 Mining Law was introduced, the aim was to provide a simple, transparent way for foreigners to invest in the Indonesian mining industry through wholly foreign owned PMA Companies which, for the first time, could hold mining licenses. During the last couple of years, however, the Government has increasingly given foreign investors ever greater "negative policy" incentives to, once again, employ artificial contractual arrangements on the basis that it may be preferable for foreign investors to let Indonesians hold mining licenses while foreign investors extract economic value through indirect means. Essentially, in the space of five short years, Indonesia seems to have come full circle in terms of its attitude to foreign investment in the local mining industry."

Later clarified through further legislation, the 2009 Mining Law introduced new conditions and devolved a significant amount of regulatory power to state governments. Among these conditions were the dual requirements that new entrants must develop "mineral beneficiation" facilities – smelters – and comply with divestment requirements, whereby, it was subsequently announced, companies involved in production must sell a majority stake of their equity to a local partner. The 2009 Mining Law affected even service providers, as miners would be forced to favor local service providers in tendering contracts.

Complying with the law is not simple. The legal interpretations of many provisions are ambiguous and evolve as new requirements are announced. Guy Des Rosiers, senior foreign legal consultant at Makarim & Taira S., a leading Indonesian business law firm remarked: "State-level requirements for mining companies continue to be unclear; the industry remains unsure as to how transactions should be structured. There is a long history of people employing various investment structures, only for these structures to be later deemed incompliant."

The most infamous example of this has been permitting, which led to the suspension of thermal coal miner Churchill Mining's license, a case that has since escalated to international arbitration. Shareholder requirements are another. Guy Des Rosiers explained: "Indonesia opened up its mining industry to foreign capital under the premise that foreign businesses could initially own 100% of their companies, with an obligation to decrease their holdings to 80% after five years of production. This has since been revised to include further divestment obligations, ultimately leaving foreign businesses with only 49% after 10 years of production. While one would think that as results from the sector have continued to worsen, regulation would become more favorable – or at least provide clearer instructions as to how foreign mining companies are to proceed with divestment. The new regulation, however, has only provided more bad news for the in-

Image: Pt. Ahdadia Coal

dustry, especially with regard to how the price of company shares is valued.

Although not unexpected, it has been announced that replacement costs will be the ceiling price at which mining company shares are valued. Obviously for an operating mine, this is not a great valuating technique. One would want to see some multiple of this, but this is not happening. Instead, a ceiling price will be used for the government party—all other valuations will be based off of a benchmark. Again, this is problematic as there is no certainty as to the amount above the benchmark price a company will receive. In fact, there is no certainty as to who is subject to new regulation. Previously, it was assumed that mines operating under the Contract of Work (CoW) system would be protected to the extent that such contracts are considered lex specialis and contain their own divestment rules. This appears to no longer be the case, though it remains to be seen how and when the government may attempt to apply the new divestment rules to holders of CoWs."

Defenders of the legislation have argued that the introduction of these policies had long been public knowledge. Tamba Hutapea, deputy chairman for investment planning of the Indonesian Investment Coordinating Board (BKPM) stated: "The fact that often goes missed by industry participants is that the establishment of the 2009 Mining Law, and its subsequent enforcement in 2014, followed a four-year period of public consultation prior to the law's introduction wherein regulators consulted with the industry over the structure of Indonesia's new mining law. Those involved in the production of nickel and bauxite, (commodities whose export was recently banned), had eight years to organize themselves; eight years to, at a minimum, show a commitment to the conditions that Indonesian mining henceforth would be based. The industry's lack of preparation is not for a lack of awareness."

Yet those within Jakarta's legal circles would disagree. Rahmat Soemadipradja, partner at Soemadipradja & Taher Advocates, a leading domestic law firm involved in natural resources, said: "The introduction of the 2009 Mining Law was without precedent. It came as a complete surprise to the industry." Mochamad Kasmali, partner at Soemadipradja & Taher, said, "For the nickel and bauxite miners that will be facing a shut down as a result of this ban, it is only a matter of time before they take this issue to court."

The 2009 Mining Law has had a discernible effect on investor sentiment. In the Policy Potential Index of the Fraser Institute's "Survey of Mining Companies 2012/2013," which ranks the attractiveness of a country's resource policies based off of industry perception, Indonesia ranked last of the 76 jurisdictions surveyed. If political barriers were to be removed and best practices employed, the Fraser Institute noted that Indonesia would have been ranked fourth globally. Though proponents of the 2009 Mining Law might argue that Indonesia has seen consistent growth in foreign direct investment into its mining industry, which drew in $4.8 billion in 2013 from $2.2 billion in 2010, the average size of these investments has shrunk significantly; falling from $9.4 million in 2010 to $5.9 million in 2013.

Indonesia has lost its ability to generate mega-projects, which could stymie the development of otherwise indigent regions of the country. Starting in 2014, the country will roll out $35 billion in infrastructure projects, 56 of which will take the form of public-private partnerships (PPPs). Regional projects slated for 2014 include the Kuala Tanjung port development in North Sumatra, the first phase of which will entail an investment of over $600 million, and Russian Railway's East Kalimantan rail line, a freight line that will require an investment of $1.7 billion. Each of these two projects represents an opportunity for the development of several regions both poor and currently bare of infrastructure. Two hurdles could remain: the legal framework and the country's treatment of its resource sector.

Rainier Haryanto, country manager of SMEC, an Australian professional services company that has acted as a consultant on several infrastructure projects within the country, explained: "The Government of Indonesia has placed much emphasis on building infrastructure; however, the strategy which they rely on for the development of infrastructure is weak. The framework supporting PPPs in Indonesia is immature. The government is still only exploring the correct formula for PPPs. There are many conflicting legal perspectives on how these ventures must be structured. PPPs, in particular, require a clear legal framework."

Jeff Tutticci, business development manager at Aurecon, a provider of global engineering, management and specialist technical services which is currently handling the execution of a major rail line in East Kalimantan said: "When I first arrived in Indonesia in 2005, I arrived before the country's infrastructure summit. I attended it and listened to the proposed deliverables. I presented these ideas to my country manager. He then pulled the list of deliverables proposed in 2004 off the shelf, and then the list of deliverables proposed in 2003. A common theme emerged; Indonesia has great plans, but poor execution." If given the proper framework, mining can lead to development, but Indonesia cannot fund many of these PPPs without the foreign investor.

Resource nationalism is a political tool and 2009 was also an election year. Anti-mining rhetoric is a rallying point. Bill Sullivan, licensed foreign advocate at Christian Teo Purwono & Partners, explained: "Out in the heartland, where the great masses of Indonesian voters live, the mining industry is unpopular. Because Indonesia is a densely populated country where mining projects take place in "people's back yards," Indonesians see funds being poured into projects, but unless they are directly employed by the mining industry, they only experience the negative impacts of the mining industry on their region. Coupled with Indonesia's xenophobia, which I put down to the country's bad colonial experience under the Dutch, many are of the view that foreigners are out to take advantage of Indonesia. Indonesia and Indonesians also feel that they did not 'get their fair share' of the profits during the last mineral commodities boom and will not let this happen again."

Taking a tough stance on the mining industry is, accordingly, seen as a tailor-made, vote-getting opportunity. Matt Simpson, principal consultant at Mining Alliance, a specialist, Australasia-focused recruitment service provider, echoes this sentiment with regard to the impact that politics have had on foreign hiring. "At its rawest form, without being overly cynical, this is an election year and there is a fair bit of nationalist rhetoric that is being thrown about today. For a long time many have been pushing the Government to limit the presence of the foreign business in Indonesia. The Indonesian government now wants for its workforce to move up the ranks of organizations and place themselves in a decision-making capacity. From a human resources perspective, it is important to be realistic as to whether domestic workers can satisfy the expectations of an organization. This is not an event that takes place over night. The transformation of a workforce takes longer. Following the election we may see the industry face less pressure to nationalize its workforce, but this will be a gradual process." •

Rifki Feriandi and Jeff Tutticci

RF: Country Manager
JT: Business Development Manager
AURECON

Aurecon first entered Indonesia in 1997 and established a presence in 2001. How has Aurecon's business in Indonesia evolved and what will drive its business moving forward?

RF: The business environment in Indonesia is attractive and full of opportunities in areas that have traditionally been the company's strengths, such as industrials and mining, as well as in new fields like transport and international aid projects. We expect donor-funded projects, such as those initiated by USAID and the World Bank, to contribute to our growth. These organizations closely follow Indonesia's Masterplan for Acceleration and Expansion of Indonesia's Economic Development (MP3EI) and offer opportunities for infrastructure projects. Mining remains the pillar of Aurecon's work in Indonesia, but we are always looking to diversify.

Aurecon has won a number of important projects in the domestic market. Which projects were milestones for the firm?

RF: We are very proud of Aurecon's recent work on the Cigading International Bulk Terminal (CIBT). We provided conceptual design, evaluated bid documents, designed audits, and provided representative services for CIBT.

JT: This was a particularly satisfying project because we were involved from the beginning and could see it take shape from a concept on paper to bid evaluation through to construction.

Aurecon developed the conceptual design, which formed the basis of the owner's tender package, and assisted in bid evaluation and design review for all disciplines, excluding geotechnical. During construction, we played an active role. The project leader visited the site every week, accompanied by other electrical, civil and structural engineers when required. We also prepared regular progress reports and chaired monthly stakeholder meetings. By being so involved in the project, we became a valued partner.

With regard to new projects, what does 2014 hold?

RF: One of our largest projects is in coal transportation, and Aurecon is providing front-end engineering design and professional advisory services. We are excited to utilize our multidisciplinary expertise to design a cost-effective, efficient, and sustainable solution for our client. In addition, new international aid and port development projects will occupy our energy. We are proud to be a part of Indonesia's economic and social advancement.

As a global operator, what challenges are unique to the domestic market?

JT: Indonesian clients demand simple and clear engineering design solutions so we are striving to provide such designs. The country's equipment stock and the ability to replace parts in remote areas also inform design choices. It would be impossible to succeed in Indonesia if we do not adapt to local conditions. We cannot approach Indonesia through a preconceived notion of what an engineering solution should be or what best practices have been elsewhere. Most importantly, under-qualified technicians must be able to fix problems. We must understand what solutions operate efficiently under the harshest of conditions and what the life expectancy of these solutions is. Aurecon understands all this.

The government has planned $35 billion in infrastructure projects beginning in 2014. Do you think these investments will materialize?

JT: When I returned to Indonesia in 2005, I attended the country's infrastructure summit, listened to the proposed deliverables, and presented them to my country manager. He then pulled the list of deliverables proposed in 2004 off the shelf, as well as those proposed in 2003. A common theme emerged: Indonesia has great plans, but poor execution. There are too few resources. The money is pulled in so many directions, and, particularly for infrastructure development, land acquisition remains problematic. The success of the current proposals will depend upon whether we can acquire the necessary land.

Many of Indonesia's plans are contingent upon the support of the international financial community. With sovereign risk increasing, have international capital markets tightened for project financing?

JT: In spite of the export ban, the IMF continues to be positive regarding Indonesia's growth. Capital markets have tightened, and some large players in the mining industry have pulled back. However, small- and medium-sized companies have grown more active in anticipation of a market recovery.

If we were to meet with Aurecon again in two years, where might the company and the market be?

RF: Aurecon will have expanded its business as well as its capabilities. Coal will continue to be the backbone of Aurecon's work, but it will diversify into public infrastructure work, especially in the ports, transportation, and international aid sectors. We expect that non-mining projects will constitute almost half of our total work. We are laying the groundwork for this expansion now, identifying opportunities, and securing the requisite talent and skills to realize these plans. The coal market is more difficult to predict. Hence Aurecon's strategy is to leverage our engineering strengths, gained through our experience with coal projects, and apply them to infrastructure projects in other sectors. •

Guy Des Rosiers

Foreign Legal Consultant
MAKARIM & TAIRA S.

As the Indonesian mining industry has moved further along the path outlined by the 2009 Mining Law, how has Makarim & Taira S. seen it change?

Uncertainty about the industry's regulatory framework has heavily influenced investor confidence in the Indonesian mining industry. Coupled with declining commodity prices, a lack of regulatory transparency has resulted in a quieter mining practice for Makarim & Taira S. However, investors continue to monitor Indonesia. Should policy changes occur that grant a greater level of clarity within regulatory structures, we could see investors become more confident in placing their money in the country.

What current trends have you noticed among investors in Indonesia's mining industry?

Investors from several countries, including India and China, have maintained relatively strong positions in Indonesian natural resources. Naturally, the forthcoming export ban has generated some interest in the development of smelters: however, aside from the question of whether a full export ban will be implemented, significant economic challenges remain to the development of these facilities. The feasibility of these projects remains to be seen.

There are several clear examples of the lack of transparency in Indonesia's mining policy: state-level permitting requirements are one example. Have we seen a more conciliatory government attitude towards mining emerge as a result of the decline in investor sentiment?

State-level requirements for mining companies continue to be ambiguous, and the industry remains unsure how to structure transactions. There is a long history of people employing various investment structures, which were later deemed incompliant.

Shareholder structure requirements are one evolving example of this. Indonesia opened up its mining industry to foreign capital under the premise that foreign businesses could initially own 100% of their companies, with an obligation to decrease their holdings to 80% after 5 years of production. This has since been revised to include further divestment obligations, ultimately leaving foreign businesses with only 49% after 10 years of production. While one would think that as results from the sector have continued to worsen, regulation would become more favorable – or at least provide clearer instructions as to how foreign mining companies are to proceed with divestment. The new regulation, however, has only provided more bad news for the industry, especially with regard to how the price of company shares is valued.

Although not unexpected, it has been announced that replacement costs will be the ceiling price at which mining company shares are valued. Obviously for an operating mine, this is not a great valuating technique. One would want to see some multiple of this, but this is not happening. Instead, a ceiling price will be used for the government party—all other valuations will be based off of a benchmark. Again, this is problematic as there is no certainty as to the amount above the benchmark price a company will receive. In fact, there is no certainty as to who is subject to new regulation. Previously, it was assumed that mines operating under the Contract of Work (CoW) system would be protected to the extent that such contracts are considered lex specialis and contain their own divestment rules. This appears to no longer be the case, though it remains to be seen how and when the government may attempt to apply the new divestment rules to holders of CoWs.

The direction of the government is clear; more in-country processing is desired. However, as noted in a 2013 USAID report, this needs to be developed in a way that makes economic sense, not through some blunt instrument such as the export ban, which does not distinguish (for instance) between the economics of smelting copper versus the economics of smelting aluminum.

Speaking to the forthcoming export ban, Chatib Basri, Minister of Finance, recently backtracked, stating that a full export ban is unlikely. Different arms of the government hold different views on this. Do you think we will see a full export ban?

I doubt that we will see a full export ban implemented. Like in the recent case of the United States' debt ceiling debate, there is some brinksmanship. In all likelihood we will see a decision occur five minutes before the stroke of midnight wherein the government will state that the export ban will not occur, but instead that producers must meet a set of conditions. This may result in less transparency, with some rent seeking in certain cases pertaining to who can export their ore and at what cost. None of this is particularly reassuring, but in terms of whether the Indonesian government will simply impose the ban, I view this as highly unlikely.

Do you have a final message for readers?

Investors and foreign miners should not give up on Indonesia. Investments need to be approached carefully, but the geological potential of the country is tremendous. Although mixed signals are now being sent, one can decipher what is underpinning them. This is the key to success in Indonesia. •

Firdaus Asikin

Managing Partner
DELOITTE TAX SOLUTIONS

Could you historicize the development of Indonesia's mining industry?

In the late 1980s and early 1990s, the Government of Indonesia sought to create a solid regulatory framework for its mining industry by which it could better attract foreign investment. To this end, the Contract of Work (CoW) system was developed. Under the CoW system, the Indonesian subsidiary of a foreign company would sign an agreement with the Ministry of Energy and Mineral Resources that would guarantee the terms of a mining venture as law. Special stipulations were given in some cases, known as lex specialis, which could, for instance, allow companies to employ an evolving tax structure, but the CoW system provided companies with a uniform way of structuring their investments. Though the mine licensing process changed with the introduction of Mining Law No. 4/2009, under which no more CoWs are granted – instead, all new mining shall be operated under the Mining Business Permit (IUP) system – CoWs still govern the majority of contracts.

Recently there has been much uncertainty about the validity of CoWs under Indonesia's new mining code. What have been the tax implications of this?

Starting in 1994, the Indonesian government began altering the structure of the country's tax law with regard to Value Added Tax (VAT) as it applies to the mining industry. Certain categories of items were deemed to be non-VATable. This was broadened in 2000, creating a large financial burden for those mining companies that employed an evolving tax structure. Under this new VAT Law, mining companies that pay VAT incorporated the VAT in the cost of components associated with the production of ore (since the VAT paid is non-recoverable), but were then unable to recover these costs through the price at which they sold their ore. While many mining companies were exempt from this change, as their tax burden was previously structured in their CoW, the applicability of these exemptions has now come under fire as the CoW has been reinterpreted. Many new tax officers, in examining Indonesia's legal strata, now challenge the CoW as legally inferior to the VAT Law, which states that mining products are non-VATable. More broadly, this same thought process has underscored the way in which many consider the CoW to integrate with the 2009 Mining Law.

Certain CoWs may have lost independence in the new regulatory system, which has far-reaching consequences, and the certainty that backed the development of Indonesia's mining industry has been undermined. For tax, as the interpretation of the tax law is situational, mining companies are unable to guarantee compliance, even if they understand under which system their tax requirements are structured. Much is determined by how a given tax officer enforces the law.

Many companies are left ignorant of whether or not they are in compliance with the law. Tax compliance is self-assessed, and problems are usually found when a company is audited. In the worst-case scenario, this could mean that a company could face a far larger tax burden, in addition to a large amount of back taxes.

Many CoWs contain an international arbitration clause. Given these challenges to the CoWs' independence from the new tax regime, why have we not seen this clause activated?

CoWs do contain an international arbitration clause, but not for matters of taxation; tax disputes are handled in the local courts. In tax issues, foreign companies are unable to pursue recourse internationally, which subjects them to the varied interpretations of what regulatory system a mining contract falls under and how Indonesia's tax code should be implemented.

Many contend that these conflicting interpretations of regulatory statutes are a result of the country's rapid decentralization. Do you agree?

Many have expressed concerns about Indonesia's rapid decentralization. Since there is no uniform understanding of what the law is, there is no consistent rule of law. President Susilo Bambang Yudhoyono has guaranteed Indonesia's stability, but now a stronger, more decisive leader is needed to rectify many of the legal problems. Good governance is important to Indonesia's further development, particularly with how regulations apply to foreign investors. The domestic mining industry remains one of the largest single generators of tax revenue, and, within this, foreign joint ventures are the largest contributing group.

How can mining companies best handle the current environment?

Indonesia is now conducting its presidential election. During the candidate debates, the national interest has been one of the main issues discussed. The newly elected president and the new government might review mining CoWs and renegotiate their terms and conditions. Mining companies may be required to refine their products domestically before exporting them. Mining companies need solidarity and to strengthen industry associations. Individually it would be difficult for a mining company to negotiate with the government, but collectively there is power. The industry must speak with one voice. •

Rahmat Soemadipradja & Mochamad Kasmali

RS: Managing Partner
MK: Partner
SOEMADIPRADJA & TAHER

Since we last met with Soemadipradja & Taher (S&T) in 2012, the mining industry has seen a great deal of turbulence, moving further along the path set by the 2009 Mining Law. What has changed for the industry itself and how has investor confidence in this period of time?

Rahmat Soemadipradja (RS): The biggest change that we have seen is in regard to the carrying out of refining onshore. Specifically, a part of the 2009 Mining Law now seeks to restrict the export of ore which, which has created a number of problems for the industry and generated numerous court cases. This has had a discernible effect on investor confidence because, once invested in a mining project in Indonesia, investors then understand the lack of clarity in the law. Another development since 2012 was the introduction of a more complicated and higher divestiture requirement.

In January 2014, the ore export ban was announced to apply to only two categories of ore: nickel and bauxite. What are some of the most important points to understanding this announcement?

RS: The recent announcement maintains that certain types of ore can be exported only once processed. The government will have to address the statutory requirement on the policy given by the legislature that mining companies should be refining the product onshore. It creates issues for the miners, but opportunities for the smelters. In three years we will likely see more mineral beneficiation, though this could potentially be hindered by the lack of infrastructure. The state electricity company has confirmed that in certain areas it can provide the energy needed for infrastructure projects, but other areas will have to go about finding that energy in other ways.

Mochamad Kasmali (MK): The government seems to be committed to implement the obligation to refine minerals domestically. For these nickel and bauxite miners that will be facing a shut down as a result of this ban, it is only a matter of time before they take this issue to court.

With regard to export duties, it is assumed that this tax will apply to Contracts of Work (CoWs). CoWs were previously thought to be protected from complying with new legislation. Will those mines that work under a CoW agreement have to pay this progressive tax?

RS: Whether mineral companies cover this progressive tax will be subject to how they choose to dispute it; it is unlikely that they will not want to take a stand. Certain parts of the government are in support of the contracts because they do want to see international levels of mining practice; however, as a result of the political pressure for refining to be carried out in Indonesia, they can do nothing but support this, although tacitly. We expect to see a great deal of lobbying carried out, and if that is not successful, this will be escalated to higher levels, namely the court system.

Is the manner in which the government carried out this ban, passing legislation at the stroke of midnight, perceived locally as a failure of its policy making? Could this become a political issue in the next election?

RS: The idea is to make this export ban a political issue. It is important to note, though, that the way the government behaved is nothing new. The government has put the industry in a tough position, but it has traditionally approached policy making by necessity. In the past, Indonesia had the advantage of having one decision maker, Suharto, who would arrive at his own conclusions, but also at his leisure. Today, Indonesia has a democracy and the President must consider many more aspects when making a decision, creating delays in terms of making a decisive decision.

The 2009 law set a precedent, creating a clear preference for national service providers to the mining industry. While there has historically been this implicit understanding, do you believe that it is now being enforced more heavily?

RS: Enforcement is strict, but the government has been wise in that it addresses policies for companies on a case-by-case basis. Older companies are often grandfathered into this piece of regulation.

MK: In the past, there were so many

mining companies that did not carry out coal or mineral extraction by themselves and were thus silent partners of foreign investors. The government is now looking to require that a mining company carry out mineral extraction by itself rather than hire its affiliate.

If we were to meet with you in two years, where would S&T be and what changes would you expect to see in the industry?

RS: Mining will continue to be S&T's primary practice. This firm's in-depth knowledge of the industry grants us a unique advantage. Also, S&T has been in the business for over 25 years.

The volume of work that we perform for the mining industry will not be as large as in the past as the industry will be more regulated; there will be a downsizing of lawyers across the board. In the next year or so there will be changes to mining legislation from the Constitutional Court or Supreme Court, the outcome of which will bring clarity in terms of how the industry should function. Consequently, we will likely see an uptick in M&A and there will be more opportunity for investors to enter the country.

MK: As a full-service law firm, with dedicated litigation and M&A teams, S&T has the expertise to serve its mining clients no matter how legislation evolves.

Many have commented that the introduction of the 2009 Mining Law had the opposite of its intended effect: to encourage foreign investment. Instead it led to the creation of many artificial structures. Specifically, what do these structures look like? How did they come to be?

RS: The use of these artificial structures is nothing new. In the past, when foreigners were prohibited from investing into Indonesia, foreign companies would team up with a domestic company, usually a mining services provider; the mining services company would agree to provide services to a company and then be remunerated through the sale of a product. The 2009 Mining Law was to do away with these artificial structures. Foreign investors were to be allowed to directly hold shares in a company. Instead, many employ a loan and security arrangement, which is functionally different from this previous setup but serves the same end: to allow for companies to invest upon better terms. This reflects how unattractive the 2009 Mining Law has made investing into the industry.

Today foreign ownership has been limited to 75% at an exploration stage and 49% if one is involved in production. Service companies are also more tightly regulated. A result of these past arrangement, those involved in production must not only employ a local company, but they also must employ a company local to the region in which they operate. If no service provider can meet the requirements of a project, only then may an Indonesian company with foreign ownership be hired. •

Rainier Haryanto

Country Manager of Indonesia
SMEC

SMEC is an Australian company involved in professional services, with a heavy focus on infrastructure-focused consulting. Could you please introduce us to the history of SMEC in Indonesia?

The name of SMEC originates from Snowy Mountain Hydro, one of the largest hydroelectric projects in the Southern Hemisphere and one of the most complex water and electricity projects in the world. Executed in 1950s and completed in 1974, Snowy Mountain Hydro was a result of the Government of Australia's desire to increase hydropower generation. Following completion of the project, the government wished to maintain the expertise; thus, SMEC (Snowy Mountains Engineering Corporation) began as a state-run organization, with the intended purpose of executing projects on behalf of the Australian government overseas. Indonesia was the second country in which SMEC established a presence, in 1970. Indonesia represents one of the most important markets for SMEC globally. Our workforce in Indonesia is one of the company's largest in the Asia Pacific Division.

Looking at the history of SMEC's operations, which projects are most representative of the quality of SMEC's value proposition?

We have completed infrastructure projects in Indonesia across a number of disciplines, including roads, ports, hydropower, tunnels, mining, geothermal, water management and environmental and social studies. We have been involved in the hauling roads for Adaro and in the Scoping Study for Cokal's BBM project in Central Kalimantan.

Given the broad array of services in which SMEC is involved, which service lines have driven company growth most strongly in 2013?

SMEC's service offering related to infrastructure projects continues to be one of the most important areas for the generation of business. Many mining companies are now realizing the importance of engaging consultants in infrastructure projects; specialized service is now seen as necessary, which was not the case before.

In 2014, SMEC will continue to lead the market for growth. Four years ago, the company made a decision to tailor its service offering to the private sector, particularly for the middle market of mining. At the time, many of the largest consultancies were focused on the contracts of big name companies, such as BHP Billiton. SMEC realized though that smaller mining companies could create much of the industry's value. This strategy allowed SMEC to grow while many consultancies are seeing demand decline. Big projects might build one's brand, but sustained growth depends upon repeat business.

Indonesia is not an easy country for the development of projects. Mines are remote. Those involved in mine management are often under-educated. What does SMEC identify as challenges to project development that are distinctively Indonesian?

There are several challenges that are unique to Indonesia. Land acquisition and permitting are extremely difficult. Property is hard to procure, which prohibits project development. The development strategy that a company employs is important, as one cannot place themselves in a position where they must buy more land later on. Community relations also must be approached carefully, otherwise they can preclude a project from reaching completion.

The government has announced that in 2014 the country will begin to roll out $35 billion in infrastructure projects. How likely is it that we will see many of these projects materialize?

The government has placed much emphasis on building infrastructure; however, the strategy for developing infrastructure is not keeping up with the needs. The framework supporting Public Private Partnership (PPPs) in Indonesia is still immature. The government is still exploring the correct formula for PPPs. There are many conflicting regulation perspectives on how these ventures must be structured. PPPs, in particular, require a clear framework, which integrates all supporting regulation. Otherwise, many of the proposed projects will not materialize.

What does SMEC identify as the key infrastructure projects that will open up certain regions?

In the mining sector, the development of smelting and processing facilities in Indonesia will continue to be one of important determinant of future projects in the country. These projects will pave the way for certain regions of the country to be opened up. The infrastructure is not yet in place to accommodate these facilities, but should certain utilities be created, they will multiply the number of projects that are feasible in certain regions.

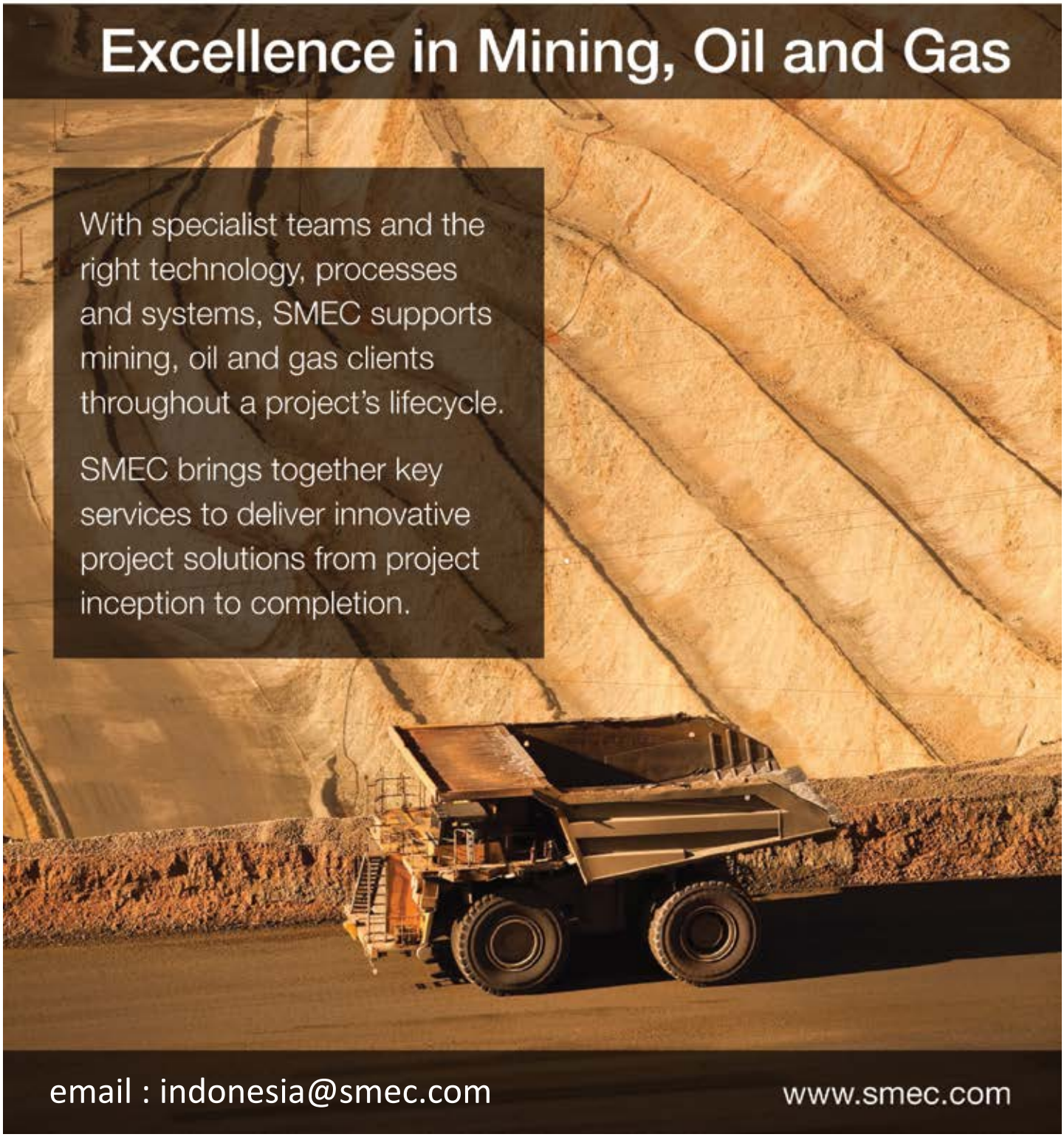
If we were to meet with SMEC in five years, where might we find the company?

SMEC would like to grow its resource division, which is why it has placed such an emphasis on expanding its presence in Indonesia. We will focus on capacity development and efficiency improvement to better serve our resource client. Five years from today, mining will be one of SMEC's core divisions. SMEC has over forty years of experience in infrastructure in Indonesia, but this work is now slowing. •

SMEC

Local People. Global Experience.

Excellence in Mining, Oil and Gas



With specialist teams and the right technology, processes and systems, SMEC supports mining, oil and gas clients throughout a project's lifecycle.

SMEC brings together key services to deliver innovative project solutions from project inception to completion.

email : indonesia@smec.com

www.smec.com

Matt Simpson

Principal Consultant
MINING ALLIANCE

Could you please introduce us to the services that Mining Alliance provides to the domestic market?

Mining Alliance is a specialist, Australasia-focused recruitment service provider for all levels of personnel within the mining industry. We do not focus on other sectors, although we cover resource- and mining-related construction.

How have weak commodity markets affected the industry's appetite for talent?

The market is at the toughest point that I have ever seen. Nonetheless, there is still demand for specialist expertise, in part related to the increased difficulty of receiving kitas, foreign work permits. There is a shift towards short-term contracting and fixed-term arrangements, but Mining Alliance believes there will continue to be work in the recruitment of high caliber senior project management level personnel: those that can come in and drive production and efficiency whilst motivating a sizeable work force.

What areas of the domestic market does Mining Alliance believe are underserved for recruitment services?

Previously, at Mining People International, I recruited from the Indonesian market. In boom times, many of Australia's largest miners employed Indonesian nationals on fly-in fly-out (FIFO) contracts. This will happen again. There is a Liberal government back in power in Australia, which typically has a more open approach to 457 visas and foreign work permits for the Australian market. We hope this will no longer be the case, as a skill shortage exists across Australia, as made clear by the exorbitant price of labor in the country. Only in Australia is non-skilled or semi-skilled labor paid a six-figure salary. There was upward pressure on salaries prior to the last downturn and opening up Australia to Indonesian nationals is a potential solution.

Top level Indonesian talent is extremely valuable. Fortunately, Indonesians with international experience typically want to return to Indonesia and are exposed to a variety of management philosophies and mining methods that can then be transferred to domestic workers. More should be done in this area.

The government has recently made it difficult to bring foreign labor into the country: a kitas crackdown is occurring. What has spurred this?

This is an election year and some nationalist rhetoric that is being thrown about. There are moves afoot to make it difficult for companies to export raw ore. Two of the industry's largest foreign businesses, Newmont and Freeport, are now struggling with a tax that would require them to pay what could be up to a 60% duty on ore taken from the country. For a long time many have been pushing the government to limit the presence of the foreign business in Indonesia. Foreigners operating in the domestic market would be required to up-skill an Indonesian national into their role, placing them out of a job. This was a provision to enter the country as an expatriate. Many companies have been complacent and now the government is trying to hold the industry to certain standards.

From a human resources perspective, it is important to be realistic as to whether domestic workers can satisfy an organization's expectations. If one operates in Indonesia over an extended period of time, one will see one's expat, national ratio decline.

Indonesia has proven itself an excellent destination for human capital in certain fields such as mine planning. However, there still appears to be gaps in the labor market. Where do these gaps exist?

Indonesia has some of the best rising mining talent in the world. A gap in skills within the labor market does exist, though typically for the small- to mid-cap companies. Many of these companies do not have international systems and procedures and a commitment to the training and development of people that the larger organizations have.

Could you please identify Indonesia's leading schools for the development of technical expertise for the mining industry?

The Technical College of Bandung and the ATV produce the most technically sought after students within mining. Many oil and gas companies are already aware of this and now target the graduate mining engineers produced by these institutions as little time has to be spent in upgrading the skillset of a mine engineer to become a petroleum engineer. There are other universities of interest to recruiters but ITB is the most well known and highly regarded internationally.

What deficiencies exist within the curriculums of these institutions?

If deficiencies exist, it is likely in the lack of practical experience among Indonesian graduates.

In a Western Australian context for example, those trained at the Kalgoorlie School of Mines, which is part of Curtin University in Perth, have typically benefited from on the job training that the students source for themselves during semester breaks. Known as VAC Work or vacation work, students gain a practical orientation to the course theory that they have learned in the classroom. More Indonesian mining graduates could potentially enjoy the benefits of this type of practical experience, which can accelerate career paths and possibly also go some way to ensuring greater course material relevance and practical application of course material in Indonesian university curriculums. •

Andrew Carnie

Managing Director
MCCONNELL DOWELL

Can you provide us with a brief history and introduction to McConnell Dowell on both a global scale and to its operations in Indonesia?

McConnell Dowell is a 50-year old construction business that focuses on oil and gas, mining, infrastructure and power. The company employs 7,500 people and has offices of operation in Australia, New Zealand, the Pacific, South East Asia and the Middle East. McConnell Dowell has been in business in Indonesia since 1975, working predominantly with private clients in the mining and metals sector, marine infrastructure and oil and gas works. In the last five years, the company has worked on coal handling facilities and nickel mining projects and has most recently seen a shift back to gold projects, including G-Resources' Martabe gold and silver mine and also J Resources' Bakan gold mine.

How does McConnell Dowell apply "Creative Construction" to the mining industry and what special significance does it hold in Indonesia?

"Creative Construction" was originated by the company's founders, Malcolm McConnell and Jim Dowell, when they established the company in New Zealand. They realized that if you could understand the risks of a job and determine ways to engineer out of them, it would be possible to complete projects that many would deem as not feasible. As such, McConnell Dowell began to provide alternative design concepts and utilized new construction methodologies, offering clients significant cost savings. This culture continues today, allowing us to go beyond traditional means of construction by applying concepts from our knowledge bank or by taking a new technology that we have been utilizing in other parts of the world.

This practice is particularly useful for remote area mining projects in Indonesia. On a greenfield site, it is important to imagine how the whole project will be built, including any potential risks, and then plan the necessary steps to mobilize the complete suite of equipment.

What are the principal challenges that McConnell Dowell must address on mine site projects in Indonesia?

The technical component of the mining projects, if engineered properly, is not very complex. The mining industry, in terms of process and equipment, has not changed significantly over the last ten years; mine sites are not looking to come up with a unique way of processing minerals. Putting steel and pipe and concrete together is the same for all projects around the world. Designing and constructing a mine site is simply a matter of taking a different footprint and determining the most efficient means of installing the system.

The difficulties of the projects in Indonesia are generally related to the remoteness of the site locations and the infrastructure that must be built to support the project. Greenfield sites require the construction of mini-townships where sewerage systems, firefighting systems, drinking water and fuel supply must be established. If the site runs out of fuel, the project stops. If the site runs out of water, the project stops. There are also no neighboring towns and so spare parts must be kept at the ready should equipment break down. In addition to the concerns related to the remote nature of the site, the Indonesian infrastructure to get product and equipment to the site must be taken into account. A project might require a 150 ton crane that needs to be placed on a wide-load arrangement. However, if the bridge to the project site is only rated for 100 tons, another route must be considered. For projects in Indonesia, McConnell Dowell has utilized a combination of logistical methods to move equipment.

While there are many challenges to working on remote mine sites in Indonesia, there are a number of companies that offer similar services competing in this space. What does McConnell Dowell offer to these sites in terms of value add?

McConnell Dowell brings a global management system to Indonesia with international levels of safety, quality and surety of project delivery. McConnell Dowell has strong CSR policies and guidelines governing how the company views the workforce. When a client wants McConnell Dowell to go into the jungle, the job must be done safely and not draw any bad publicity. Once awarded a project, our teams will make it to the site independently to begin work and while the process may seem "out of sight, out of mind," the team is running that construction site in the same way that a McConnell Dowell team would run one in Sydney or Dubai. No matter where the project may be located, McConnell Dowell applies the same policies, level of safety and quality of product at the finish. Clients may pay a slight premium for our services, but in working with McConnell Dowell, they know that their project is in a safe pair of hands.

When GBR returns in two to three years, where will we find McConnell Dowell?

While McConnell Dowell would like to see mining continue to be a significant component of its business, the company will be more diversified, moving into other areas such as public infrastructure, tunneling, process and chemical plants and tank terminals. There is sovereign risk to the mining industry in Indonesia, but hopefully the government will correct this and the country will see more foreign investment in the near future. •

Image: Pt. Ahdadia Coal

The Straw That Breaks the Camel's Back?

Weighing the Costs of Indonesia's 2014 Export Ban

On Sunday, January 12, 2014, in what was a surprise event for the country's mining industry, the Government of Indonesia moved forward with its plans to enforce a ban on the export of raw minerals from the country's ports. Put forth as law in 2009 following four years of public consultation, January's export ban had long been public knowledge; part of the country's movement to internalize a greater share of the gains associated with its natural resource sector.

The ability of the government to enforce such a requirement, however, had been doubted since the ban's introduction, many being unconvinced by the economics of domestic smelters. At a point in time when Indonesia's current account deficit was at a historic high and raw ore remained one of the country's most important trade commodities, implementation of the ban seemed all the more unlikely.

Logic, however, failed to give way to the government's determination. Though less stringent than initially conceived (as many of Indonesia's principal mineral commodities were exempted in a last minute Presidential decree), the ban, which still applies to nickel and bauxite, was enforced amidst much uproar. Police took to the country's ports to preempt protests. Speculators considered the impact that the ban might have on global commodities prices. Indonesia accounts for from 18% to 20% of the global supply of nickel and from 9% to 10% for bauxite.

Though significant, far more important than the impact that the country's export ban will have on Indonesia's economy immediately will be in the way in which several issues attached to the ban's enforcement play out. The most significant of these events will be the way in which many of Indonesia's largest miners are forced to comply with new requirements suggested by former President Susilo Bambang Yudhoyono's (SBY) decree.

In structuring the decree, which exempted many mines from the ban, SBY barely back-stepped from requiring domestic miners to construct smelting facilities. For those miners involved in the production of copper, iron, lead, zinc, and magnetite, exports of raw ore can continue until 2017, at which point in time processing facilities must be established. Until 2017, a progressive tax on all exported commodities will be applied: 25% in the first year for copper – 20% for all other commodities – thereafter escalating to 60% for all minerals in 2016.

Aimed at punishing the country's mining industry for failing to comply with the government's initial mandate, the imposition of this tax strikes at the heart of Indonesia's current struggle to integrate many of the country's oldest mines into the new legal framework. Built under a different political administration, mines such as Freeport-McMoRan's Grasberg and Newmont's Batu Hijau offered their investors concessions that would have not been granted later. The legal document governing each mine, their Contract of Work (CoW), was set forth as law; all subsequent legislation affecting the country's mining industry was to be inferior to these pre-established contracts. This included Indonesia's IUP licensing system, which, introduced in 2009 with the 2009 Mining Law, created a new framework for foreign investment into mining and introduced Indonesia's mineral processing requirement. Though CoWs would terminate at a certain point of time, until this point was reached, they were to be considered untouchable.

The Indonesian government's imposition of the country's IUP system on the country's oldest mines, through requiring CoWs to establish mineral processing facilities and by creating a new tax regime to which their exports will be subject, is the second assault that the Indonesian government has waged on the sanctity of the CoW in the past six months. In October of 2013, it was announced that all foreign miners would be required to comply with a set of divestment requirements whereby over a 10-year period all mines currently in production that failed to build integrated mineral processing facilities would be forced to divest 51% of their equity to a local stakeholder. While these events have been noticed by the industry, their recourse has not been fully felt.

This could change, however, with the implementation of Indonesia's new set of export taxes. Estimated by some analysts to cost Freeport-McMoran up to $5 billion over three years, the price of SBY's export tax could be far larger for both the country and the industry. Bill Sullivan, licensed foreign advocate at Christian Teo Purwono & Partners, explained: "The

government has chosen to pursue its CoW objectives through bilateral negotiations. If, however, this ceases to be true and the government seeks to unilaterally impose additional obligations on CoW holders, it is quite possible that then a number of the larger CoW holders might seriously consider pursuing arbitration against the government, although this would be very much seen as a strategy of absolute last resort."

Though generally taxation disputes are one of the few matters within CoWs that cannot trigger international arbitration, the enforcement of an export tax could prove to be the straw that breaks the camel's back for the industry's largest miners, prompting an escalation of discussions as to the legality of other impositions on the industry, such as mineral processing or divestment requirements, to international courts. While Freeport recently finalized their CoW renegotiations, this could still happen for Newmont, which in June filed for international arbitration against the Indonesian government. Should the Government of Indonesia lose, the current political administration could lose the driving force behind its push to force others to establish mineral processing facilities. Should the government win, more drastic measures, such as the use of a full shutdown of the country's largest mines as a political bargaining chip, could be taken.

The implications of such a shutdown would be far reaching: widespread job losses and the descent of several regions into poverty. Ir. Syahrir Abubakar, executive director of the Indonesian Mining Association, explained that in such a scenario wherein the country's largest miners would elect to close, "Freeport-McMoRan anticipates a loss of 22,000 laborers: for Newmont, 8,000. The impact of these losses would be highly regionalized. In West Sumbawa, the area surrounding Newmont's Batu Hijau mine, and Mimika, the area surrounding Freeport's Grasberg mine, 45% and 25% of the region's inhabitants are employed through mining. Yet the effect of a full shutdown is far larger than this.

In the case of Grasberg, if Freeport were forced to halt production, Pt. Smelting, one of Indonesia's four smelters, would shut down, which would in turn prohibit them from supplying Petrokimia Gresik with an important byproduct produced through refinement, in effect causing one of Indonesia's largest fertilizer producers to decrease production. This would, in turn, translate into widespread job losses across East Java. Makoto Miki, president director of Pt. Smelting, said: "If Pt. Smelting were to shut down, it would be quite ironic. Through enforcing a policy that seeks to encourage mineral beneficiation, one of the country's few smelting facilities would close."

Following a shortfall for the supply of copper resulting from the suspension of operations at Newmont's Batu Hijau and production decreases at Grasberg, which has cut production by 60% since the enforcement of the ban, this possibility of forced closure has grown ever more real. Miki notes that this could happen as soon as January 2017.

A second event that will unfold in tandem with these discussions will be the success or failure of Indonesia's efforts to establish mineral processing facilities for bauxite and nickel. In differentiating nickel and bauxite from those mineral commodities exempt from the export ban, the Government of Indonesia reasoned that international interest in the construction of nickel and bauxite processing facilities was stronger than for copper or iron ore. Furthermore, nickel and bauxite smelters could more easily be established immediately. The economics of establishing integrated mineral production and processing facilities for both commodities certainly cause the closure of several hundred small and medium-sized mines. Infrastructure is weak in many of the regions best suited for such facilities; rates of electrification are low, and access to water, roads and ports, poor. Rahmat Soemadipradja, partner at Soemadipradja & Taher, said: "The state electricity company has confirmed that in certain areas it can provide the energy needed for infrastructure projects, but other areas will have to go about finding that energy in other ways."

Though the Indonesian government has slated $35 billion in infrastructure spending starting in 2014 in part to address this, it is highly unlikely that many of these projects will proceed prior to the establishment of these facilities. Should

these projects fail to materialize by 2017, the government of Indonesia will lose a key point of leverage for requiring other commodities to establish mineral processing facilities. Many of the problems experienced by Indonesian miners are a result of the country's rapid decentralization. Decentralization propagated corruption, leading to cases like that of Churchill Mining. Decentralization obfuscated permitting.

In the view of some, SBY's export ban is an attempt by the central government to rectify the problems created by decentralization through the central government reasserting control over the industry. Karlheinz Spitz, president commissioner of Pt. Env Indonesia, a consultancy specialized in environmental permitting and risk management in Indonesia, noted: "The central government realizes that too much authority was devolved to local governments. Power, though, is much more easily given than rescinded. Indonesian President Susilo Bambang Yudhoyono's Export Ban is quite an elegant way of the central government wrestling back some of the authority that was conferred upon local governments. Many of the small mining operations that sprung up post-reformasi will close. The focus of the industry will, once again, return to large-scale mining projects; projects that once fell under the purview of the central government."

Others argue that resource nationalism has been the overriding driver of the ban. Simon Birch of Resindo Resources Indonesia, a domestic consultancy, notes said: "The Indonesian government has put considerable thought into developing the piece of regulation that governs the country's export ban. Although naturally the government may initially be lenient in its enforcement, granting certain exceptions, the ban itself will be enacted: it plays an important role in encouraging the development of mineral beneficiation facilities. The export ban plays an important role in forcing upgrading in remote areas, in the development of local ecosystems – schools, businesses – that arise to support these projects. It is a tool for economic development."

Foreign mining companies have disproportionally appropriated the lucre of the country's mining industry. In spite of its mining industry, Indonesia is indigent. The government's effort to build mineral processing facilities is a bold attempt to use the country's natural resources for greater control in international commodity markets and, ultimately, to generate domestic wealth. This could never have been attained easily and without stepping on toes, but, the logic backing the government's decision is understandable and many within the domestic mining industry may even agree with it in principal.

A larger criticism is that the government has proceeded with the enforcement of the ban in a way that reveals other, more political motives. This is observed in the urgency with which the government has moved to enact this ban. Four years, regardless of the length of the period of public consultation preceding the implementation of the law, is insufficient to prepare any country – especially a country as ill-equipped by way of infrastructure as Indonesia – for the undertaking of such an ambitious project. Rahmat Soemadipradja said: "The government is attempting to make the export ban a political issue. It is important to note, though, that the way the government has behaved is not new. The government has put the industry in a tough position, but it has traditionally approached policy making by necessity."

This would also explain the country's use of a blanket piece

of regulation forcing all miners to develop smelting facilities, irrespective of the potential profitability of those facilities and the implications that forcing these companies to do so would have on trust in the country's legal system.

Demagoguery and any potential upside generated through the creation of such facilities, however, cannot justify the way in which this ban was enacted. The cost of the ban on the country's industry and integrity is too great. Though, since January, the government of Indonesia has proposed a revised export tax which could lessen the impact of the export ban on the country's miners, specifically those investing in smelting facilities, much could still change once Indonesia's new president, Joko "Jokowi" Widodo, assumes office. Ratih (Ipop) Nawangsari, counsel at O'Melveny & Myers, an international law firm with a presence in Indonesia, remarked: "Jokowi is known for his focus to solve the short-term/immediate issues first. Thus, while he will respect and uphold the requirements that have been set out under the laws, he will be open to consider some helpful measures to give mining companies a bit of a breathing room. That does not mean he will lift the export ban completely, but he will probably set some less restrictive requirements so that at least production activities can be restored."

Michael S. Carl, senior foreign advisor at SSEK, a full service Indonesian law firm speculates on the several scenarios that could come about. "Assuming that there is no major financial crisis, we will see a system in which two situations could occur, potentially together. The first is the entrance of Indonesian entrepreneurial-type players who are not necessarily mining specialists, but have access to foreign capital. The question is then whether these Indonesian entrepreneurs need the technical expertise to build a large mining house or if they can buy it.

The second possibility is that some of the state-owned entities will begin to take more of a center-stage in developing local mining houses. State-owned enterprises have technical expertise and can acquire financing, but they have government and political constraints that can make it difficult for them to be able to move effectively in developing opportunities. In regard to foreign players, their role is unclear if there is no significant regime change. It is too soon to tell what will take place, but Indonesia is determined to remove itself from the middle-income trap and wants to make certain that the development of its resources is done in a way that will help the country to develop. •

Simon Birch

President Director
RESINDO RESOURCES & ENERGY

In establishing Resindo, what gap did you seek to fill within the domestic market?
Resindo's value proposition centers on providing an Indonesian solution to engineering and project delivery to our clients. There are very few companies that offer this service to the mineral sector. We work extensively with this sector, as well as with domestic captive power plant projects. We are differentiated from our competition in that we are an international company, with full certifications, but entirely operated by Indonesian employees barring myself. We seek to empower our employees through providing them with the experience they need to grow.

Resindo was founded four years ago and has since grown rapidly. Since its establishment, how has the firm evolved?
Resindo was never founded with the intention of being a large group. We started with the expectation that we would have half of a dozen employees. We exceeded this during our first three months of operations and have since changed offices three times. Today, we employ 100 and plan to add 30 positions within the next three months. Our growth is a reflection on the demand of our clients to employ an Indonesian solution for engineering, fabrication, design, construction, supervision and management. We work with many of the world's leading process groups.

How have you seen the business environment surrounding Indonesia's mining industry change over the course of the past four years?
Generally, there is concern regarding the regulatory atmosphere surrounding the industry, in particular related to the export of concentrates and raw materials. For us, this has been reflected in a rise in the number of studies our clients have demanded, especially in coal, gold, nickel, and copper, and a decrease in small plant projects. We have certainly seen increased levels of interest in smelting projects since the passage of the export ban.

What does Resindo's pipeline of projects look like for 2014?
Most people expect for business to slow in the lead up to Indonesia's presidential elections. We have experienced the opposite of this. Our work in 2014 has been spread across studies, engineering, and field implementation projects. This year looks to be our largest year. While multinational companies have struggled recently in Indonesia, those businesses like Resindo, which have integrated themselves into the Indonesia market, have experienced above-market growth.

The remote nature of work in Indonesia and the quality of Indonesian labor have been identified by some as the largest challenges within the domestic market that service companies must overcome. Has Resindo found either of these issues to be problematic?
Remote works within Indonesia are quite similar to remote works in Australia; the only difference is the temperature of the regions. Australia has extreme high temperatures. Indonesia is just humid. This, therefor, has not been a large problem for Resindo. Some comment on the uneducated nature of the Indonesian workforce, however, once again, our experience has been the opposite of this. Indonesia graduates many engineers who then go and work on projects throughout the world before deciding to return to the county, both in minerals and oil and gas. Indonesian labor produces good quality work.

Much attention has been placed on the impact that Indonesia's export ban will have on the domestic mining industry. Some have argued that Indonesia lacks the mineralization required to make the construction of smelters economic. In what commodities have you seen interest in smelting facilities? Are these projects economic and how likely are we to see these projects materialize?
The development of smelting facilities in the country requires a large amount of resources; however, these facilities are feasible and are economic for certain groups. We have seen serious interest in nickel. In spite of some arguing that Indonesia lacks a sufficient resource base to develop these facilities, we believe that for certain commodities, especially nickel, we will see smelters developed.

Do you believe it to be likely, then, that we will see the export ban enforced in full?
The Indonesian government has put considerable thought into developing the piece of regulation that governs the country's export ban. Although naturally the government may initially be lenient in its enforcement, granting certain exceptions the ban itself will be enacted: it plays an important role in encouraging the development of mineral beneficiation facilities. The export ban plays an important role in forcing upgrading in remote areas, in the development of local ecosystems – schools, businesses – that arise to support these projects. It is a tool for economic development. •

Karlheinz Spitz

KS: President Commissioner
BM: Principal Advisor, Air Quality and Climate Change
PT. ENV INDONESIA

In addition to your position in Greencap Asia as the chief representative of the company's Asian presence, you are also the President Commissioner of the company's Indonesian subsidiary, Pt. ENV Indonesia. Could you introduce us to both companies and explain the relationship between both organizations?

I am part of the senior leadership of Greencap Limited, a leading provider of risk management services in Australasia. In 2010 we established our subsidiaries in Singapore and Indonesia, with the goal of duplicating the success that we have had in the Australian market in Southeast Asia. Our work in Singapore focuses on the provision of risk management services to the financial sector. Here in Indonesia, we are strongly focused on the mining and oil and gas industries.

How has the business evolved since ENV Indonesia was established in 2010?

The most important piece of a consulting business is one's expertise. Through our relationship with Greencap Limited, we have broadened our expertise, which has fueled the quick expansion of our business.

In 2013, much of our work was generated through assisting companies in areas of permitting, in particular, environmental permitting. We have worked with Vale and Sumitomo on the development of their nickel project assisting in preparing the environmental impact assessment. Environmental permitting in Indonesia can be quite challenging. The technical aspects of the permitting process aside, one must also straddle the requirements of local governments and of involved banks, which are beholden to standards of the IFC. This created a niche market in which ENV Indonesia excels.

One of the greatest struggles in Indonesia is permitting, which some argue is rooted in Indonesia's rapid decentralization. Has the central government attempted to recentralize some of this regulatory power?

Indonesia's enforcement of a partial ban on raw mineral exports is, in part, a reaction to the country's rapid decentralization. The central government realizes that too much authority was devolved to local governments. Power, though, is much more easily received than rescinded. Indonesian President Susilo Bambang Yudhoyono's export ban is quite an elegant way of the Central Government wrestling back some of the authority that was conferred upon local governments. Many of the small mining operations that sprung up following reformasi will close. The focus of the industry will, once again, return to large-scale mining projects, which fall under the purview of the central government.

One area in which ENV Indonesia has expertise is in Indonesia's environmental code. Indonesia has among the most sensitive eco-systems in the world. In what way does this impact on mine development within the country? Is Indonesia's environmental code adequate?

Indonesia's current system of environmental guidelines was established about twenty-five years ago, and it has provided an adequate framework for the development of the country's mining industry. The larger problem faced, however, is found in weak implementation of this code. Many mines within the country developed in an informal and unprofessional way. Anyone with a bulldozer and truck, and a concession to mine can develop a coal or nickel mine. This has created many mining operations that operate below the standard of the industry. The international companies, however, have closely followed Indonesia's environmental standards. No one can say that these mines operate below the industry's standards. Sadly, the work of these companies is undermined by the activities of small-scale, unregulated businesses, the proliferation of which has led to widespread illegal logging and environmental degradation. Again, this is largely attributable to the devolution of power to the regional level. Prior to this change in governance, there were 600 licensed mines. Following this change, over 10,000 mining licenses were issued. It has been largely these mines that are responsible for the current state of the industry and environment.

2013 has been exciting for ENV Indonesia, as it has undertaken several large, long-term contracts with prominent companies. What does 2014 hold?

In Indonesia the mining sector is quite unpredictable. Even large mining houses, such as Freeport-McMoRan and Newmont, face an uncertain future given the changes that have occurred in Indonesia as an operating environment. We will not see significant mining investments into the country, at least in the short-term.

However, ENV Indonesia has a bright future. The Grasberg mine will soon become fully an underground mine, with new permitting requirements. Smelters will be developed, the product of which will be more downstream business. I had the pleasure to work on Indonesia's first copper smelting facility, that of Pt. Smelting Gresik, back in 1994. I hope to have the opportunity to contribute to the development of Indonesia's second copper smelting facility. •

Budi Santoso

Director
SRK CONSULTING

Since we last met with SRK Consulting in 2012, how has business faired for the consultancy within Indonesia?

In the past two years, businesses have adopted a very conservative attitude towards mining in Indonesia, which has, in turn, impacted the market for consulting services. In Indonesia, this has been further exacerbated as a result of political uncertainty. The passage of several regulatory measures, such as the ban on unprocessed minerals that will take effect in January 2014, has drained investor confidence. For consulting businesses, this has meant that many projects have been postponed. Some have been cancelled entirely.

Few commodities have been isolated from this event. While precious metals, in particular gold, have faired better than base metals, SRK Consulting has observed a decline in interest across all commodities.

Previously we spoke of the development of the KCMI, Indonesia's answer to JORC requirements. Since 2012 have we seen the industry adopt the KCMI?

The KCMI continues to develop. In November, the Indonesian Stock Exchange (IDX) ruled that it would accept exploration companies' applications for listing. The creation of the KCMI was an important milestone in this development. Investors and third-party investors need confidence in the authenticity of the results that a company posts. The KCMI provides for this.

Several other systems, such as the NI-43101 or JORC, also provide for this. How does KCMI stand apart from these systems?

KCMI used JORC as a template, combining its requirements with those of the Indonesian National Standard for Resource Estimation. Our methodology for resource estimation is very similar to that employed by JORC or NI-43101. KCMI also requires a peer-review of resources. What separates the KCMI from other systems of resource verification is that unlike with JORC, the KCMI does not deem self-declarations of expertise to be valid for resource authentication. Under JORC, anyone with five years or more of experience can qualify themselves as an expert. Instead, under KCMI one must register with the government and industry associations. These associations must verify the competency of the individual.

Aside from this stipulation, KCMI is very similar to JORC 2004. If KCMI results are accompanied by a feasibility study, it is functionally the same as JORC 2012.

In the past five years the government has adopted a nationalistic attitude towards the development of Indonesia's mining industry. What has this actually meant for the mining industry?

This change in the government's attitude towards the country's mining industry has been positive. Indonesians deserve more responsibility. The government, however, trusts its people too little. Enforcement of many of these measures has been weak. Only through a greater amount of responsibility being transferred to the Indonesian people will we see Indonesia develop further as a nation.

One facet of this is observed in the licensing process for mines. In order to qualify for a license, one must have experience. But in order for one to have experience, one must have a license. This permitting requirement tilts the industry in favor of foreign miners, who have experience. As a consequence, talented Indonesian engineers have left the country as they have found it too difficult to operate domestically.

Many foreign nationals struggle with the permitting process as well, in particular with earning their social license to operate. This can involve appeasing local governmental figures. What consequences has this had on the mining industry?

Local bupatis cannot separate their personal interests from that of the government. Vested interests have manifested in bureaucracy, which has in turn resulted in delays in permitting and licensing. It took SRK two years to receive its license to operate. A new government must be held to higher standards and actively eliminate bureaucracy. Otherwise, Indonesia will fall short of meeting the standards required by the ASEAN Community in 2015. This will further delay Indonesia's development.

What does the future hold for both SRK Consulting and Indonesia's mining industry?

SRK Consulting will further strengthen its technical competencies before expanding further. We anticipate great growth in infrastructure projects, if not mining, especially in civil engineering and port engineering projects.

The growth of national industries should be the key priority of the Indonesian government. The ownership of domestic industries is unimportant. Foreign businesses can play a part in domestic industries. More important to Indonesia's growth is that these industries are supported by domestic businesses. •

Michael S. Carl

Senior Foreign Advisor
SSEK

Can you provide us with a brief introduction to SSEK and its work in Indonesia?

SSEK is a full-service firm of 65 lawyers that focuses on advising foreign investors, with a secondary practice in advising domestic companies, particularly those with a multinational presence. SSEK covers the full spectrum of mining advisory work, from regulatory compliance to the suite of mining and off-take agreements. In addition, SSEK is active in the M&A and dispute resolution spheres.

Following the enactment of the 2009 Mining Law, the firm witnessed a surge of foreign interest in the Indonesian mining industry. However, this interest has declined as the regulatory environment has become more uncertain and restrictions have been imposed. Recent work handled by SSEK includes restructuring foreign mine holdings to accommodate the new restrictions on foreign shareholding and advising on foreign investments in smelters. SSEK's most prominent recent representation is of Intrepid Mines Limited in its dispute with local investors over the Tujuh Bukit gold-copper-silver project in Banyuwangi, East Java.

Many speculate that the export ban will lead to the closure of hundreds of local nickel and bauxite mines. What recourse will likely result from this and, if in two years mineral beneficiation facilities fail to develop, what will this mean for the imposition of the export ban in 2017?

This is a complex matter because of the emotion surrounding it. The economic viability of smelting facilities must be viewed against the backdrop of a government determination that the resources sector should be seen to be contributing more to broader economic development through onshore value-adding activities. A ban is already effectively in place for certain unprocessed metals. The major Indonesian political parties are on record as supporting the export ban. Unless overturned by the Constitutional Court, the ban will remain and likely be expanded in 2017. There may be some tweaks to prevent large-scale job losses and loss of tax revenue from the major miners, but the basic idea of onshore processing appears fairly entrenched in the national political leadership.

IUP holders are fully subject to the Mining Law and have no legal recourse against the imposition of the export ban apart from the Constitutional Court challenge, which is now in hearings. The position of CoW-holders is dependent on the generation of the particular contract - all CoWs already provide for a refining and processing requirement. The requirement in some generation contracts is fairly robust, while in others it is vague. CoW holders whose CoWs cotain more vague language may perhaps contemplate resisting the export ban, but there are obvious risks with this strategy. CoWs have expiry dates, and CoW-holders want to see their mining rights renewed. With this objective in mind, antagonizing the government with litigation is not preferable to a negotiated compromise.

Many contend that the export ban is a political measure and that clarification was granted as an exception to benefit certain entities, such as Freeport and Newmont. Is this how the situation is being read domestically?

By clarification, we assume that you are referring to the export tax in lieu of an outright ban. On the domestic front, this clarification is being read as a benefit to these companies against a broader backdrop of resource nationalism. However, in reality the export tax is high, and miners do not see it as a viable alternative to the export ban. Resource nationalism aside, Freeport and Newmont are significant employers and taxpayers, and it is difficult to contemplate that there will not be a compromise reached.

Some argue that 27/2013 is not sustainable in that it does not encourage foreign investment. Will we see an amendment to 27/2013?

Many would like to see an amendment to 27/2013, but increased foreign investment is not necessarily the aim of leaders. There is a worldwide trend of surging "resource nationalism" – a recognition of the fact that a country's non-renewable resources are finite and must be exploited for the maximum benefit of the country – and Indonesia has embraced that trend, forming the view that it needs to develop the mining industry on its own terms.

What will the Indonesian mining industry look like in two years?

Two situations could possibly occur, potentially together. The first is the entrance of Indonesian entrepreneurial-type players, who are not necessarily mining specialists but have access to foreign capital. These players can galvanize large amounts of capital, potentially more easily than foreigners, because the perception exists that local networks and know-how are invaluable, while technical expertise can be purchased. If this proves true, domestic players will come to dominate the resource sector and domestic stock exchange listings will become an important source of capital. The second possibility is that some of the state-owned entities will begin to take more of an active role in developing local mining houses. State-owned enterprises have the requisite technical expertise and can access financing, but they have government and political constraints. It is difficult to see the established foreign mining houses making significant investments if there is no significant regime change. •

Bill Sullivan

Foreign Legal Counsel
CHRISTIAN TEO PURWONO & PARTNERS (IN ASSOCIATION WITH STEPHENSON HARWOOD LLP)

Could you quantify the impact that the 2009 Mining Law and subsequent pieces of regulation like Decree 27/2013 have had on the Indonesian mining industry?

Decree 27/2013 certainly made some investors hesitate before investing in Indonesia, and caused current investors to consider structuring their investments in a less straightforward way.

The great irony of recent Indonesian mining policy is that when the 2009 Mining Law was introduced, the aim was to provide a simple, transparent way for foreigners to invest through wholly foreign owned PMA Companies, which could hold mining licenses for the first time. During the last couple of years, however, the government has increasingly given foreign investors ever greater "negative policy" incentives to, once again, employ artificial contractual arrangements on the basis that it may be preferable for foreign investors to let Indonesians hold mining licenses while foreign investors extract economic value through indirect means.

Will the government succeed in renegotiating Contracts of Work (CoWs), so as to comply with the new regulatory framework?

The government has been trying to renegotiate CoW for over three years. There are 118 CoWs, and the deadline for their renegotiation was December 31, 2013. To date, none have been renegotiated. Part of this failure is attributable to the government attempting to work individually with CoW holders on contract renegotiation. In initiating these discussions, the government targeted smaller CoW holders first, then hoping to later approach larger CoW holders, pressuring them into submission through reproaching them for holding out. Had the government issued a uniform mandate for all CoW holders, the industry would have looked markedly different, but a fear existed that by grouping all CoWs together, they would hold the upper hand in contract negotiations. Now, the focus of renegotiations is on targeting larger players, thereby leveraging their agreement into pressuring smaller CoW holders into amending their CoWs. The government has yet to reach a consensus with Vale or with any other major CoW-holder and is more unlikely to do so following the 12 January 2014 enforcement of the export ban, as two of the six issues upon which these contract negotiations have turned are downstream processing requirements and tax matters. Under their current agreements, CoW holders are not obliged to build such facilities or comply with changes in the tax regime. If CoW holders were to accept the ban and pay the associated export tax, they would undermine their position in the ongoing contract re-negotiations.

Will international arbitration clauses in CoWs be triggered?

The government has chosen to pursue its CoW objectives through bilateral negotiations. If government seeks to unilaterally impose additional obligations on CoW holders, it is possible that a number of the larger CoW holders might consider arbitration but this would be a strategy of last resort. The government might lose in arbitration, as international arbitrators are unlikely to find merit in the government's nationalistic stance.

You contend that the export ban will lead to the closure of what could be hundreds of nickel and bauxite miners. What legal recourse is available to challenge what you refer to as the Grand Compromise, the last minute decree issued by the government forcing them, but not others, into compliance?

The Indonesian Mining Entrepreneurs Association recently filed a claim with the Constitutional Court challenging the ban and others may do the same. The track record of Indonesia's various mining associations is impressive, and the government might lose.

You argue that the Grand Compromise is most significant as a symbol of bad planning. Is it read this way domestically?

Many people, particularly foreign investors, have commented on how poorly the government has handled the introduction and implementation of the domestic processing and refining obligation into law. All of the relevant issues should have been carefully considered and worked through five years ago. What has become apparent in the past six months is that when the domestic processing and refining obligation was first introduced, no studies had been conducted as to whether or not mineral processing made sense. The first study was conducted by USAID in 2013. The government had no study that supported the idea that domestic processing and refining made any sense from an economic perspective.

Will Indonesia's export ban become politicized in the lead up to the 2014 election?

The government is politicizing the export ban. Out in the heartland, where the great masses of Indonesian voters live, the mining industry is unpopular. Indonesians see funds being poured into projects, but unless they are directly employed by the industry, they only experience the negative impacts of it. Coupled with Indonesia's xenophobia, many believe that foreigners are taking advantage of Indonesia. Finally, they feel that they did not "get their fair share" of the profits during the last mineral commodities boom. •

Shaun Simmonds

Former President Director
COMO ENGINEERS

Como Engineers was established in Australia in 1986. Could you provide us with an overview of its history of operations in Indonesia?

This office has been opened officially as a registered office for three years. Previously our work in Indonesia was conducted remotely, through our Perth office. We found that without an office in Indonesia, it was difficult to develop business there. Indonesian miners need to trust their suppliers and develop rapport with them, which cannot be done remotely. Operations were made easier following the passage of the 2009 Mining Law, which stipulates that in tendering contracts, companies must use local service providers. As a local entity, Como Engineers has benefited from this law.

As a larger organization, Como Engineers has gone through several transformations in its history of operations. Established as a private company, we later became public as we were acquired by VDM Group of Australia. This had little impact on our operations in the country, as VDM's operational presence in Asia is limited to Vietnam. Later, in mid-2013, Como Engineers decided to acquire all outstanding shares, thereby privatizing the company.

Please introduce us to the functional areas of the Indonesian office.

One core competency of Como Engineers and one area that the local office is becoming more involved in is in the development and fabrication of modular plants. We believe this is a strong offering for the domestic market, given the remote nature of mine sites in Indonesia. We have developed plants for a number of miners domestically, such as Kingrose Mining for their Way Linggo Project as well as for Finders Resources' Wetar Project on Wetar Island: a heap leach operation that uses a solvent-extraction electrowinning process. We also supply coal crushing plants.

Studies are also an important piece of our business and may act as the key driver of our growth in the immediate future. We have completed studies for Sumatra Copper & Gold, a feasibility study for their Tambang project, in addition to studies for several other players within the market. Studies will play an important role in developing business in Indonesia because they act as a point of introduction between a company and its services. If one can win the trust of their clients early on, they will likely be contracted for detail design work, procurement, and possibly closure.

Now remains an uncertain time for the industry, given the government's attempts to transform its resource sectors. What has this meant for business for Como Engineers?

Como Engineers is fortunate in that even in uncertain times it has been able to steadily generate business. This is attributable to the resilience of thermal coal in international markets and gold's isolation from the government's attempts at policy making. It also benefits from its relationship with Australian miners, who have placed additional emphasis on the importance of overseas markets to continuing to generate growth. Much of our business overseas is generated through the familiarity that Australian businesses have with our work in Australia. Como Engineers now plays an important role in the supply of equipment and spares to these markets and has remained relatively protected from the economic conditions of any one market.

Those in production often comment on the undeveloped nature of the domestic service sector. What gaps exists within the domestic market?

Gaps exist within domestic equipment supply. Original Equipment Manufacturers (OEM) are hard to find in Indonesia. Much of what the country lacks in way of capital equipment manufacturers, though, can be sourced from foreign markets such as China or Korea.

Indonesia is known to be a difficult region for mine development. What has this meant for the market's receptivity to Como Engineers' service offering?

The modular nature of our plants is a strong fit for the Indonesian market. Plants in Indonesia must be designed with the logistical constraints of the country in mind as mines are generally located in remote, hard-to-access regions. Plant and plant equipment must be broken down to be transported, for which our modular plants are well suited. They fit into shipping containers, which allow for them to be transported by barge or road to a site, and even by helicopter, something other plant solutions cannot offer.

What advice might you have to the new entrant to the market?

Time on the ground is critical to the success of the service provider in Indonesia. Companies that have had a long-standing presence in the country run the industry. One cannot approach the market from outside.

Do you have a final message?

Patience is required: especially now, during a down cycle. Now is the time to invest in improving operational efficiency, in improving one's gold plants, in improving one's coal plants. Plant maintenance should not be neglected; maintenance adds years to a company's life. This is my fifth down cycle. Things will improve and the Indonesian mining industry will see better days. •

Denis Daley

President, Director & Managing Partner
Indonesia Business Unit
ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)

Can you provide us with a brief introduction to Environmental Resources Management (ERM) globally and the history of its operations in Indonesia?

Environmental Resources Management (ERM) has been operational since 1972 and has grown today to 145 offices in 40 countries. ERM provides services to some 60% of the companies in the Fortune 500, including major mining houses globally, whilst also working with regional and national mining operators. ERM works extensively in the mining, oil and gas, power and manufacturing sectors. On a worldwide scale, ERM focuses on the broad spectrum of environmental, health, safety, technical risk, social and information solutions issues and is one of the world's leading sustainability consultancies. ERM opened its Indonesia office in 1997 covering everything from transactions, environmental and social impact assessments, assurance that operations meet national and international standards, assessment of process safety, regulatory compliance services, climate change, contaminated site management, safety and training. Currently, the services that are in most demand are impact assessments, compliance and management systems, water management, closure planning, safety leadership, as well as contaminated site management.

What are the areas of focus of the impact assessments that ERM provides to its mining clients?

There are three categories of impact assessments that ERM performs, depending on the circumstances of the project. The first category is regulatory, relating to AMDALs (Indonesia's Environment Impact Assessments), which result in environmental permits needed for mine operations, AMDAL amendments or UKL/UPLs. ERM is sometimes asked to perform the AMDAL from the outset or become involved if the process is getting upgraded. For example, if a mining operation is looking to expand it will already have an AMDAL in place and ERM will need to determine if a new AMDAL needs to be undertaken or if the new process is close enough to the existing AMDAL that an amendment will suffice. The second category relates to new funding or a new partner entering into the mining operation. In these cases, an AMDAL is already in place, but another gap assessment may be required to benchmark against international standards, such as those of the International Finance Corporation, or other lender's individual standards and requirements. ERM also undertakes reviews for financial institutions that are signatories to the Equator Principles. The third category is a combination of the AMDAL and an ESHIA.

What are the principal issues that are flagged through the AMDALs and international assessments?

In Indonesia managing social issues associated with land acquisition and Indigenous Peoples (IPs) can be very complex and often results in lengthy project delays and cost overruns. Land ownership can be difficult to confirm and land users, such as sharecroppers, are frequently not recognized in terms of being eligible for compensation or livelihood restoration support. IP issues are also challenging to manage, in particular when applying international standards, which may require operators to demonstrate that Free and Prior Informed Consent (FPIC) has been obtained. FPIC is still a relatively new concept for companies and will evolve in the future.

Biodiversity, water, waste handling are also some of the other key issues as is forward planning for closure. There is added complexity around what is acceptable to stakeholders associated with the projects: the local community, government and regulatory agencies and the international and funding community. The delicacy lies in finding the line that all parties involved or affected by the operations of a mine can accommodate.

As Indonesia increases its focus on environmental and social requirements, new consulting firms have emerged. How does ERM compete with new entrants?

ERM has an extensive global network in terms of relationships with client companies, including the mining houses and lenders that ERM has worked with globally. As such, ERM understands the market for the services that we provide very well. In addition, ERM has strong national consultants within our offices that have a strong appreciation for the national context, allowing ERM to marry the international with the local, which is where ERM really excels. Having said that, in Indonesia ERM does have a significant amount of international competition and has seen an increase in local competition in recent years. However, ERM does not view this negatively but rather as a reason to stay sharp and focused. On a larger scale, a strong consultancy base is good for all parties involved: for clients, as it provides them with a broader range of solutions; for consultants, as it pushes us to perform better; and, most importantly, for improving the environmental and social circumstances around mining operations.

When GBR returns in two to three years, where will we find ERM, particularly in regards to mining?

ERM will continue to work in Indonesia and will have grown through being responsive to what is required and serving as a strong support to the consultancy industry. Mining will continue to be one of ERM's core sectors. •

Oliver Swaffield

Director of Operations
MCELHANNEY

McElhanney has had a long history within North America. Could you provide us with an introduction to McElhanney's presence in Indonesia?

McElhanney first entered Indonesia in the 1970s through work on several projects in Kalimantan and Sumatra, after which the company operated in the country as projects required, but not through an office. In the early 1990s this changed as we began to work more closely with Freeport-McMoRan. In 1997, Pt. McElhanney Indonesia was incorporated. Ever since then, we have built a strong presence in Indonesia through our work with the mining community. Mining is our core industry sector here, though we are diversified: we also provide mapping services for forestry, palm plantations, to support land use, land development, Oil and Gas and for infrastructure projects.

McElhanney operates in a technical niche. How would you characterize the technological sophistication of the domestic market?

The state of technology in the domestic market has evolved significantly in the past five years. McElhanney was one of the original providers of LiDAR technology to Indonesia, a technology that has since been strongly embraced by any business requiring high accuracy mapping services. LiDAR technology has allowed for McElhanney to provide topographical services in densely vegetated areas through the use of lasers and 60-megapixel camera to survey the ground. This technique can penetrate forested areas that have heavy groundcover. Obviously this type of technology is particularly well suited for Indonesia. Traditional aerial photography would keep teams employed for several months, even years doing what we can now do in months. Additionally, it is far more accurate than photogrammetry (aerial mapping); the deliverables include photos, contours, and features including rivers, roads, buildings and villages. Quite quickly it can produce a highly detailed map of an area: that it is cost effective as well is also certainly an added benefit. While originally the price of the equipment stopped many companies from trying it, now this service is quite strongly in demand.

A heavy, legislated preference for the use of national service providers exists within the domestic market. Within this, what has McElhanney found to be its competitive advantage?

McElhanney's competitive advantage within the domestic market lies in the quality of its technical expertise and the wealth of experience we have built, both as a global and local organization. As an example: our LiDAR manager has been flying LiDAR in North America and Asia for 15 years, since the birth of the technology. Many of those that offer this service do not possess such expertise. In fact, this caused several local organizations to have a bad experience with the technology. However, this is not a reflection on the technology, but rather the organization providing it. The successful implementation of any technology depends upon the hands of those using it. We have this expertise, and we have made a point of educating the domestic market on the advantages that LiDAR technology can bring if used appropriately. Herein lays our competitive advantage.

How does business look for McElhanney in 2014?

McElhanney will be quite busy in 2014. Already we have projects lined up for the first quarter of 2014. Similarly to most places in the World and to the last election period, there will be an uncertainty in the market. Investors will be looking for guarantees from the government of Indonesia and if the government can satisfy these we will be working hard and further developing Indonesia.

Where will McElhanney be in two years time?

McElhanney will continue to see its growth driven by the natural resource sector, however, as mentioned above we will continue to diversify. We hope to increase our portfolio and attract larger clients and will be doing our best to obtain work from others countries in SEA and Asia, which would be performed by Indonesian technicians and technologists. We also perform engineering and geotechnical work, which has historically been an area in which our North American offices are much stronger than we are locally. This may change. •

Minerals Multiplying: Mining Production in Indonesia

"Sustainable mining is an 'emerging market.' The speed of adoption will depend on the developments in international and local awareness for more social and environmental friendly mining techniques. It is hard to predict how fast this development will go in Indonesia, but we see signs that the mining sector is changing and taking more care of the environment. Projects like geohydrological monitoring are good examples of that."

- Eveline Buter, Country Representative, Witteveen+Bos

Image: Pt. Ahdadia Coal

Production Growth Continues

Coal Mining Prospects in Indonesia

Estimated to only have 3% of total global thermal coal reserves, Indonesia is surprisingly the world's largest exporter of coal and the fourth largest producer, at 421 million metric tons (mt). Asian demand has fueled recent growth. From 2000 until 2011, Japanese demand doubled from 13 million mt to 26 million mt, and demand from other Asian markets, namely China and India, grew nearly tenfold.

> "Indonesia is now in over-production as a result of the small scale miner and trading companies. Our resource base is finite; a failure to better regulate coal production could mean that Indonesia runs out of coal.
>
> Raymundus Mulyadi,
> President Director, Ahdadia Coal

Today, the market has become more internally focused. Ms. Ika Bethari, corporate planning director & CFO at MBSS, a leader in the provision of sea transport and transshipment solutions to the local market, said: "A fall in the price of thermal coal has meant that internal markets are now receiving more attention as Indonesia's internal economic growth is strengthening. There are many power plants that require more coal to be transported from Kalimantan to other islands in Indonesia. Fortunately, Indonesia's coal can easily be transported."

Peter Lynch, chairman and CEO of Cokal, an Australian coking coal miner, said: "We are lucky in Indonesia; we have access to some of the best infrastructure in the world: rivers." The waterways that wind through Indonesia's coal producing regions have allowed the country to avoid costly infrastructure solutions that have been the bane of many mining jurisdictions. Pat Hanna, executive director of Cokal, said: "In Indonesia, incremental expansion is possible; in order to accommodate larger haulages one does not need to undertake a port expansion."

Indonesia's waterways have also dictated regional growth. Kalimantan, the province on the island of Borneo, has been the locus of domestic coal mining because of the size and depth of its rivers, which are navigable by large barges. In narrow veined Sumatra, large-scale coal projects have failed to materialize because proposed infrastructure solutions are not implemented.

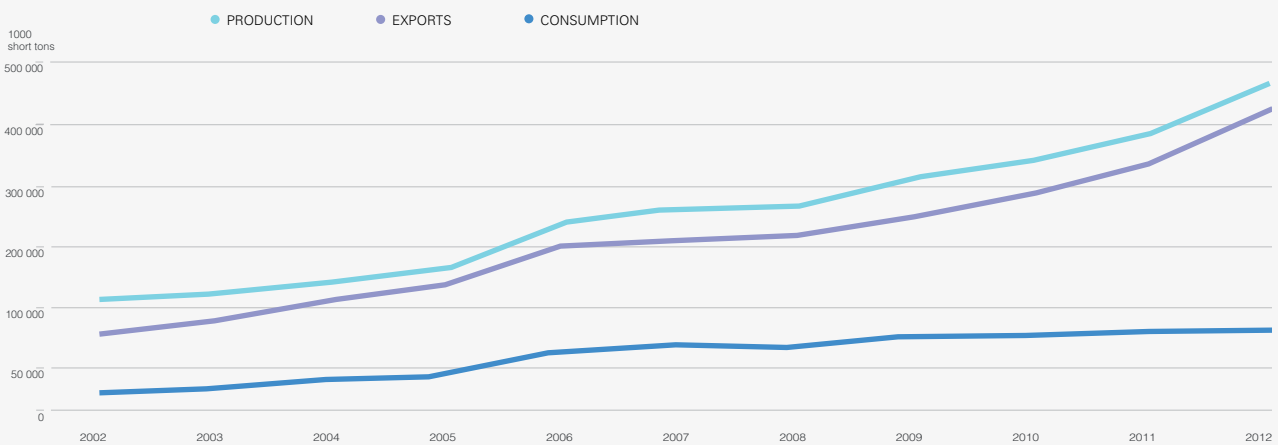
Indonesia has failed to leverage its coal production into control over global thermal coal pricing. The lack of regulatory oversight helped an estimated 50 million mt – one eighth of the country's total formal coal production – leave the country illegally in 2013. Raymundus Mulyadi, president director of Ahdadia Coal, a producer of low-ash, low-sulfur, environmentally-friendly coal in Indonesia's South Kalimantan region, explained: "Indonesia is now in over-production as a result of the small scale miner and trading companies. Our resource base is finite; a failure to better regulate coal production could mean that Indonesia runs out of coal... As an industry, we need to closely examine the management practices and values of our coal miners. A greater level of focus must be placed on long-term strategy; enhancing transparency and allowing only the best businesses to operate in Indonesia. Additional regulations also need to be released to reign in small-scale production of thermal coal and the trading companies which sustain them."

The government's imposition of a quota system, including a domestic market obligation (DMO), on coal producers whereby all those involved in the production of coal in Indonesia must sell an allotted amount to domestic businesses at a set price, also causes anxiety.

Largely created to address Indonesia's growing energy problem, Indone-

INDONESIAN COAL PRODUCTION,EXPORTS AND CONSUMPTION, 2002-2012

Source: U.S. Energy Information Administration, International Energy Statistics



> We are lucky in Indonesia; we have access to some of the best infrastructure in the world: rivers." The waterways that wind through Indonesia's coal produc- ing regions have allowed the country to avoid costly infrastructure solutions that have been the bane of many mining jurisdictions.
>
> - Peter Lynch, Chairman and CEO,Cokal

sia's DMO system demands domestic industry sell 95 million mt to the domestic market in 2014. Yet this system fails to address the possibility that there may not be a domestic market for certain grades of coal. Udaykumar, general manager of business development at Adani Global, explained the case of Adani's low-grade Bunya mine: "DMO requirements have unfairly penalized Adani in that there is no domestic buyer willing to buy our coal because of its low GAR. Our coal can only be used in India, yet Adani has to incur a cost to obtain tradable quotas to enable export of this coal." Raymundus Mulyadi, president director of Ahdadia Coal, which sells between 20% to 30% of its coal domestically, said: "While important to the further development of Indonesia and the health of domestic coal mining, the government's DMO policy contains several flaws. Their needs to be additional stipulation that grants exemptions based on the moisture content of coal."

Those that fail to meet export requirements can purchase credits from other coal producers, which sell a surplus to the domestic market, and power plants may one day create a market for undesirable lower grade coal. Nonetheless, DMOs impede profitability. Bob Kamandanu, chairman of the Indonesian Coal Mining Association, said: "Though the economics of creating syngas facilities are still unproven, technological developments in the field of coal conversion could define the future of the Indonesian coal mining industry." •

Peter Lynch & Pat Hanna

PL: Chairman & Chief Executive Officer
PH: Executive Director
COKAL

Could you please introduce us to Cokal's principal concession, the Bumi Barito Mineral project (BBM), as well as the other concessions owned by Cokal in Indonesia?

Peter Lynch (PL): Cokal's principal project is the Bumi Barito Mineral project, located in Central Kalimantan. One of eight IUPs that Cokal possesses, BBM is the company's primary focus: a reflection both on the geological potential of the deposit and the perceived costs of bringing the mine into production. In addition to BBM, Cokal holds two other IUPs in the Murung Raya Regency in the North Barito Basin of Central Kalimantan, which will become Indonesia's coking coal region. Cokal also holds IUPs in several other jurisdictions: two in the Gunung Mas regency, which neighbors Murung Raya; and three in West Kalimantan.

BBM is about to reach bankability. We have just announced a resource upgrade, which has put total measured, indicated, and inferred resources at the site at 264 million metric tons (mt) of coking coal. We are now completing the definitive feasibility study for the project including the barging solution, which we have been working on since February 2013. We speculate this will be finished in Q1 2014. The study should provide an estimation of total capital costs for the project, plus or minus 15 per cent.

We will also soon receive approval for production, after we receive our forestry permit, which we expect to occur in Q2 2014. This is a process which we began upon first entering the country. The length of the permitting process is in part attributable to the high standards which Indonesia uses in evaluating the impact of a mine. The Indonesian Government prescribes to the international AMDAL standards, which heavily scrutinizes the impact of a mine on the local environment and surrounding communities: both areas that Cokal also values highly.

Cokal has several neighbors in the region, one of which is BHP Billiton. Given the region's promise, why have we not seen others develop their concessions?

PL: Cokal does have several neighbors within the North Barito Basin. This includes BHP Billiton, who holds seven Coal Contract of Works (CCoWs), all of which they have had for over twenty years. BHP Billiton has begun to develop their concessions, albeit slowly. The pace of these sites' development is not for lack of interest. In fact, the CCoWs which the company holds near us are the only coking coal assets outside of Australia that the company has not shed: this includes Tavan Tolgoi in Mongolia, which the company explored without success in the 1990s, later dispensing of them. These CCoWs remain the companies only coking coal assets that have not entered into production. This will change. BHP Billiton is now putting in place infrastructure for the site, constructing its port and haul roads. Soon they will enter into production, producing one million metric tons per annum.

How well suited is coking coal from the North Barito Basin for the international market?

Pat Hanna (PH): Until recently, not a lot had been known regarding the properties of coking coal from the North Barito Basin. BHP kept their results to themselves. According to the tests we have run so far, the coking coal present at our sites in Central Kalimantan appears to be a very special type of coking coal: perhaps similar to a New Zealand style coking coal, but even then still different from that. This coking coal could break all the rules.

PL: This coal compliments the shift in quality which we will see appearing in Australian product as older mines, those developed in the 1970s, cease production and newer mines, such as those in the Rangal Coal Measures, begin to ship product. Australian coking coal produced in these new mining regions has a markedly lower amount of vitrinite. Coking coal produced from the North Barito Basin, is vitrinite rich and can offset this drop.

What type of infrastructure solution will be employed at BBM?

PL: A mixed infrastructure solution will be employed at BBM. We are lucky in Indonesia; we have access to some of the best infrastructure in the world: rivers. That said, due to some river constraints, we are building a haul road and employing a push barge system capable of transporting goods through shallow waters. Similar to those seen in the Mississippi, these vessels are the first of their kind to be used in Indonesia and will allow for us to transport 6,000 mt per shipment: 50% more than others. Additionally, the shallow draft of these boats will allow for us to ship 80% of the year, versus 55% of the year for our competitors.

Initially, how does Cokal plan to begin production at BBM?

PL: Cokal's approvals are based on the assumption that the company will produce six million metric tons per year (mt/y). Initially, however, the company will only produce two million mt/y. Once we have paid for our infrastructure at BBM, we will then invest in developing TBAR, one of our neighboring concessions, after which we will then ramp up production to six million mt/y at BBM. Our pre-feasibility operational costs are excellent, standing at less than $100, which places Cokal in the bottom quartile for coking coal projects globally. This is in part attributable to the position of Indonesia as a strategic region for production; Indonesia is half the distance between China and India compared to Australia.

Last year we announced that Blumont had taken a placement in the company and that Cokal was evaluating a financing proposal from them. Now we are considering an additional financing proposal from Platinum Partners, a New York-based fund that has been actively pursuing Asian based resource plays, in conjunction with another, still unnamed investor. This proposal, which offers $150 million in debt financing to bring BBM into production, accompanies a 12% stake which Platinum Partners has taken in Cokal.

Once the financing required to bring BBM into production has been secured, we believe it will bring about a re-rating of the company. Bringing BBM into development will further de-risk the project, allowing for Cokal to more easily fund its other ventures.

Previously when we met with Cokal, you were bullish on the price of coking coal. Given that the price of coking coal has since declined, how does your outlook stand?

PL: The price for coking coal is now low; however I am still very positive about the prospects of our project. When other large coking coal projects were developed in the 60's and 70's, the price of coking coal stood at $34 per mt. Now, this is not the case. The point that should be taken away from this is that more important than the market price of coking coal in determining a mine's profitability is the position of a mine relatively on the cost curve for the industry. This drives pricing dynamics.

We will see a price of $180 to $200 per mt in the long-term. This will principally be a result of the cost structure of Australian producers. With the Australian dollar standing at $.90 to the US dollar, many mines have or will shut. BHP Billiton has closed mines in Australia, as have GlencoreXstrata. Accountants are now being brought in to cut costs at many Australian mine sites, and these cost cuts will affect medium-term production. Other drivers of the future price of coking coal are the production costs of mines in Appalachia in the US, and Shaanxi, China. In the US, operational costs for these mines stand at near $180 per mt. We expect total US production to shrink from 45 million mt to 25 million mt. Coking coal mines in Shaanxi are also relatively expensive to operate on account for the depth of mining, often in excess of 600m below the surface. We could see mine closures occur there as well for this reason.

Compared to each of these regions, Indonesia is cheap. Indonesia also offers the additional benefit that production is far more scalable here than in other mining jurisdictions like Australia. In Indonesia, incremental expansion is possible; in Australia, this is quite expensive. This is, once again, attributable to Indonesia's natural infrastructure: the country's river system, which allows for one to easily increase or decrease haulage and use floating cranes, which means that in order to accommodate larger haulages one does not need to undertake a port expansion.

What impact will the development of BBM have on the Central Kalimantan basin as a destination for coking coal production?

PL: The development of BBM will bring to the basin a much more efficient and reliable logistics chain, thereby allowing for North Barito Basin coking coal to become a mainstay in the global market. Cokal's innovative barging system will allow for coal to travel down the river not 55% of the year, but 80%. At 55% of the year, coal is still a seasonal project. This ceases at 80%, especially when accompanied with an intermediate stockpile that we will have down river. •

"Indonesia also offers the additional benefit that production is far more scalable here than in other mining jurisdictions like Australia. In Indonesia, incremental expansion is possible; in Australia, this is quite expensive.

- Peter Lynch, Chairman & Chief Executive Officer, Cokal"

Bob Kamandanu

Chairman
INDONESIAN COAL MINING ASSOCIATION

This year the Indonesian Coal Mining Association will celebrate 25 years. Could you tell us about the vision and mission of the organization?

The Indonesian Coal Mining Association (ICMA) seeks to be the sole representative body of the Indonesian coal mining industry. We seek to be a partner of the government, acting as a consultant to regulation and providing a commercial voice.

In so far as the later role is concerned, we must distinguish between groups of industry participants. There are many charlatans that have entered into coal mining purely for profit. We seek to represent miners: those who were involved in the industry prior to it becoming lucrative and those that will stay a part of the industry through market downturns. This group is concerned with questions of the impact of mining on the local community and environment post-production. These miners are legal and contribute to the country's tax base. We are highly selective in granting membership. The industry today has from 300 to 400 coalminers. Today we have 120 members, all of which share this profile. Through our members we represent 85% of total coal output from Indonesia.

Indonesia is the world's largest exporter of thermal coal. What role will Indonesia play in guiding the market price for thermal coal?

The irony of Indonesia's position in global thermal coal is that in spite of being the world's largest exporter, Indonesia cannot guide pricing, as it does not possess the world's largest deposits. Indonesia only has 3% of total world reserves. We are the world's top exporter of the product because of our proximity to growth markets.

The Indonesian Government is attempting to create a domestic market for thermal coal. What has this meant for the profitability of the industry?

The use of a Domestic Market Obligation (DMO) for thermal coal has created a large problem, as the DMO system does not differentiate between different grades of coal and some grades cannot be used domestically. Indonesia needs to reevaluate its energy policy. The first step that the country must take is to map its resources. Most of its 6,000 GAR coal is gone. Where is the country's 4,200 GAR coal located? What grades need to be used domestically? The government must first answer these questions, after which it can become involved in planning exports.

Indonesia has among the lowest electrification rates in the world: 64% on Java, and 55% outside of Java. Why have we not seen more coal-fire power facilities developed?

The largest obstacle to the creation of an internal market for thermal coal is that the national energy company, PLN, is unable to acquire free land in Java, where infrastructure is best equipped to support such projects. Mine mouth power plants are one potential solution to Indonesia's energy problem. Most of the remaining coal in Indonesia is high moisture. These plants would cut costs, though they need to be connected to a grid. The removal of our diesel subsidy, though, is the first step in making these facilities attractive. The second step is to address the problem of land acquisition by redrawing boundaries, which will allow for better central planning.

Declines in the price of thermal coal have led to the closure of many small mines. What impact will this have on Indonesia's thermal coal production and global pricing?

The closure of small mines is important to the health of the country's mining industry. Informal production of thermal coal stood at 50 million metric tons in 2013: one eighth of total Indonesian production. Informal production of thermal coal has led to the current state of oversupply and low global pricing. The lack of regulatory oversight that has prevailed since decentralization has underscored this development. Since decentralization, over 4,000 IUPs were issued, and on many of these sites, little or no exploration has occurred. Tighter regulation on a local level is now needed to both correct the current state of the market and ensure that noncompliant ventures are barred from entering into production.

What is the Indonesian Coal Mining Association's outlook for domestic thermal coal production and the price of the product in 2014?

In 2013 all but one of the country's coal producers increased production in order to maintain profitability. This must change in 2014. The government will likely play a more active role in encouraging businesses to slow production by prohibiting production increases. More profit can be generated off of the country's resources if sold in the future, not now. These decreases in production will trigger a readjustment in the price of the commodity. By mid-2014, we will likely see the price recover.

Might we see some equivalent of an export ban enforced on thermal coal?

The regulatory structure of coal is unlikely to change significantly. Perhaps, though, a windfall tax will be introduced. There has been discussion of barring the export of low quality coal in an attempt to incentive the development of coal conversion plants. Though the economics of creating syngas facilities are unproven, technological developments in coal conversion could transform the industry. •

Kevin Dobson

Director, Environmental Mining, Asia
PT. AECOM INDONESIA

Can you provide us with a brief introduction to AECOM and the history of its operations in Indonesia?
AECOM is a global company with multiple business lines that operates in countries around the world. The company first grew in Indonesia through a New Zealand-based consultancy specializing in geothermal and hydropower. AECOM has been in Indonesia in different forms for the last 25 years, largely operating under the names of the company's acquisitions and with local teams delivering services to the power industry. Around 2008 and 2009, AECOM moved to change its brand strategy and began operating in the country under the name AECOM. At the same time a number of initiatives were taken to expand our business in Indonesia, performing a great deal of work in thermal power, geothermal power and hydropower. Today, we have 130 employees working in five operative divisions.

AECOM offers its services in a number of industries. Can you describe the work that you perform in Indonesia for the mining sector?
AECOM currently has a mining and engineering team within the company based of out Brisbane, Australia, which utilizes its expertise to service client needs in Indonesia. In Indonesia, AECOM works in a niche area in the environmental segment; for large companies we work in that space between internal Corporate Social Responsibility standards and also meeting the requirements of international banks, so that our clients can attain project financing. AECOM also works to find project solutions for the various stages that mining projects go through.

How would you describe AECOM's pipeline of work?
Upcoming projects in Indonesia have been unpredictable largely due to the uncertainty that we see surrounding Indonesian Mining Legislation; certain projects that AECOM has been selected for have been put on hold. AECOM is however optimistic about future prospects. Looking at the commodities market, most of AECOM's clients operating in Indonesia are able to extract ore at competitive prices compared to other markets. Once the 2014 elections have taken place and there is more regulatory clarity, AECOM expects to see a situation where there will be more of a commitment for mining activities.
One area in particular where AECOM expects to see more growth is with coal, given the demands for energy in India and China. Despite the uncertainty that the country is seeing with mining regulations, there is a promise to develop this energy resource.

How would you describe the stringency of local and environmental standards, in comparison to the other regions where AECOM operates?
Looking at Indonesia's environmental standards and initiatives, this country's legislation is comparable to what you would find around the world. The environmental principals and tenets are mindful of modern-day standards, techniques and issues. With recent changes to the legislation in respect to mine rehabilitation and closure, we can see that this is part of a mine planning process. In terms of intent, Indonesia has good initiatives. However, the implementation of the regulation is inconsistent across the country. One of the challenges regarding regulation in Indonesia is the local autonomous legislation, particularly concerning the interpretation and implementation of the regulation on a regional level. We are working with different jurisdictions and there does not exist a standard for one province to address issues in the same way that another does.

Do you think we will see a larger national permitting process take hold to streamline the implementation?
Given how environmental regulation is approached internationally, a national permitting process is not necessarily the solution. Looking at federal systems around the world we see that states retain jurisdiction with the difference being that managing environmental regulations is done in a more consistent way. In many cases in Indonesia, personnel with limited expertise deal with projects outside of their purview. As a result, along the way things can be subject to different interpretations.
Throughout the 1990s there was a plethora of projects funded by American, Australians and Canadians to develop the environmental legislation that is now the framework we are working with today. It is fairly new and in the context of the way that the industry is changing, it is taking time to gain traction and consistency.

When GBR returns in two to three years, where will we find AECOM?
While AECOM's mining division is able to operate successfully from Australia today, in two to three years, AECOM will likely have a mining division in Indonesia. This office is on a reasonable growth path and will likely be double its size in terms of personnel from where it stands currently. Following the 2014 elections, AECOM expects to see increased commitment from mining clients onshore, similar to the type of demand that we see for our engineering design services for power at the moment. In terms of AECOM's environmental work, there will likely be less of a gap between local and international standards, but our team here will still play a role in servicing this need. AECOM offers a very specialized service for the mining industry in the areas of facilities, conveyers and materials handling and sees growth opportunities for these entry points and beyond. •

Raymundus Mulyadi

President Director
PUTRI AHDADIA COAL

Putri Ahdadia Coal is owned by Pt. Karunia Agung Infiniti, could you please provide me with an overview of the relationship between these two companies?

Putri Ahdadia Coal is one asset of Pt. Karunia Agung Infiniti, a company that has a number of years of experience in operating in Indonesian coal. Putri Ahdadia Coal entered into development in 2007, beginning production in April 2010. We are a fully Indonesian company: our management is Indonesian and we are financed domestically. We have no debt. We strive to be a small company that offers a world-class product: environmentally friendly, Indonesian thermal coal.

Putri Ahdadia Coal is located in South Kalimantan; the venture comprises port and stockpiling facilities, in addition to the mine. Could you please introduce to us the mine itself?

Pt. Karunia Agung Infiniti is blessed to have the Putri Ahdadia Coal mine. The property on which the mine sits is only 50.7 hectares, but the structure of the coal deposit is in decline. Our coal juts up, with the main seem then running 40-meters (m) deep, granting us a very low stripping ratio of -2:1. We further benefit from the position of the deposit, which sits on top of a hill and thereby allows us to avoid the problems that many domestic coal miners experience during the region's rainy season.

Attributable to these factors, we have a very low operating costs, standing at between 30% to 50% less than the operating costs of other industry participants. As an organization we strive to minimize our operational costs; the market price of thermal coal should, ideally, be inconsequential.

The market, though, is at a low point now and this has influenced the way in which many coal miners mine their concessions. How has the state of the market for thermal coal influenced the way Putri Ahdadia Coal now mines its concession?

Putri Ahdadia Coal is now producing at below production capacity: a reflection on the state of the market and the company's determination to maximize the value of our resource. In 2014 we will produce 2.3 million metric tons (mt) of thermal coal. From conception Putri Ahdadia Coal only had 20 million mt of thermal coal as reserves. As we have already extracted six million mt of thermal coal, placing our estimation of mine life at five years, the price at which we sell our product is very important.

The quality of the thermal coal mined at Putri Adhadia Coal's South Kalimantan mine is unique, especially for Indonesia. How does the quality of Putri Adhadia Coal's coal differ from that of other industry participants?

Putri Adhadia Coal's coal is low-grade, but has low-sulfur and low-ash content, placing it apart from other coal mined in Indonesia as it is more environmentally friendly coal. The AFT of our coal is high compared to other low-grade coal. This attribute allows for our coal to be blended seamlessly with high-sulfur coal, as the FT is in the same range. Our coal offers stability, which the use of other types of blended coal does not guarantee.

The Indonesian Coal Mining Association speculates that much of the continued growth of Indonesia's coal mining industry will come through demand for electricity on the part of near markets. Do these markets tend to be more conscientious of the environmental impact of coal than India and China, which are at present the largest markets for thermal coal?

Putri Ahdadia Coal believes that Japan will have higher demand for Indonesian coal in the future. Japanese customers are environmentally conscientious; they desire low-ash, low-sulfur coal, like that produced by Putri Ahdadia Coal. China will also become more sensitive to the quality of coal used for power generation as many of its major metropolitan areas become polluted and the country's citizenry becomes cognizant of its impact on their quality of living and health.

What strategy will Putri Ahdadia Coal use to continue to grow following the closure of the company's South Kalimantan mine?

Putri Ahdadia Coal is now evaluating concessions in several other areas, including Central and West Kalimantan. These are non-traditional areas for thermal coal,

but as is South Kalimantan. There are several logistical constraints associated with opening up these regions to development. Rivers are shallow between Central and South Kalimantan; coal production thus becomes seasonal. The soil in these regions is soft, complicating mine construction. The quality of the coal found in these regions, though, still makes mining in these areas desirable. For any future project which Putri Ahdadia Coal develops, we wish to mine coal of a similar quality to that which we currently mine and also a comparable stripping ratio.

The Indonesian government has taken a more active role in regulating coal as of late, employing a domestic market obligation, which requires coal producers to sell coal locally. In what way has Ahdadia Coal been affected by this requirement? How can the Indonesian government better structure this policy?

At present, between 20% to 30% of Putri Ahdadia's Coal is sold to the domestic market. While important to the further development of Indonesia and the health of domestic coal mining, the Indonesian Government's DMO policy contains several flaws. Their needs to be additional stipulation that grant exemptions based on the moisture content of coal.

Additional regulations also need to be released to reign in small-scale production of thermal coal and the trading companies which sustain them. Indonesia is now in over-production as a result of the small scale miner and trading companies. Our resource base is finite; a failure to better regulate coal production could mean that Indonesia runs out of coal.

Do you have a final message for readers?

As an industry, we need to closely examine the management practices and values of our coal miners. A greater level of focus must be placed on long-term strategy; enhancing transparency; and allowing only the best businesses to operate in Indonesia. •

Raman Prabhakar & Udaykumar

RP: Chief Operating Officer
U: General Manager, Business Development
PT. ADANI GLOBAL

U

Could you please provide us with an introduction to Adani Globa's presence in Indonesia?

Adani Global first established its office in Indonesia in 2006 in line with the company's global vision and mission of acquiring and developing coal blocks, for captive consumption, in certain strategic markets, such as Indonesia. Adani Global is backed by the Adani Group of India, which has expertise in the supply and use of thermal coal for power generation and the development of infrastructure associated with the trade and logistics of coal. Adani has an aggressive growth strategy for both domestic and foreign markets. Although we now generate 7920 megawatts (MW) of electricity through our thermal power plants in India and operate India's largest port at Mundra which also includes the world's largest coal import terminal, capable of handling 60 million mt per year of coal. The Group's target is to generate 20,000 MW power, by 2020 have infrastructure in place to transport 200 million of thermal coal. Today we have a respectable position in Indonesia: we are the single largest buyer of thermal coal from Indonesia. We are also the largest importer of thermal coal into India.

In Indonesia we operate through the activities of our trading arm, in addition to one mine, the Bunyu Mine, that is currently in production. Our immediate goal is to focus on increasing production capacity at Bunyu, from four million mt to seven million mt by 2016. In tandem with this we expect to increase our trading volumes.

In 2011 Adani Global caught headlines for the company's venture with Bukit Asam, a deal that later fell through. Could you please provide us with an overview of the venture?

Our venture with Bukit Asam was aimed at optimizing synergies between the strength of Adani in infrastructure development with the mine that Bukit Asam holds in Sumatra. This led Adani to proceed and sign a tripartite agreement between the Government of South Sumatra and Bukit Asam, upon the condition that Bukit Asam would mine coal, Adani would construct a special railway and port in South Sumatra capable of transporting their coal and in turn would pay a tariff for use of our infrastructure and would purchase 60% of the coal. Adani spent a significant amount of resources conducting studies, but the agreement between Bukit Asam and the Government of South Sumatra was nullified by a decree released in December of 2011 from the Ministry of Transport. Under this regulation only companies that own the mine can only build a special railway, and so Adani could not pursue this project, and it was abandoned.

The Indonesian government is actively trying to create an internal market of its coal. What has this process meant for Adani Global?

Under the industry's current regulatory framework, many IUPs- and Coal Contract of Work (CCoW)-holders are obligated by the Ministry of Coal and Mineral Resources to satisfy a domestic market obligation: a stipulation that dictates that Indonesian coal producers must sell an allotted amount of their coal to the domestic market at market prices. Domestic market obligation requirements have unfairly penalized Adani because there is no domestic buyer willing to buy the coal, as its low GAR means it can only be used in India. Nonetheless. Still, Adani has to incur a cost to obtain tradable quotas to enable export of this coal. Adani continues to export this coal earning valuable foreign exchange and tax revenue to the government and has generated employment for locals, from a resource that would have not been gainfully utilized otherwise, and thus we feel that Adani should not be penalized. Adani would be happy to supply the coal domestically if there is a willing buyer. PLN, Indonesia's national energy company, and cement companies refuse to buy it.

Do you have a final message for readers regarding operating in the country?

It is important to maintain long-term stability in policies, laws and regulations governing ownership, production, processing and sale/export of natural resources and mineral wealth of the country to promote sustainable long-term development through foreign investment. Policy changes regarding ownership levels for foreigners, domestic quotas, value-addition norms, export bans/restrictions for example, are certainly within the domain of the sovereign government for the larger benefit, however the policies should be applied prospectively and not retrospectively: not after the investment has been made by a foreign investor. Policy parameters should be unambiguously communicated to the prospective investor in advance and should not be revised after the investment commitment, the policy parameters should remain stable thereafter. •

Image: Indonesian Mining Association

Defying Market Conditions

Thermal Coal Production Strategies in Indonesia

In 2014, thermal coal pricing declined, which some attributed to a slowdown in China's economic growth while others believed that prices were deliberately suppressed. Bill Park, technical manager of NRM, a domestic consultancy that specializes in coal, explained: "Several variables recently have affected thermal coal pricing: the slowdown in China's industrial growth and the aftershocks of the GFC. Even though these two factors have impacted thermal coal pricing, thermal coal pricing is suppressed for reasons beyond this. Specifically the supply-demand balance has shifted adversely with over-investment in new and existing operations pre-2013, both in Indonesia and elsewhere. Although fringe players have dropped production, the majors still entertain plans for expansion in 2014 despite the attempt by the Indonesian government to introduce production caps."

Dharma Djojonegoro, president director of Multi Nitrotama Kimia (MNK), a leading supplier of ammonium nitrate to coal miners through their production facilities in Central Kalimantan, explained: "The vitality of the Indonesian mining industry is determined by two factors: the price of thermal coal in global markets and the attitude of regulators to the mining indus-

INDONESIA'S COAL EXPORT DESTINATIONS BY COUNTRY OR REGION, 2006 AND 2012

Source: 2013 Handbook of Energy & Economic Statistics of Indonesia, Indonesian Ministry of Energy and Mineral Resources

COUNTRY	2006	2012
Japan	23,128	25,738
Taiwan	17,070	16,391
China and Other Asia	49,590	155,065
Europe	21,005	8,437
Pacific	5,263	180
Others	27,577	98,240
Total	143,633	304,051

Image: Indonesian Mining Association

try. If the coal price rises in 2015, the health of the industry will return. A greater amount of certainty on the part of regulators will play an equally significant role in influencing the industry's growth."

Regardless of market conditions, many of Indonesia's largest coal producers are targeting higher production in 2014, following a year in which production soared. Ms. Ika Bethari, corporate planning director of MBSS said: "We have seen coal producers move towards higher production volumes as profit margins thinned-out. There is certainly a push to maintain, at least, the margins from previous years, although the Rupiah is now worth less and the market value of thermal coal has decreased."

Production increased by over 10% in 2013, with all but one miner, Bayan Resources, increasing production from the previous year. In 2014, industry giant Bumi Resources, historically one of Indonesia's largest producers, plans to collectively increase production at their Pt. Kaltim Prima Coal and Arutmin mines by 15%, to 74 million metric tons per year (mt/y). Berau Coal, the country's fourth largest coal miner, expects to increase production by 15%, to 25.75 million mt/y. Among those with the loftiest ambitions for 2014 is Bukit Asam; the state-owned organization plans to increase production by 22%, to 23 million mt/y this year. The production increase is seemingly at odds with the market, but the scalability of mines in Indonesia and the low cost of operating domestically have made it possible for Indonesian coal producers maintain mine profitability simply by increasing output.

Terry Gray, director of Pt. Britmindo, a mining services company specialized in coal, said: "Many major coal players, on the back of the lows of 2009 and highs of 2011, invested heavily in infrastructure and are now seeking to amortize those investments through increasing production. Even those that did not spend money are still trying to force as much coal through their infrastructure as possible without investing in capital. Those that invested initially will be in a far better place than the latter group when coal comes back in vogue as they will be able to much more easily accommodate an uptick in demand"

Others anticipate more rapid industrial growth in India and China, and highlight low stockpiles as a justification for greater demand in 2014. Still, government conditions will determine whether Indonesia's miners reach their production estimates.

In 2014, the government stated that it would play a more active role, limiting production to 397 million mt/y, down 6% from the previous year. The government also retains the right to enforce sanctions should industry participants fail to satisfy their DMO or regularly file their quarterly reports. Sanctions are not new to Indonesia's miners but have historically been weakly enforced and many believe these sanctions will not be enforced. For this reason, Deutsche Bank predicts production to increase to 435 million mt/y in 2014.

The profitability of Indonesian coal miners could also be undermined by further adjustments to the industry's royalty structure. First suggested last year, the government stated that it would increase royalties from 3.5% to 7%, to from 10% and 13% for many of the country's newer mines. Whether or not intended, this mechanism may decrease Indonesia's annual production by closing many of its smaller mines.

With the market and regulation of coal uncertain, the industry must minimize operational expenses. This will dictate the success or failure of many of those already invested in the Indonesian coal mining industry. For some, as in the case of Toba Bara Group, this has meant investing. With three concessions in operation through subsidiaries all in close proximity to one another, Toba Bara Group invested heavily in developing synergies for the group through infrastructure sharing. The first in the company's series of investments is a hauling road connecting the company's three concessions. As a result, the company internalizes what were previously third-party services and, simultaneously, increases output.

> "Many major coal players, on the back of the lows of 2009 and highs of 2011, invested heavily in infrastructure and are now seeking to amortize those invest- ments through increasing production. Even those that did not spend money are still trying to force as much coal through their infrastructure as possible without investing in capital. Those that invested initially will be in a far better place than the latter group when coal comes back in vogue as they will be able to much more easily accommodate an uptick in demand.
>
> - Terry Gray, Director, Pt. Britmindo."

Iwan Sanyoto, head of investor relations at Toba Bara Group explained: "Toba Bara owns three IUP coal mining concessions

> The wide variation in terms of project settings in Indonesia makes engineering and design projects a wonderland for those working in the field. The mix of factors that must be taken into account is astounding: the technical components of the design, namely geotechnical, hydraulics and safety; the wide variation in material and ground types, from soft clay to hard rock; and the environmental aspects such as high seismicity and heavy rainfall. In these projects there is a lot of risk, but also great opportunity at the same time.
>
> - Simon Ballantyne, President Director, Ground Risk Management

through its subsidiaries: Adimitra Baratama Nusantara (ABN), Indomining, and Trisensa Mineral Utama (TMU)…In late 2012, management decided to better its infrastructure by streamlining the road system between TMU, ABN, and Indomining. As TMU was the only concession lacking road infrastructure, we built haul roads to link up with ABN. When we completed construction of the road in May 2013, this enabled TMU to ramp up its production output, transporting its coal across to ABN and using the coal processing plant (crusher) and port facility of Indomining. Prior to having the road at TMU, TMU was relatively inefficient, as it had to use third party facilities at high costs. With the road infrastructure at TMU in place, we have internalized the usage of our own assets, particularly enabling TMU to ramp up its production and become more cost efficient in the process. For example, prior to completion of the haul road, TMU's quarterly production run rate was at 88,000 mt in Q1 2013. After completion in May 2013, the ramp up produced output of 147,000 mt, 275,000 mt, and 420,000 mt in Q2, Q3, Q4 2013 respectively."

"As per first quarter (Q1) 2014, our FOB vessel cash cost was about $48.9/mt. Last year, the number stood at $55.1/mt," Sanyoto continues. "The higher the strip ratio, the more expensive it is to remove waste in order to obtain coal. Coal price and fuel price are two major variables we have no control over, but we can at least manage variables such as lowering strip ratio and overhaul dump distance. So far we have managed to lower the dump distance more than the strip ratio as well as reducing logistics and transportation costs."

Arthur Simatupang, director of Toba Bara Group, summarized: "With the current downturn, if we want to survive as mine owners, we have to do it together and have common cuts to bring down the coal costs. We have to work together as partners."

Entering the coal market during its high in late 2008, Medco Energi Mining Internasional, a subsidiary of the long-established Indonesian energy company Medco Energi Internasional, soon realized that it needed to find a creative solution to survive in the low-price environment. With a civil engineer, Arie Prabowo Ariotedjo, as its CEO and managing director, Medco Energi Mining Internasional learned that by performing all contracting services in-house, it could turn a profit on its relatively small concessions in Nunukan, North Kalimantan: Duta Tambang Rekayasa (DTR) and Duta Tambang Sumber Alam (DTSA). DTR is currently only producing 600,000 mt/y and the reserve between the two is a mere 10 million mt.

However, Arie Prabowo Ariotedjo explained that Medco Energi Mining Internasional has created a model that works: "At present, large companies generally only consider buying large concessions, believing that the headache and the cost, including operations, permitting etc. does not change whether you are producing 1 million mt/y or 10 million mt/y. On the other hand, smallscale mining is only being done by smaller companies and it is not being done properly, meaning not in accordance with government and environmental regulations and standards. Medco Energi Mining has created a model for small mining concessions of around 5 million mt in total resources, which is not viable for large companies." Through this scheme, Medco Energi Mining Internasional is acquiring additional smaller mines with the intention of replicating its success. Minimizing operational expenses may be the best opportunity to maintain profitability and the country's position as the world's largest exporter of thermal coal. •

Image: Indonesian Mining Association

Opening Up North Barito

Coking Coal in Indonesia

More surprising than the development of Indonesia as one of the world's most important sources of thermal coal are the prospects of Indonesia's still nascent coking coal industry. In 2012, Indonesia did not even stand among the world's 10 largest producers of coking coal, exporting but 3 million metric tons per year (mt/y) of the substance compared with China, Australia and the United States with 510 million mt/y, 147 million mt/y, and 81 million mt/y of production, respectively. Even speculatively, many other regions have drawn more attention than Indonesia. This, however, has not been for lack of interest. Indonesia has failed to develop as a coking coal region because of a number of challenges associated with infrastructure, which may soon change. Moreover, the qualities of the country's coal are unique and the proximity of this coal to hungry markets is enviable.

Among those blazing trails in producing coking coal is Australian Cokal, which, in 2014, will bring the Bumi Barito Mineral project (BBM), their first project in Indonesia, into production. Located in the Murang Raya regency of Kalimantan, BBM, as well as several of the company's other concessions, have long been trapped. The waters of the Barito River, which winds through the region and would act as the access point to the company's coal, were too shallow for the company to access using conventional transportation methods.

Necessity was the birth of innovation. Peter Lynch, chairman and CEO of Cokal, said: "We are building a haul road and employing a push barge system capable of transporting goods through shallow waters. Similar to those seen on the Mississippi River in the US, these vessels are the first of their kind to be used in Indonesia and will allow for us to transport 6,000 mt per shipment; 50% more than others. Additionally, the shallow draft of these boats will allow for us to ship 80% of the year, versus 55% of the year for our competitors."

Upon reaching market, Cokal's product could be strongly in demand. Pat Hanna, executive director of Cokal, commented: "According to the tests we have run so far, the coking coal present at our sites in Central Kalimantan appears to be a very special type of coking coal, perhaps similar to a New Zealand style coking coal, but even then still different from that. This coking coal could break all the rules."

Lynch added: "This coal compliments the shift in quality which we will see appearing in Australian product as older mines, those developed in the 1970s, cease production and newer mines, such as those in the Rangal Coal Measures, begin to ship product. Australian coking coal produced in these new mining regions has a markedly lower amount of vitrinite. Coking coal produced from the North Barito Basin is vitrinite rich and can offset this drop.

The development of BBM, which is now in the final stages of bankability, will allow for the company to initially produce 2 million mt/y of coking coal, which will later be scaled to a 6 million mt/y operation. The implication of BBMs success may be larger, though, acting as a springboard for regional development. Peter Lynch said: "The development of BBM will bring to the basin a much more efficient and reliable logistics chain, thereby allowing for North Barito Basin coking coal to become a mainstay in the global market."

BHP Billiton is among the few companies that own concessions in the North Barito Basin. The company has held the rights to seven concessions for 20 years, even while discarding other assets, including Tavan Tolgoi in Mongolia. BHP Billiton's assets in the basin, in fact, are the only coking coal assets outside of Australia that the company retains, which is a sign of the region's promise. •

Arie Prabowo Ariotedjo

CEO/Managing Director
MEDCO ENERGI MINING INTERNASIONAL

Medco Energi, an Indonesian energy company, has worked in the Indonesian oil and gas sector since it was founded in 1980, but moved into mining in 2008 with the establishment of its subsidiary, Medco Energi Mining. What inspired the company to enter the mining space?

Medco Energi Mining was founded in late 2008 as part of the parent company's strategy to diversify the business and, at the time, coal was the obvious choice considering the bullish market. At an earlier stage, Medco Energi Mining owned 14 concessions and eventually determined that the company's 2 concession in Nunukan, North Kalimantan – Duta Tambang Rekayasa (DTR) and Duta Tambang Sumber Alam (DTSA) – had potential. The total resource is only 10 million metric tons (mt), but the size is appropriate for an up-and-coming company. DTR is currently only producing 600,000 metric tons per year (mt/y), and the nearby concession, DTSA, which along with DTR will produce 1 million mt/y, but the company decided that it would wait to ramp up production until coal prices recovered and would await for clarity from the government on the increase of royalties.

Duta Tambang Rekayasa entered into production when coal prices were beginning to fall. How has the company realized a profit in the current market?

When Medco Energi Mining was first established, the original concept was to outsource the work on the mine, as is the common practice in the industry. However, as prices started to fall, the company realized that it needed to be more cost efficient. I evaluated the tenders that we had received from contractors and concluded that Medco Energi Mining could save money by performing the work itself and perhaps even make a profit. As such, Medco Energi Mining moved to perform all of the operations and has been doing so successfully for several years. Coal prices were 10% lower than last year, but the company turned a profit.

Given that there is no clear sense that coal prices will improve in the short-term, what is Medco Energi Mining's strategy going forward?

Medco Energi Mining hopes to replicate its successful model in other parts of Indonesia. At present, large companies generally only consider buying large concessions, whereas only smaller companies are doing small-scale mining, but small-scale mining is not being conducted in accordance with governmental and environmental regulations and standards. Medco Energi Mining has created a model for small mining concessions of around 5 million mt, which is viable for large companies. The company is acquiring smaller mines and hopes to attract foreign investors and position itself as a potential strategic local partner, where regulation requires that the foreign investor divest shares to a local partner after a certain number of years of operation.

Medco Energi Mining's second strategy is to integrate the upstream and the downstream, that is to say to build coal-fired power plants at the mine mouth to power the local areas and also to build a coal-fired power plant to power the smelters for the downstream processing of minerals. The government requires that minerals be processed in domestic power plants. Medco Energi Mining is working with its affiliated company, Multifab to study areas where it could build a power plant, including Central Java. Medco Energi Mining's role will be to acquire local coal concessions or work with concession owners to determine a long-term contract for the provision of coal to the power plants.

The coal that Medco Energi Mining produces, with 3.5% sulphur, is not the most desirable on the market. Why did Medco Energi Mining decide to purchase concessions with this type of coal?

Many investors in the mining space would not have bought a concession of coal that possesses 3.5% sulphur. In fact, many investors are moving away from this type of coal. However, Medco Energi Mining is able to sell its coal above market prices, 15% above the government index rate, because Medco Energi Mining has a strong reputation as a reliable producer.

Coal royalties are between 3.5% and 7%, but the government has stated that it will increase them to between 10% and 13% for many of the country's newer mines. What will this mean for the industry?

If the government increases the coal royalties, which is a fixed cost, and the price of coal remains at current levels, many small mines will close. However, the government has been reconsidering this policy. Instead, the government should consider putting a tax on windfall profit instead of increasing royalties, which would still decrease a miner's overall profit, but be less burdensome.

When GBR returns to Indonesia in two to three years, where will we find Medco Energi Mining?

Medco Energi Mining hopes to grow production on Duta Tambang Rekayasa, Duta Tambang Sumber Alam, and its new concession Asset to up to 2 million mt/y. In addition, the company will be looking at other concessions, developing power plants, and providing mining services. The company entered the coal market at a difficult time, but it has found creative solutions that it can carry forward in bull and bear markets. •

Bill Park

Technical Manager
NRM (IN ASSOCIATION WITH XENITH)

Since we last met with NRM in 2012, how has business faired?

The coal market has had a significant effect on our business. In 2012, we completed 45 separate projects, but only around 20 projects in 2013. Although individual projects in 2013 had higher value, we still experienced a 30% reduction in revenue and other consultancy groups are reportedly suffering similarly. The closure of many smaller greenfields and brownfields-type coal projects has largely caused this. Still, it is surprising that we have only seen a limited uptick in acquisitions driven by a greater prevalence of distressed assets in the market. In response to this, NRM has established a strategic alliance with Australian-based Xenith Consulting Pty Ltd., which will benefit both parties. Xenith can establish a foothold in the Indonesian market, and NRM can expand its services through access to Xenith's larger resources.

The service sector has been described as 'in limbo," as it waits for a change in the macroeconomic environment. What catalysts might cause the market to turn?

The fundamentals driving business growth in 2014 are hard to predict. A rise in acquisitions due to lower thermal coal prices did not materialize, as we predicted. Market conditions might have increased demand for consulting services, as mines are required by financial institutions to revise their life of mine plans, but this also did not happen, as many companies chose to utilize internal resources to cut costs.

On a brighter note, a growth area has been in providing support to the Indonesian governmental power utility, PLN, to expand domestic power capacity, with emphasis on using lower quality thermal coal, particularly in Sumatra, to feed into the national grid. A recently released plan by PLN anticipates expansion of coal usage from approximately 60 million metric tons (mt) in 2013 to 150 mt by 2022. Ironically, this sector has previously not found much favor, with the industry preferring to focus on the export market. The new mining law attempts to enforce a 30% commitment of coal supply to domestic consumption.

The overarching problem is Indonesia's bureaucracy. In less than twenty years, the country has moved from an autocracy to a democratic democracy. Yet in conferring responsibilities on regional governments, vested interests developed. Permitting has become a mechanism by which political parties generate funding. Nonetheless, corruption is now being discussed more openly, and Indonesian leaders are now using the Chatham House Rules to address the business community on sensitive issues.

Will the 2014 presidential elections impact business confidence in the mining industry?

The 2014 presidential elections represent a chance wherein the Indonesian people will be able to dispense with old, ineffective intuitions in favor of new ones. The end of the current administration could lead to profound change within the industry. President Susilo Bambang Yudhoyono's Democrat Party was not broadly supported in the parliamentary elections, which resulted in a coalition government. Consequently, his cabinet position nominations were driven more by a political agenda than policy reform. A decisive victory could allow the elected party to move in a concerted direction.

What is NRM's two-year outlook for thermal coal?

Several variables have affected thermal coal pricing: the slowdown in China, the aftershocks of the global financial crisis, and the shift in the supply-demand balance as a result of over-investment in new and existing operations prior to 2013. Although fringe players have dropped production, the majors still entertain plans for expansion in 2014 despite the attempt by the government to introduce production "caps."

A correction is forthcoming, but how soon? In 2003, Japan, Taiwan, and Korea – the three largest markets for thermal coal at the time – attempted to maintain suppressed thermal coal pricing, which had prevailed since 1997. This resulted in the supply-demand balance reaching a "tipping point" with the price of thermal coal jumping steeply, by greater than $3/mt in one weekend and subsequent larger jumps in the Newcastle Index up to $160/mt. A period of significant price volatility followed.

Regardless, Indonesia is in a strong position to capitalize from the business generated from a volatile coal market. There are a number of smaller mines that are simple deposits and situated close to rivers that can be started up and closed easily. The larger players have already committed to excess infrastructure and equipment capacity.

What final message do you have for readers?

Indonesia needs to lower its "hidden" barriers to investment, principally permitting so as to remain a competitive destination for investment capital. This means minimizing the economic and time cost of permitting. Land issues need to be resolved more quickly. The impact of illegal mining is a good example. In the 2000s, uncontrolled activities were brought under control but not before BHP closed its operations. Will the current permitting "logjam" result in other businesses reaching a similar decision? •

Terry Gray

Director
PT. BRITMINDO

The coal market has changed significantly since we last met with Britmindo, in 2012. What has this meant for Britmindo?

At present the industry is challenged by the price of coal. However, at Britmindo we remain positive as history shows that the market for coal is cyclic; that there is continuing demand for coal worldwide and thus the coal price will eventually recover in Indonesia. I first came to Indonesia in 1993, when Indonesia was producing only 65 million metric tons (mt). Indonesia has consistently and repeatedly confounded the pundits, regardless of the price of coal and regardless of the state of the market. Indonesia has consistently increased production over the last 20 years at an average of 10% per annum, year on year. Now the country produces over 400 million mt. How much coal production can be increased further, will be defined by a number of variables, among them governmental policies and availability of infrastructure. The low hanging easy fruit of the early days in the industry is gone. Indonesian companies will now need to work harder and focus more on long-term strategy to continue their growth strategies.

At Britmindo, turnover in 2013 was considerably less than that of 2012. This is because when coal is attractive, many organizations run to consultants; consultants are then the first to feel the downturn when the coal market falls. At Britmindo, we have a core of clients who have steadfastly remained with Britmindo, despite the recent industry difficulties and when the price improves, we believe that many others will return.

Which services lines have been resilient during this market downturn? Which services is Britmindo now seeing little demand for?

While there has been less interest in mine owners developing their mines, Britmindo has observed that a depressed market has resulted in lesser price expectations from mine owners for equity investments. We have been assisting a number of entities in evaluating possible investment opportunities in mines.

The downturn in any commodity usually results in a significant reduction in exploration development. Whilst development was still with us in 2012, in 2013, a further weakening of coal prices hit exploration hard with the industry electing to withhold exploration funding. An increase in the price of coal will correct this, as companies must demonstrate that they have mineable reserves, which then requires initial exploration work to demonstrate to the market that they have reserves, which have been estimated in accordance with JORC 2012.

Britmindo will work on a broader array of project types in 2014. What spaces of the market will this be in?

As consultants, we currently offer many front-line services, such as JORC 2012 reporting, feasibility studies and mine management, but we now see a greater promise in back-line services, the services that are required to support exploration and operational requirements. Historically, we have used third-party services for the provision of these services, which range from exploration drilling to geotechnical testing; from site support to infrastructure design. Britmindo has found that the interface between many of these services is often poor, as is the quality of services provided.

Britmindo has invested in exploration drilling and geotechnical reporting and aims to be a "one stop" shop from exploration to mine management going forward, providing a suite of integrated services to the industry. Additionally, Britmindo will deal in other minerals and look at credible market intelligence supply services going forward.

Indonesian coal production continued to grow in 2013, in spite of the recessed market. In what way, has the market informed how coal miners are mining their concessions?

Many major coal players, on the back of the coal price highs of 2011, invested heavily in infrastructure and are now seeking to amortize those investments as much as possible through increasing production. Even those that did not spend money are still trying to force as much coal through their infrastructure systems as possible without investing in capital. Those that invested previously will be better placed when coal comes back in vogue as they will be able to much more easily accommodate an up-

turn in production demands.

Mining in Indonesia is quite simple. Most of the mines are fairly easy to operate; the largest issue is logistics. For operating costs, a proportion of one's cost structure is fixed costs, i.e. the cost of processing and transporting coal from the mouth of the mine to the mother vessel; and this does not vary much, irrespective of coal price. However, one of the most important costs are the variable costs: those related to stripping ratio and currently many miners are stripping at low ratios and thus "high grading" their reserves deposits.

Nationalism has influenced many of Indonesia's resource policies. What will be the role of the foreign investor?

The role of foreign investor will remain very important to the continued growth of Indonesia's mining industry. Indonesia has money to invest, but it still needs the foreign investor to continue its development, especially in commodities other than coal which require a greater amount of expertise and capital.

Indonesia has among the lowest rates of electrification globally. In spite of its wealth in coal, the country continues to depend on gasoline for electricity generation. Is this sustainable?

Indonesia's continued dependence on gasoline for the generation of electricity does not make sense. Indonesia imports fuel at world price parity and then provides a power tariff which is not commensurate with fuel costs. The nation would benefit from an energy policy which provides low grade, low cost coal to mine mouth power stations, thus leaving better quality coals for export and the subsequent export revenues and applicable taxes. Such a policy will lead to greater focus on the construction of coal fired power plants, which in turn will lead to greater domestic consumption of coal. Therein lies the opportunity for the coal industry in Indonesia.

Aside from commodities traditionally associated with Indonesian mining, which other spaces of the industry will develop?

Perhaps in time we will see iron ore developed in a more significant way. Indonesia's iron ore deposits are similar in quality to those of Australia and closer to their possible market in China.

Some believe that we might soon see a ban on raw mineral exports extended to low-grade thermal coal. Is this a legitimate concern?

No, at Britmindo we do not believe we will see an outright ban on raw mineral exports extended to low-grade thermal coal. That view was taken in the belief that low grade coal could be upgraded and thus command better pricing structures. However at today's low prices, coal beneficiation may not be economic and so in the short to medium term, this should not be a major concern. •

Arthur Simatupang & Iwan Sanyoto

AS: President Director
INDOMINING
IS: Head of Investor Relations
TOBA BARA

Indomining began operations in 2008. How has business fared since this point in time?

AS: There has been a downturn in the market since we first entered into production in 2008. To match these conditions, Indomining and Toba Bara have collectively focused on increasing mine profitability, rather than increasing production volumes, as many in the industry are doing. We will continue to produce at one million metric mt (mt) per annum for the next five years. Thereafter, we may increase production to four million mt/year, a move that we are currently preparing for by expanding the group's infrastructure. Infrastructure sharing has been a very strong asset for the entire Toba Bara Group.

How has the global decline in coal prices influenced the way in which Toba Bara mines its concessions?

IS: Toba Bara owns three IUP coal mining concessions through its subsidiaries: Adimitra Baratama Nusantara (ABN), Indomining, and Trisensa Mineral Utama (TMU). The company has an advantage where the three concessions are located adjacent to each other with close proximity to the loading ports. Given this advantage and to create synergies through infrastructure sharing among Toba Bara's three subsidiaries, in late 2012, management decided to better its infrastructure by streamlining the road system between TMU, ABN, and Indomining. As TMU was the only concession lacking road infrastructure, we built hauling roads to link up with ABN. When we completed construction of the road in May 2013, this enabled TMU to ramp up its production output, transporting its coal across to ABN and using the coal processing plant (crusher) and port facility of Indomining. Prior to having the road at TMU, TMU was relatively inefficient as it had to use third party facilities at high costs. With the road infrastructure at TMU in place, we have internalized the usage of our own assets, particularly enabling TMU to ramp up its production and become more cost efficient in the process. For example, prior to completion of the hauling road, TMU's quarterly production run rate was at 88,000 mt in Q1 2013. After completion in May 2013, the ramp up produced output of 147,000 mt, 275,000 mt, and 420,000 mt in Q2, Q3, and Q4 2013, respectively.

IS: As per Q1 2014, our FOB vessel cash cost was about $48.9 per mt. Last year, the number stood at $55.1 per mt. The higher the strip ratio, the more expensive it is to remove waste in order to obtain each mt. Coal price and fuel price are two major variables that we have no control over, but we can manage variables such as lowering strip ratio and overhaul dump distance. We have managed to lower the dump distance more than the strip ratio as well as reducing logistics and transportation costs. Last year we took the opportunity to upgrade our on-site infrastructure capacity in anticipation of production ramp up and potential coal price recovery in the future.

AS: With the current downturn, if we want to survive as mine owners, we have to do it together and have common cuts to bring down the coal costs. We have to work together as partners.

What is the production schedule for the Toba Bara Group for the next few years?

IS: We are striving to maintain consistent production growth while sustaining a certain profitability margin, but we will continue to achieve the higher end of our production target range. In 2013, we produced 6.5 million mt, beating our initial target of 5.8 to 6.4 million mt. This year, we are targeting production output of between 7.2 to 7.8 million mt. Given global coal prices, our strategy is to prepare for further production growth in the near future, while still generating decent profitable margin. Last year, we realized relatively sizeable capex to upgrade our infrastructure capacity, increasing annual capacity from previously 13 million mt to 16 million mt. The new capacity should be more than sufficient to accommodate much higher production resulting from potential ramp up. On the other hand, if the coal price corrected more than we anticipated, we would simply not produce as much.

Indomining has won awards for the company's environmental practices. What has underscored the firm's success in this field?

AS: From inception, Indomining strove to be a transparent and environmentally responsible entity. We are providing and giving back to the community. We place a heavy emphasis on CSR: on rebuilding facilities, providing education and strengthening the health sector.

Where do you see Toba Bara and Indomining in two to three years?

IS: It will be a much bigger company. The group is run by young professionals who have strong ambitions, strong work ethics, and positive attitudes about the future. We would like to become a diversified energy producer that can grow the usage of coal domestically to power Indonesia.

AS: We are inherently bullish, as we become a mid-size coal producer. We want to focus on building infrastructure to accommodate further growth and to have more control over the process. This will be key to the success of any company operating in Indonesia's coal space. •

The Reliable Minerals: Gold and Copper Production in Indonesia

Gold & Copper Production in Indonesia

Image: Kalimantan Gold

Gold and copper mineralization was first established nearly 80 years ago at Erstberg, the mine which first drew international interest to Indonesia's mineral resources and led to the establishment of Freeport-McMoRan's Grasberg mine. A Dutch geologist named Jean Jacques Dozy discovered the mine while surveying rocks found in a riverbed near the mountain in 1936. The gold and copper found in Western Papua and made famous through Grasberg continues to play an important role in Indonesia's economy. Grasberg alone contributes as much as 2% of the world's gold production annually, and Indonesia stood as the world's eighth largest producer of copper and gold in 2012.

Gold and copper production in Indonesia, grouped together as gold is often found as secondary mineralization in copper porphyries, has historically been controlled by the activities of two firms: Freeport-McMoRan, which operates the Grasberg mine, and Newmont Nusa Tenggerah, which operates the Batu Hijau mine. Both companies collectively account for 97% of total copper production in Indonesia. Other participants of note include Aneka Tambang, the state-run mining company that owns the Pongkor and Cibaliung mines in West Java and Bantam, which produce gold and silver, but not copper.

In 2012, this small industry saw the entrance of a new player, G-Resources. A sixth generation Contract of Work (CoW) with a resource base of over 8 million ounces (oz) of gold, G-Resource's Martabe mine has revitalized interest in Indonesian mining at a time when few thought it possible to put a mine through to production. First entering into production in July of 2012, G-Resources surpassed its own production estimates in a year when aggregate gold production shrank. In 2013, the company produced 280,000 oz of gold and approximately 1.5 million oz of silver.

Though still young, Martabe has come to represent the best of Indonesian mining: world-class resource bodies and a globally low cost structure. Peter Albert, CEO of G-Resources, said: "Martabe was always going to be a very competitive mine, and the cost profile over the past 18 months has demonstrated that we are operating well within the lowest quartile of global gold producers. In 2013 the "all-in-sustaining-cost" (AISC) was $799/oz and for the first half of 2014 it is about $700/oz – there are very few gold mines around the world operating at these sort of cost levels."

Key to the company's success has been its emphasis on community relations and safety, both of which have proven to be perennial pitfalls for larger members of the industry, like Freeport. Albert continued: "With a workforce of 2,600, we have placed a heavy emphasis on worker training, development and safety. In two years of operations we have had only four work related injuries – four too many to be sure, and we remain committed to creating a zero accident workplace."

INDONESIA'S GOLD PRODUCTION 2003-2011

YEAR	PRODUCTION (METRIC TONS)
2003	141
2004	92
2005	131
2006	93
2007	118
2008	64
2009	130
2010	120
2011	97

GOLDEN YEARS

In 2011

Indonesia was the

9th largest producer and 12th largest consumer

OF GOLD

Image: Kalimantan Gold

In the past several years, Indonesian copper and gold production has swung wildly on account of poor mine management. Riots have plagued Grasberg, halting production. Many expect production to fall in 2013 following a bout of community related issues that flared following a tunnel collapse, which killed nearly 30 and led to a two-month suspension of operations.

Uncertainty continues to hang in the air over Indonesian copper and gold production following several years of declining production and the implementation of an export ban, which could adversely affect Freeport and Newmont. In 2012, Indonesian copper production stood at 430,000 metric tons per year (mt/y), down from 543,000 mt/y in 2011. Gold production stood at 95 mt/y in 2012, down from 96 mt/y in 2011. Though Newmont achieved its 2013 production estimates, analysts recently downgraded the company out of fear over the unclear fate of Batu Hijau, which now faces stricter regulation through the country's export ban. This fear was made legitimate in June, when Newmont filed for international arbitration against the government. The government has ince retaliated with threats of full blown nationalization should Newmont fail to comply with its new regulations. •

> "Como Engineers is fortunate in that even in uncertain times it has been able to steadily generate business. This is attributable to the resilience of thermal coal in international markets and gold's isolation from the government's attempts at policy making."
>
> - Shaun Simmonds, President Director, Como Engineers

Expanding Company Operations

Smelting in Indonesia

The Indonesian government has taken strong step to encourage producers to construct mineral processing facilities, which have materialized. To date, the BKPM, Indonesia's foreign investment coordinating board, has issued 28 permits for the construction of such facilities, three of which will smelt bauxite, five of which will smelt iron ore, 14 of which will smelt nickel, and three of which will smelt copper. Through these investments, the BKPM expects to grow foreign investment into the country by 15% in 2014. These facilities are speculated to bring in $12.4 billion of investment into the country over the course of the next three years.

Though some have speculated how many of these facilities the industry will see developed, citing infrastructure concerns and rationalizing that perhaps many of the proposed facilities are companies attempts at buying time, some maintain that these projects are economic. Simon Birch of Resindo Resources Indonesia, a domestic consultancy, explains that, "The development of smelting facilities in the country requires a large amount of resources, however, these facilities are feasible and are economic for certain groups. We have seen serious interest in nickel. In spite of some arguing that Indonesia lacks a sufficient resource base to develop these facilities, we believe that for certain commodities, especially nickel, we will see smelters developed."

Indonesia has moved to lock in those that would propose the development of such facilities. The country has issued a regulation stating that all those intending to build smelters domestically must pay a 5% guarantee on their investment.

In 2014, Indonesia will see three smelters enter production: one involved in processing bauxite into chemical grade alumina, and two involved in processing iron ore.

Among the most interesting of Indonesia's proposed smelters is that of Asia Minerals Corp. (AMC) in so far as it represents the direction in which the Indonesian government would like for domestic mining to head: smelting acting as part of the company's license to operate. Currently involved in the trade of raw manganese ore in West Timor, AMC plans to use the funding generated through gradually increasing exports, which the firm plans to expand from 250,000 metric tons (mt) in 2014 to 500,000 mt in 2015, to fund the development of first a manganese smelter and then later an iron ore mine. Regardless of the politics that will continue to surround Indonesia's export ban, AMC proves that smelting, if approached properly, can be attractive. •

Peter Albert

Chief Executive Officer
G-RESOURCES

In 2012, Martabe entered into production. How has production faired?

In July 2014 Martabe reached its two-year production anniversary. In 2013, we produced 280,000 ounces (oz) of gold and approximately and 1.5 million ounces of silver. In 2014 we expect gold to settle back to our longer term projection of 250,000 oz per annum (oz/year) and silver to increase to 2 million oz. Martabe was always going to be a very competitive mine, and the cost profile over the past 18 months has demonstrated that we are operating well within the lowest quartile of global gold producers. In 2013 the "all-in-sustaining-costs" (AISC) was $799/oz and for the first half of 2014 it is about $700/oz – there are very few gold mines around the World operating at these sort of cost levels. With a workforce of 2,600, we have placed a heavy emphasis on worker training, development and safety. We have only had four work related injuries, which is four too many, and we remain committed to creating a zero accident workplace.

A very good cost profile and a healthy cash flow bodes well for the company with regard to potential acquisitions. In evaluating any possible acquisition, we naturally have a preference for Asia and Southeast Asia as they are in our backyard. However, we are not opposed to evaluating opportunities further afield.

Can you tell me about G-Resource's exploration strategy in 2014?

We will continue to explore in and around the Martabe deposits as well as wider afield on our tenement areas. Our annual budget is around $17 million, and with such geological potential at Martabe, this expenditure will inevitably yield results. Since G Resources acquired Martabe in mid 2009 we have increased reserves from 2.2 million oz gold to 3.1 million oz gold as well as having produced over 400,000 ounces from the mine – so a very real and competitive "bang for our buck" in terms of exploration dollars spent.

How does G-Resources engage with the local communities?

Our social license today is the strongest it has ever been. In late 2013, we were challenged by misinformation, which led to the community to believe that we were doing something wrong. The way in which G-Resources resolved this issue is a great example of how a company can rectify a situation to the betterment of all parties. If one does not have a social license to operate, one's project is meaningless.

How have you managed to integrate a relatively uneducated local work force into the project near seamlessly?

G-Resources employs around 1600 local villagers. Local stakeholders can see that we have made a long-term commitment and that their families' children and grandchildren will benefit from the mine's presence. This involves education and collaboration. Having experienced leaders across the business that can share their knowledge with local community is paramount both in ensuring that a mine functions and that a community is enriched through its operations. Through this process, over time, the local employees will move up into more skilled positions.

5% of Pt. Agincourt (the Indonesian subsidiary of G Resources) was divested to the local government. What advantages has this offered G-Resources?

In Pt. Agincourt's mine contract, we do not have any specific divestment provision, but we offered a 5% ownership of the business to a combination of the region and its provinces. It is a loan, so they pay us back out of future dividends. It means they are our partners. They are still the government; we still have to abide by the government regulations and get our permits, but there's an alignment where all stakeholders can benefit.

G-Resources has experienced share price volatility in the past year, not unlike many other mining companies. Now that G-Resources is into production, what can be done to further de-risk the mine?

From an external perspective observers see a risk in a single-asset company operating in a country where mining laws have been in a state of flux in recent years. But frankly I do not think we are being rewarded enough for our cash-cost position and the production goals we are achieving. We have already conducted a major de-risking of the company by building the mine and bringing it into production. G-Resource's market capitalization is down 30%, but probably in line with other similar companies in the gold mining industry. The fall in gold price has been a big factor, but we cannot control that, all we can do is continue to perform; eventually someone will wake up and recognize the great value proposition that is Martabe.

How would you advise a resource exploration company to navigate the obstacles in Indonesian mining?

One must have technical skills, proper licenses, social licenses and capital. Technical skills guard the organization and enable one to bring a large project to a remote environment. We have licenses because we work directly with the relevant ministries and the Indonesian people. A group of seventy people on the ground works on community relationships.

The fundamental key to success is people – the right people, with a belief in the company and its core values, and the dedication and commitment to succeed. Most of our top people have been with us since the beginning. •


966H
CAT
NISSAN DIESEL

More Than Pickaxes: Mining Logistics and Services in Indonesia

"There are additional safety concerns with these smaller machines. Many mine sites in Indonesia are large, employing hundreds of employees at any given time. Having too many machines working in one area can compromise safety as there are too many moving parts to coordinate. Chitra Paratama expects that as the price of coal increases and mining companies have more money to invest, that they will once again employ larger machines on their mine sites."

- Herry Herman, President Director, Pt. Chitra Paratama

Image: Pt. Ahdadia Coal

Navigating Rivers, Seas and the Market's Changing Tides

Shipping in Indonesia

Miners, engineers, and contractors working at Indonesian mines face geographic and topographic challenges ranging from remote locations and rocky terrain to seasonal flooding. These and other factors must be considered in the planning, design, and day-to-day operations of mine sites, but the shipping industry must grapple with its own challenges to meet the demands of clients both within the archipelago and beyond.

With over 17,000 islands spread over 1,919 million square kilometers, Indonesia requires careful planning of shipping logistics. Rastian Nazir, managing director of Pt. F.H. Bertling Logistics Indonesia, a global project freight forwarder that also provides project management services, explained: "Indonesia is a very large and complex system of islands. Knowledge of the various navigable channels for moving cargoes from one point to another is essential. Each project is different and sometimes we need to utilize all modes of transportation, combining air, sea, and road, to assure that the shipment arrives on time. Moving cargoes within Java and also between Java and Sumatra is straight forward, but Indonesia itself is divided into two parts: West and East. Jakarta is the door to the West, including Java, while Surabaya is the door to the East, where there are numerous additional islands. The major challenge is to connect West and East. For example, the best route for a shipment destined for south of Sulawesi is through Jakarta, while a shipment destined for north of Sulawesi must pass through Surabaya."

Apart from the complex nature of Indonesia's geography, changes are taking place within the mining industry, particularly in coal, that can shape a shipping provider's strategy. A case in point can be found in the Indonesian company Anugrah Lautan Luas, which specializes in offshore coal transshipment activities in Indonesia. Not only providing the floating crane terminal, Anugrah Lautan Luas has a fleet of tugs and barges, offers storage facilities and also handles agency services. Adi Kusumah, CEO of Anugrah Lautan Luas, explained: "While many other companies in the transshipment business limit their services entirely to transshipment, Anugrah Lautan Luas believes that in order to help the customer in difficult markets, like the one we see today, it is important to oversee the process from beginning to end and tailor the design of the fleet in accordance to the river's restrictions, trade conditions (need for blending), etc. In this way, Anugrah Lautan Luas is able to protect the customer at all points in the supply chain."

In addition to shifting strategies, the entrance of new technologies is anticipated. Amit Bhardwaj, country general manager of ISS-Marindo, a joint venture between the international Inchcape Shipping Services (ISS) and the local Pt. Equator Marindo which offers maritime and cargo services, noted: "As the mines in Indonesia continue to move inward, there will be an increased demand for unconventionally sized barges and tugs. They will need to be smaller and have less draft, but still able to perform to the level of barges and tugs currently used; this can only be achieved through the implementation of new technology."

With such a complex landscape to consider, shipping and logistics service providers encourage miners to seek them out as partners, rather than perform these functions in-house. In regard to the transshipment services that CSL Group provides in Indonesia through its local partner Pt. Lintas Wahana Indonesia, Jan Gramm, general manager, said: "CSL will work with mines of other clients that wish to develop a reliable, cost effective supply chain that can help differentiate their own business, but also prefers to invest their funds and focus on their core business; e.g. coal mining and marketing. These mines will subcontract the supply chain, including transhippers, to sophisticated specialist companies such as CSL." •

Adi Kusumah

Chief Executive Officer
ANUGRAH LAUTAN LUAS

Anugrah Lautan Luas was founded in 2012, when the market for coal was on a downward trend. Can you tell us why you decided to establish Anugrah Lautan Luas at that point in time?

With over 20 years of experience in the Indonesian coal industry, I believed that 2012, when the market was not performing at its peak, was the ideal time to establish Anugrah Lautan Luas. With the sector struggling due to lower prices for coal, banks that provide the funding for capital equipment were also seeing lower business volumes. Our team, with years of experience in the industry, decided to take the advantage of this situation to negotiate favorable terms from the banks to finance our capital expenditures to build our transshipment-focused business.

While many similar companies focus exclusively on transshipment, Anugrah Lautan Luas offers a full-range of accompanying services. Why has Anugrah Lautan Luas chosen this strategy?

Anugrah Lautan Luas specializes in offshore coal transshipment activities in Indonesia. Anugrah Lautan Luas does not only provide the floating crane, but has a fleet of tugs and barges, provides storage facilities and also handles agency services. While many other companies in the transshipment business limit their services entirely to transshipment, Anugrah Lautan Luas believes that in order to help the customer in difficult markets, like the one we see today, it is important to oversee the process from beginning to end and tailor the design of the fleet in accordance to the river's restrictions, trade conditions (need for blending), etc. In this way, Anugrah Lautan Luas is able to protect the customer at all points in the supply chain.

At present, Anugrah Lautan Luas has two floating cranes, one in South Kalimantan and one in Sumatera. Each floating crane has a load capacity of 20,000 metric tons (mt). In addition, Anugrah Lautan Luas has one ocean going vessel that can hold up to 22,000 mt of dry bulk cargoes. Despite difficult market conditions, Anugrah Lautan Luas has been able to grow its business and in fact will be commissioning another floating crane in January 2015.

What is an example that illustrates how Anugrah Lautan Luas has been able to adapt, as the coal mining industry in Indonesia continues to evolve?

One of the key moves that Anugrah Lautan Luas is making is with the introduction of a floating crane that has the capability to blend coals. In Indonesia, the availability of high calorie coal is beginning to diminish. As the calorific value falls, it is necessary to blend the coal to keep up the calorific value as the market demands. This point is particularly important for premium markets, such as Japan, which require high calorie coal for their power plants.

While Anugrah Lautan Luas will continue to incorporate new technologies, a very important focus of the company is in providing creative solutions. For clients that are having production issues as we see today, Anugrah Lautan Luas will work with them to identify the issues and put together a financing package accordingly. No matter how the market for Indonesian coal changes, it is very important to listen to the needs and concerns of the customer and provide creative and friendly solutions.

As coal mines move more inland, particularly deeper into Central Kalimantan, how important is it that coal companies use local transshipment service providers, such as Anugrah Lautan Luas?

While large international players have been in the market for a number of years, local players offer their own key advantages, which can be seen as coal mines begin to move more inland. In Central Kalimantan, the area is undeveloped where the challenge is not only natural conditions but also understanding social issues and applying local wisdom. Indonesian companies, especially Anugrah Lautan Luas, are better prepared to handle situations like these because they understand the local context thoroughly.

When GBR returns in two to three years, where will we find Anugrah Lautan Luas?

Anugrah Lautan Luas will be a much larger company. In addition to the services that the company currently offers, from tugs and barges to floating crane terminals, Anugrah Lautan Luas will become more involved in the export of coal. It already has one ocean going vessel and is in negotiations to build a supramax. Anugrah Lautan Luas believes that now, when the market is not in a boom period, is the best time to invest for the future. •

Ika Bethari

Corporate Planning Director & CFO
MBSS

In the past few years MBSS has gone from being a small service provider to one of the largest sea transportation providers in Indonesia. How did this happen?

MBSS is a family-run business, but in 2011, when MBSS went for an initial public offering (IPO), Indika Energy bought 50% of its shares. This has allowed for MBSS to maintain the strengths of a family business, which include a strong spirit of entrepreneurship, in addition to those associated with a larger organization: corporate values that prioritize organizational structure, business strategy, and a focus on business analytics. Through combining these attributes, MBSS now has a very strong and sustainable business model. This is evidenced in our successive successes following the IPO. In 2011, we grew by 40%. Prior to the IPO we only had 48 fleets. Now, we have nearly double this number. Previously, we had five floating cranes. Now, we have seven.

Today we are an ambitious company, with lofty goals both for the domestic and international shipping markets. At present we seek out financial partners capable of helping the business move to the next level.

As a sea transportation company, MBSS has crossed a significant milestone: the company now ships from port-port. What factors underscored the timing of this decision?

MBSS's decision to move into port-port sea logistics was not just a result of a strategic decision, but was also a result of changing industry dynamics. In the past, when the coal industry was booming and export markets were very strong, short distance sea transportation was more likely to be requested. The story of Indonesia's coal industry has changed since last year. A fall in the price of thermal coal has meant that internal markets are now receiving more attention. Our internal economic growth is strengthening. There are many power plants that require more coal to be transported from Kalimantan to other islands in Indonesia. To capitalize off this trend, we have increased the size of our barges. This, however, has been measured. Not all clients will use this type of process and not all ports can handle ships of this size. We have around ten clients in our portfolio. If something happens to one, we can allocate one ship to another. But if we convert to a larger size, we would lose that flexibility.

Apart from this, what stands as MBSS's competitive advantage?

The core of our value proposition focuses on offering our customers an integrated solution. We meet with clients and discuss how MBSS fits with their service requirements. We provide services, not equipment. These services, however, are designed to fit the changing needs of coal producers: we charge by the ton, rather than by the fleet as our competitors do. We adjust our resources so as to accommodate swings in production.

The domestic coal industry is now awaiting several larger-scale infrastructure projects that would impact economic viability of coal mining in certain regions. How does sea-transport, a more traditional logistics solution, compete against these proposed systems such as rail transport?

We have seen coal producers move towards higher production volumes as profit margins have thinned. There is certainly a push to maintain, at least absolutely, the margins of previous years: although the Rupiah is now worth less and the market value of thermal coal has decreased. MBSS has positioned itself to better serve these customers through moving to a larger fleet. This will be especially beneficial to our customers now, as higher production volumes have translated into congested waterways in Kalimantan. This, in part, is what has triggered the discussion of alternate shipping solutions.

The limitations of these solutions are found in that they are not a suitable solution unless one has a sizeable reserve. Additionally, sea transport is far cheaper than these other proposed solutions.

The 2009 Mining Law gives a preference to local providers. As a service provider to the mining industry, what advantages has MBSS derived from this piece of legislation?

The shipping industry is different to the mining industry. Within the mining industry, a state legal preference for local service providers exists. In shipping, foreign flag-ships are prohibited from operating domestically.

Does MBSS have international ambitions?

This year we start shipment not only to Thailand, but to the Philippines as well. We have been more interested, however, in opportunities that exist domestically. Given the ban on foreign-flag ships, we are in a strong position to grow in this market. This underscored our performance in 2011. People ask us why we have such a lucrative gross margin. Our tax burden is minimal at 1.2%, and we face little internal competition.

If we were to meet with you two years from now, where would MBSS be?

MBSS will expand from beyond barges into small-sized mother vessels. We believe that an opportunity exists for these type of larger scale services, but not so large as those provided by companies like BLT or Arpeni. •

mbss

integrated transport & logistic services for the mining industry

MBSS is an integrated one-stop solution provider of sea logistic and transportation for bulk materials. With experienced management of more than 20 years in the business, the company delivers high speed and accuracy services supported by the in-depth knowledge of geological & sociocultural aspects. Moreover, with its state of the art technology, it applies international operating standards and industry best practice technology to ensure efficient and reliable services to its valued customers.

MBSS services range from material handling to transportation of the bulk materials using its barging fleets from loading port to unloading port, as well as from loading port to anchorage point where the coal is to be transshipped to the mother vessel using MBSS' floating crane.

PT Mitrabahtera Segara Sejati Tbk.
Menara Karya, 12th Floor, Jl. H.R. Rasuna Said Block X-5, Kav 1-2, Kuningan, Jakarta 12950, Indonesia
Tel : (62-21) 57944755, 57944766, Fax : (62-21) 57944755, 57944766
www.mbss.co.id

Dipl.–Ing. Rastian Nazir

Managing Director
PT. F.H. BERTLING LOGISTICS INDONESIA

Can you provide us with a brief introduction and history of Bertling on a global scale and the history of its operations in Indonesia?

Bertling is a family-owned business that was founded in Germany in 1865 as a shipping company. Over 150 years, Bertling has grown to include 100 offices globally. In Indonesia, Bertling established its own entity in 2010, with a focus on the management of freight forwarding projects in order to answer to the growing demand of the EPC market, while the shipping business of Bertling for Asia Pacific continued to be handled from Singapore.

Before 2010, Bertling has already done business in Indonesia for many years through a network of agents and dedicated partners. Bertling's scope in Indonesia involves the planning of the transport logistics works for our clients at the very beginning of the project.

In terms of processes, the procurement department of our clients will first determine the goods that need to be purchased and planned for the project. Often, companies will plan the logistics at the end, but Bertling gets involved in the planning and design stage, which is crucial because project owners generally only calculate the amount that they need to allocate for materials without really considering the logistics. By becoming involved at this early stage, Bertling can minimize risks and make sure that all transport logistics tasks are carried out on time and on budget.

How does Bertling leverage its international expertise to serve clients in Indonesia?

A project freight forwarder like Bertling is unique in this part of the world, as the Indonesian market requires a deep understanding of the business model that our clients operate under before services can be rendered. Bertling has been heavily involved in providing services to the mining industry around the world and is in the position to apply this expertise to Indonesia. There are many challenges doing business in Indonesia, such as infrastructure, but Bertling has the knowledge and experience to find adequate solutions in even the remotest areas.

Bertling is aware of the importance of Indonesia in the development of the Asia Pacific region. The development of China depends on what Indonesia provides in terms of raw energy to that part of the world. That is one reason why Bertling is present in Asia Pacific and offers high-quality services through its growing office network.

What are some of the unique challenges to providing logistics planning to clients in Indonesia?

Indonesia is a very large and complex system of islands. Having knowledge of the various networks that are available to move cargoes from one point to another is essential. Each project is different and sometimes we need to utilize all modes of transportation, meaning a combination of air, sea and road, to assure that the shipment arrives at the destination on time. Moving cargoes within Java and also between Java and Sumatra is not very complicated. But Indonesia itself is divided into two parts: East and West. Jakarta is the door to the West, including Java, while Surabaya is the door to the East. East of Surabaya there is the wide distribution of islands that make up Indonesia. The major challenge is to understand how to effectively connect the East and the West. To give an example: If a shipment needs to arrive in the South of Sulawesi, the best route is through Jakarta. If the shipment needs to arrive in the North of Sulawesi, it needs to go through Surabaya. In addition to these considerations, it is also important to take into account that not all ports offer the same facilities and not all are supported by the same customs. Indonesia is so expansive that clients, before entering a certain area need to know what the situation on site; and this is where Bertling comes into play. Bertling provides its customers with a combination of knowledge, expertise and in-depth understanding of local conditions, laws and requirements.

In late 2013, the government announced $35 billion in 56 new infrastructure projects. Which projects do you believe that the government will prioritize?

The government is first looking to improve infrastructure on the five major islands and will then look at how to more effectively connect the islands. The government is committed to distributing wealth within the country, which makes it very important to link the five major islands. Within the islands, the focus will be on overland transportation, such as roads and rail. For inter-island connections, transportation can be done either via air or sea. Over the last 10 years, emphasis has been put on air transportation, so the government will likely allocate funds to improve the port infrastructure.

When GBR returns in two to three years, where will we find Bertling?

Since 2010, Bertling's Indonesian branch has more than doubled its client-base in the region and is becoming an important player in the local project freight forwarding industry. Bertling expects to see further growth within the mining industry. Other logistics companies are trying to replicate Bertling's business model, but we see ourselves as pioneers, rather than followers. Mining clients are increasingly aware of the importance of high-quality in logistics and transport management solutions. •

Amit Bhardwaj

Country General Manager, Indonesia
ISS-MARINDO

ISS-Marindo was formed in 2008 as a joint venture between Inchcape Shipping Services (ISS) and PT Equator Marindo. What was the premise for this strategic alliance?

Inchcape Shipping Services (ISS), which was established over 160 years ago, has had a presence in Indonesia since the 1970s. By the late 2000s, in response to strong customer demand, the company began to expand its geographical footprint in the country. Customers in Indonesia did not want to outsource services to additional vendors, preferring instead to use ISS's qualified staff and strong system of protocols. . ISS developed a strategic alliance with PT Equator Marindo, which resulted in a company that combined ISS's international standard operational procedures with PT Equator Marindo's local competence. Since 2008, clients have responded positively as evidenced by the growth of ISS-Marindo's team from 8 to 40 people in just six years. ISS-Marindo offers a wide-range of services across the Indonesian archipelago, including port and terminal agency, owner's protective agency, crew logistics, Cash to Master (CTM) services, bunkering arrangements, survey services, vessel line-ups, specialist equipment provision and coal logistics services.

ISS-Marindo offers an extensive portfolio of agency-related services to a number of industries. What are the services that mining companies demand from ISS-Marindo?

To understand the suite of services that ISS-Marindo offers, ISS-Marindo must be viewed in relation to its two sister ventures, Pt. Marindo Indonesia & CESI Indonesia. From the perspective of our mining clients, they are looking to strengthen their supply chain, be it upstream or downstream, depending on which side they fall. In both cases, ISS-Marindo is a very strong outsourcing partner that can help them control the supply chain better. To complement this knowledge, ISS-Marindo has an affiliated company, Pt. Marindo Indonesia, which can provide tugs, barge and floating crane management. In some cases, mining companies can be asset intensive in their supply chain control, meaning that they buy their own assets. However, while these mining companies can operate their assets from a commercial perspective ISS-Marindo and Pt. Marindo can add value with manning and technical maintenance,and CESI Indonesia can provide support with stockpile and vessel loading management. All three companies, Pt. Marindo, CESI Indonesia and ISS Marindo are joint ventures between ISS Group and SSY Indonesia and all are extremely service oriented.

Why is it important for mining companies to consider the services of a company like ISS-Marindo versus handling agency and logistical work in-house?

ISS-Marindo offers a comprehensive suite of outsourcing solutions. ISS-Marindo is not in the business of mining or trading, but it can help those companies involved in these areas to manage their logistical operations. Mining companies are better served outsourcing tasks that do not increase their core competencies. This point is critical in Indonesia because the key for businesses to survive, even for many businesses not related to the mining industry, is through supply chain management. Ultimately, ISS-Marindo through its integrated suite of services, can partner with mining companies to find a solution that not only works in Indonesia, but that works in conjunction with the client's internal protocols. ISS-Marindo is able to offer customized solutions by taking transactions and bringing them down to a strategic level that allows the clients to do business better.

What can be gained on the part of the shipping industry through looking outward, beyond the country's borders, at the introduction of new technology in Indonesia?

The introduction of new technology, in the vast majority of cases, has brought about positive change to the shipping industry. Today, we can see that the mining sector is quickly evolving and new technologies are being introduced across the supply chain. As the mines in Indonesia continue to move inward, there will be an increased demand for unconventionally sized barges and tugs. They will need to be smaller and have less draft, but still able to perform to the level of barges and tugs currently used; this can only be achieved through the implementation of new technology, be it from the United States or from India. The mining industry is changing and these technological demands are not on the horizon, but are here now.

When Global Business Reports Returns in two to three years, where will we find ISS-Marindo?

ISS-Marindo is well established in the agency business and is known as a quality service provider. In addition, the company's tug and barge management services are growing stronger by the day. ISS-Marindo will continue to engage with its clients, offering new and different services as their needs change. Clients no longer want transaction-based relationships and look to work with a smaller network of vendors. These clients seek strategic partners whom they can trust, who understand the business as they do, and who will be there through the ups and downs of their business cycles. Depending on the direction that clients grow, ISS-Marindo will adapt its service offering to grow alongside them. •

Jan Gramm

General Manager
PT. LINTAS WAHANA INDONESIA (CSL GROUP)

Would you provide us with an overview of CSL Group on a global basis and describe its operations here in Indonesia?

Headquartered in Montreal, CSL is a privately owned shipping company with operations around the world separated into four main divisions: CSL North America, CSL Europe, CSL Australia and CSL Asia. Globally, CSL operates 80 specialized self-unloading bulk carriers and transhippers. In Indonesia, CSL has had a presence since 1997 through a local joint venture company, Pt. Lintas Wahana Indonesia. At present, Pt. Lintas Wahana Indonesia operates only one transhipper, an offshore transhipment platform, which takes coal from tugs and barges and moves them to ocean-going vessels.

While CSL does not have a large presence in Indonesia to date, we hope to continue to grow its business in the country. Indonesia is one of the largest markets for transhipment in the world and will continue to be so for the foreseeable future.

Given its near 20-year presence in Indonesia, what trends has CSL seen in the way that transhipment has evolved?

Some 20 years ago, the volume of coal production was very small, around 1 million metric tons per year (mt/y) and this has increased to over 400 million mt/y in 2013. As a result, the shipping and logistics business has boomed during this period. CSL was one of the first companies to build a transhipper for Indonesia and has witnessed the market grow to about 100 floating cranes and transhipment platforms. With the low price of coal that we see today and a government-imposed cap on production volume, mines are limiting the amount of coal that they export and creating an oversupply in the market of transhippers.

CSL currently operates one transhipper in Indonesia but has ambitions to expand. Can you tell us about the company's expansion plans?

Ideally, CSL would like to build and operate five to six additional transhippers in Indonesia. CSL is in a strong position to begin this work, but we do not build speculatively. CSL will work with mines of other clients, who wish to develop a reliable, cost effective supply chain that can help differentiate their own business but at the same time prefer to invest their funds and focus on their core business, e.g. coal mining and marketing. These mines will subcontract the supply chain, including transhippers, to sophisticated specialist companies such as CSL.

Despite the low price of coal today, there are many mines working on large projects. CSL has identified 10 to 15 companies that would need transhippers and is hoping to sign one or two contracts within the next 12 to 18 months.

CSL has a long history of innovation. What is an example of a new innovation that CSL plans to introduce to Indonesia?

In Indonesia, CSL sees great potential for the Transhipment Shuttle Vessel, a small ship with equipment to carry cargo from a shallow-drafted shore facility to the Ocean Going Vessel and tranship the coal without any further intermediate equipment. In Indonesia, there is a fleet of about one thousand tugs and barges that go up and down the rivers into the mines to transport the coal to the anchorage and from there a transhipper will tranship the coal from the barge to the mother vessel, or the mother vessel will self-load if it is equipped with cranes. For those mines that can develop an infrastructure to bring coal to a shore facility on the coast, a self-sustained Transhipment Shuttle Vessel will provide a faster and more cost effective way to load Ocean Going Vessels. Rather than using five or six sets of tugs and barges and leaving one transhipper at the anchorage, the mine can use one to two Transhipment Shuttle Vessels to perform the work, thereby improving efficiency and reducing costs. CSL has the design and is in discussions with clients in Indonesia that want to take advantage of this opportunity.

When Global Business Reports returns in two to three years, how will CSL have expanded its operations in Indonesia?

CSL hopes to have multiple transhippers operating and potentially even two or three Transhipment Shuttle Vessels in the market. We also believe there is potential demand for larger, self-unloading bulk carriers to service the domestic market. CSL believes that there is tremendous opportunity in Indonesia and is ready to provide solutions to the coal industry. Even if there is no port, CSL will find a solution. CSL has been operating in and providing innovative solutions to the global shipping industry for over 100 years and will continue to do so around the world and in Indonesia. •

Sofan Prihadi

Director
PT. KARVAK NUSA GEOMATIKA (MPX GEOPHYSICS)

Can you provide us with a brief history and introduction to Pt. Karvak Nusa Geomatika and to the services that it offers to the mining industry?

I founded Pt. Karvak Nusa Geomatika in 2003 as a specialized photogeometric company that performs aerial and ground surveying with a special focus on mapping. In 2005, Karvak Nusa Geomatika began to use LiDAR (Light Detection and Ranging) technology and process the data within Indonesia with the support of foreign partners. Experiencing a rapid rate of growth, Karvak Nusa Geomatika was able a few years later to purchase its own system for LiDAR and photomapping technologies. Last year, Karvak Nusa Geomatika formed a partnership with the Canadian geophysical survey company MPX Geophysics Ltd. and together we are in the process of bidding for tenders for upcoming projects in Indonesia. This partnership has been integral to our expansion thanks to the high level of training and knowledge transfer that Karvak Nusa Geomatika receives from MPX Geophysics Ltd.

Today, Karvak Nusa Geomatika is the leader amongst local companies that provide LiDAR and photogeometric surveys. On an annual basis, Karvak Nusa Geomatika takes on between 25 and 35 projects in Indonesia and has recently performed work in Malaysia and the Philippines as well. For the mining industry, Karvak Nusa Geomatika uses LiDAR technology for topographical surveying and aeromatic technology for ground surveying. Mining clients constitute approximately 50% of the company's revenues as the LiDAR technology that we utilize has become an industry standard within the last several years.

Before the introduction of LiDAR, what mapping technology was utilized by the mining industry in Indonesia and why has the market shifted to LiDAR technology?

Prior to the industry-wide use of LiDAR technology, ground surveys were performed. While ground surveys are still utilized today, they are only effective for small areas. When a mining company needs to understand the topography of its large mining concession, LiDAR must be used as it is much more efficient and takes significantly less time. Utilizing LiDAR technology for a large area can reduce overall costs by as much as one-fifth. In addition, topographical surveys using LiDAR technology are necessary to acquire JORC (Joint Ore Reserves Committee) permits, as they require a scale analysis of between 1,000 and 2,000 (METRIC),

While LiDAR technology is not new to the global mining industry, it has only been used extensively in Indonesia over the last several years. As Karvak Nusa Geomatika has been using this technology since 2005, what changes have you seen in its application?

The greatest change that Karvak Nusa Geomatika has seen is the speed at which mapping from LiDAR technology can be processed. In 2006, three to four weeks were required to perform pre-initial data processing; this same process today takes only two to three days. This evolution has been very beneficial to mining companies as they are able to have a rough understanding of their concession in a shorter period of time and can immediately begin the process of designing their mine and applying for permits.

When processing the data collected during the surveying stage, do mining companies prefer that this service is performed locally in Indonesia or outside of the country, in such places as Singapore or Australia?

While there are foreign companies that offer mapping services in Indonesia and process this data outside of the country, the trend is shifting more toward processing the data inside Indonesia, which Karvak Nusa Geomatika has always done, even under the supervision of foreign partners in the company's early days. Processing the data in Indonesia is more-cost effective because the cost of labor is lower while the same quality of data is produced. Karvak Nusa Geomatika routinely sends its employees to train abroad in Australia and Canada so that they can deliver the same high quality of service that would be expected from foreign companies.

In addition, there are added costs to processing the data outside of Indonesia. The Indonesian government has strict standards regarding the integrity of the data that will be utilized for mine development and other critical sectors to the country, such as the power grid. The government will typically require that one or two government officials be present while the surveying is taking place and will also require additional permits, both of which translate into delays and increased costs to the client.

When Global Business Reports returns in two to three years, where will we find Karvak Nusa Geomatika?

Karvak Nusa Geomatika has experienced exceptional growth since I founded the company in 2003. There are many opportunities to provide our mapping services to mining and other clients in Indonesia and Karvak Nusa Geomatika sees great potential for its services in other countries within the region.. •

Jerry Tan

Marketing Director
RIMAU GROUP

Can you please provide us with an introduction to Rimau Group and the company's vision?

Rimau Group was first established in 1995, as a shipping and trading company. The company owns two mother vessels and approximately 20 sets of tugboats and barges. In 2004, Rimau Group entered the coal business with the acquisition of Pt. Senamas Energindo Mulia (SEM), a third generation Contract of Work in south Kalimantan. In 2007, Rimau Group acquired more coal mines in Central Kalimantan. In 2010, the group started mining activity in Pt. Senamas Energindo Mineral (SEM) due to the low stripping ratio and ease of working with local regulators. Rimau Group's vision is to become one of the leading miners in Indonesia, in which it will achieve by buying assets in a concentrated area and controlling the entire supply chain, including road, jetty, tugboat and barge.

What are current production levels at Rimau Group's SEM and REM mines and future plans for these mines and others that Rimau Group has acquired?

Currently, the production of these two mines is approximate 650,000 metric tons per month (mt/m); 450,000 mt/m from SEM and 150,000 mt/m from REM. Rimau Group plans to ramp up production of these two mines to 1,000,000 mt/m by the end of 2015. In addition to SEM and REM, Rimau Group also owns eight other coal mines in Central kalimantan. For 2014, the total coal production is projected to be 6 million metric tons per year (mt/y), but by 2015, Rimau Group hopes to achieve 12 million mt/y. To reach this target, 50% will come from SEM, 30% will come from REM, and the remaining 20% will come from other mines. Rimau Group is confident that it can achieve these targets as the company has successfully doubled its production in the last two years.

Rimau Group controls the entire supply chain of its coal production and export. What advantage does this provide?

In the coal business, it is vital to have complete control from pit to port to withstand bad markets. When coal prices are high, anyone can sell, but when they are low, as we see at present, the only companies that will survive are those who control the whole supply chain. By structuring the business in this way, Rimau Group can react quickly and decisively to issues that might arise.

To achieve this, Rimau Group's first step was to concentrate its operations in Central Kalimantan. Many miners like to spread their seed, buying a distant, but good mine, because the initial investment is low. However later, they encounter difficulties related to land authority, forestry, hauling, jetty and so forth that they could not have foreseen.

With operations focused on Central Kalimantan, Rimau Group built the supporting infrastructure to control the supply chain. In the case of SEM coal, it is hauled approximately 43 km through an ex-Pertamina road. This coal is transported to the 120 Hectares Rimau port, which is located in Telang Baru on the Napu River, a tributary of the Barito River. Rimau port can handle a barge of up to 330 ft and can load approximately 36,000 metric tons per day. At the port, crushing, stockpiling, and loading operations are then supported by Rimau Group's own employees and heavy equipment. The final product is exported on the company's 36 set of tugboats and barges.

Rimau Group places a strong emphasis on community relations. How does it incorporate community initiatives into its day-to-day operations?

As a company that seeks to control its entire supply chain, Rimau Group places a high priority on employee and community satisfaction, which ties back to its strategy to have the proper framework to survive difficult markets. Rimau Group wants dedicated employees who will be there no matter the market conditions. Rimau Group treats its employees, many of whom come from the local communities as family, striving to see that they are satisfied. Rimau Group in the near-future plans to build hospitals and schools, but its main focus is providing employees with opportunities that empower them.

When GBR returns in two to three years, where will we find Rimau Group?

Rimau Group is a positive company, believing that there are opportunities even in this down market. The company is looking at acquiring more assets that are currently priced cheaply. In addition, as the company is increasing production, all of the supporting infrastructure will need to be further developed: the company's jetty can support 700,000 metric tons (mt), but this will need to be increased to 1,000,000 mt next year, so we will acquire the neighboring jetty. The company has pending orders of another 10 sets of tugboats and barges, which will be delivered by 2015. The company also plans to bring online its first power plant, a 2 x 3.5-megawatts coal-fired steam plant, in the middle of 2014.

It is important to build a brand and determine what as a company you can provide to you employees, your customers and your partners. Rimau Group does not want to only sell coal. It wants to build a larger structure and bring in partners that will grow with the company. •

Alberto Simeone

President Director
PT. COECLERICI INDONESIA

Can you provide us with an introduction to Coeclerici on a global scale and its operations here in Indonesia?

Coeclerici was founded in 1895 to trade coal from the United Kingdom bound for Italy. Today, Coeclerici is an integrated company that provides services around the world in the fields of mining, shipping, trading and offshore logistics. Coeclerici is a family owned business, but has long had the vision to be a multinational company. Coeclerici has had a history of entering far-flung parts of the world, such as Brazil or Indonesia, which is not necessarily common or easy for an Italian-based company.

Coeclerici's office in Indonesia was established in 2003 and today its biggest businesses are trading and offshore logistics. In terms of trading, Coeclerici ships around 1 million metric tons per year of steam coal to serve Chinese and Indian markets. Such activities in trading are niche; the company does not want to compete with larger players like Glencore or Nobel, but instead is looking to provide particular and innovative services for its customers and suppliers.

How significant is Indonesia to Coeclerici's global operations and how does the company establish partnerships in this part of the world?

In terms of logistics, Indonesia is becoming more significant to Coeclerici. In what refers to the number of transshippers, Indonesia represents half of the fleet and Coeclerici has matched its logistics portfolio accordingly. Presently, Coeclerici owns and operates 11 vessels, five of which are in Indonesia. Coeclerici's first floating transfer station (FTS) was built for Pt. Kaltim Prima Coal (KPC) in 2005 and since then, Coeclerici has built four addition FTS for Berau Coal, under a 10-year contract. Coeclerici believes in long-term partnerships rather than simply providing a service because in this way we can grow with our customers. For Berau Coal and KPC, both are very satisfied with our service and we are allowing Berau Coal and KPC to grow their production and exporting capability. In Indonesia, Coeclerici hopes to expand its logistics business with select partners who would like to benefit from a long and trusted partnership.

Presently, there are approximately 100 transshipers serving the Indonesian coal market. What differentiates Coeclerici from the others?

Coeclerici has the capability to be the first in the market with innovative solutions and technologies. Coeclerici began this trend by introducing the first FTS to Indonesia and continues to do so today through such innovations as the double ship loader, which minimizes shifting. In addition, Coeclerici carries out its operations with extreme caution, with environmental considerations at the forefront of the company's activities. Lastly, with over 100 years of involvement in the shipping industry, Coeclerici knows how to adapt as business evolves in this changing world. When Coeclerici was first established, vessels could support tonnage up to 3,000 metric tons (mt) and today the largest vessels can support 400,000 mt. Throughout its history, Coeclerici has responded to trends like such as this one, making it an effective and reliable partner.

The government is trying to control the total volume of coal production by placing caps on miners. How can Coeclerici support its clients facing this government mandate?

For 2014, coal mines were intending to increase their tonnage but thus far have not received permission from the government to do so, resulting in an overcapacity. Coeclerici intends to work with traders that serve Korean or Chinese markets to blend the coal of our customers. Coeclerici has the facilities in Indonesia to blend homogeneously, which is truly a revolutionary concept in this market. Today, blending is done by placing coal of different qualities layer by layer on a vessel. Blending homogeneously has as a result one product of the same quality.

When Global Business Reports Returns in two to three years, where will we find Coeclerici?

Coeclerici will continue to serve its clients in Indonesia in both trading and logistics and will hopefully be even more integrated in the country, potentially acquiring a mine and then setting up a corresponding barging project. Coeclerici is committed to Indonesia, having found excellent ground through the politics of the government this past decade, which has allowed a foreign company to compete at the same level as a local company. The changing laws have created challenges as of late, but overall, Coeclerici has had many opportunities in an excellent environment that Indonesia has provided. •

A Booming Industry

Explosives in Indonesia

The domestic market for explosives has changed markedly in recent years, driven by changes within the industry's supply chain dynamics. Once entirely serviced through external feedstock production facilities, Indonesia now produces over 500,000 mt/y of ammonium nitrate (AN), the primary feedstock for explosives. Domestic supplies of AN benefits both Indonesian miners and those backing investments in these facilities.

In 2012, the market for explosives within Indonesia changed. Initiated by market leader Multi Nitrotama Kimia (MNK), which expanded their existing production capacity from 37,000 metric tons per year (mt/y) to 150,000 mt/y, this expansion was soon followed by that of Orica, an Australian company with a global footprint, which invested in a 300,000 mt/y production plant in Bontang.

Underscoring MNK's decision was an understanding of the unique challenges that miners within Indonesia face, especially as a result of the country's slow licensing process. Dharma Djojonegoro, CEO of MNK said: "Our clients value reliability, especially given the constraints present in their supply chain; from those related to licensing to those related to cash-flow. If a mining company asks for 1,000 mt of AN by a specific date, they expect to have that amount of product by that specific date. Having local production facilities was hugely advantageous to capturing a greater amount of clientele from the mining industry."

Having a production facility located in Kalimantan, in the heart of Indonesia's coal mining region, has also meant that MNK can respond more quickly to their client's need, avoiding what has historically been one of the largest pitfalls for those servicing the Indonesian market; the state of the country's logistics networks.

The benefits associated with AN production have not been unique to MNK. Todd Peate, country manager of Orica Mining Services, said: "Our AN plant in Bontang has substantially altered the dynamics of the explosives business within Indonesia for both Orica and its customers.... While both regulators and our customers must adjust to this substantial paradigm shift, the benefits attached to this plant have been strongly felt by our clients and Orica. Through our AN plant in Bontang, Orica has been able to both service the domestic market as well as Australia. We have also recorded strong levels of profitability on the back of this investment. This should only improve in the short-term as we tweak our supply chains to take into account the addition of this plant."

A more recent entrant to the Indonesian market is the South African company AEL Mining Services that delivers 120,000 mt/y of bulk explosives to the industry. Operating via its licensed explosives partner, Pt. Tridaya Esta (TDE), AEL Mining Services likewise has been investing heavily in Indonesia. While the company has been importing products for initiating systems from the company's central manufacturing hub in South Africa since 2007, AEL and TDE are completing the construction of TDE's detonator assembly plant in Indonesia, planned to be operational by early 2015. Separately from its ambitions to assemble locally, AEL Mining Services is introducing new innovations to the market.

In March 2014, AEL began sourcing Ammonium Nitrate Solution (ANSOL) through its joint venture with the Pt. Black Bear Resources Indonesia (BBRI) ANSOL plant in Bontang to one its customers, Pt. Kaltim Prima Coal (KPC). This was the commencement of the first successful and ongoing supply of ANSOL in Indonesia. Sean Rodger, AEL Mining Services' Indonesia country manager commented: "AEL has improved the process of manufacturing of explosive emulsion by using ANSOL, making it more cost and time efficient, as the previous melting process of AN prill is not required, thus reducing AEL's customers cost in terms of energy and adding significant environmental benefits such as carbon footprint reduction." •

Dharma Djojonegoro

President Director
MULTI NITROTAMA KIMIA (MNK)

Could you please introduce us to Multi Nitrotama Kimia (MNK), one of Indonesia's leading provider of explosives and explosive services?

MNK was originally established as a manufacturer of ammonium nitrate (AN), which is the base component of explosives. Our business grew as a manufacturer, selling directly to wholesalers. In 2008, we partnered with Ancora, and our mindset changed. We tried to grow more closely connected to our customers, and, after I joined the company in 2011, MNK became a full-service provider. We now sell AN and provide blasting services to the domestic market. We are also now building a detonator assembly station in Kalimantan. MNK is the market leader in the provision of explosives services in Indonesia, holding from 25% to 30%.

MNK strives to be the leading provider of explosives and blasting services. How has business faired over the past two years?

2012 was a banner year for MNK. Our transition into a full-service provider allowed for the company to prosper at levels that had not previously been seen. In 2013, the mining industry as a whole suffered, as did MNK. Our performance closely followed that of Indonesia's coal industry, fairing only slightly better.

What corporate initiatives played an important role in the company's turnaround in 2012?

The largest initiative taken by the company to fortify MNK's position in the domestic market focused on further developing the company's production capacity for explosives. Before 2012, MNK's AN factories had 37,000 metric tons (mt) of production capacity; today, we have over 150,000 mt. Whereas before we were forced to import, thus limiting our margins to that of traders, now we produce AN and have the margins of a producer. Equally important to our success was the reprioritization of the customer and our focus on the provision of solutions rather than a product. Previously, 30% of our volume was contracted under long-term agreements; today, it is 80%. In 2011, we had two emulsion projects; now we have seven. By focusing on these two initiatives, moving more directly into production and adopting a solution-centric approach, MNK expanded both the scope and scale of its business.

MNK continues to, at times, depend on a network of international suppliers of AN. Will the company continue to expand production capacity?

MNK will continue to expand production capacity in Indonesia, but to a smaller extent, as most of the work has already been done. In 2011, we were importing 70% of total product; now, we only important 20% to 30%.

Mining companies value reliability, especially given the constraints present in their supply chain, from those related to licensing to those related to cash flow. If a mining company asks for 1,000 mt of AN by a specific date, it expects to have that amount by that specific date. Having local production facilities was advantageous to capturing a greater amount of clientele from the mining industry. We will always look for opportunities to expand our production capacity, but this will depend on the market.

The Indonesian Mining industry has slowed across its mining industry, as have many other mining jurisdictions globally. For Indonesia, what specifically will be required to improve the market?

The vitality of the Indonesian mining industry is determined by two factors: the price of thermal coal in global markets and the attitude of regulators to the mining industry. If the coal price rises in 2015, the health of the industry will return. A greater amount of certainty on the part of regulators will play an equally significant role in influencing the industry's growth.

Indonesia's coal reserves are dispersed, in spite of the concentration of the mining industry on Kalimantan. From which regions will the continued growth of Indonesia's mining industry be generated?

The focus of coal mining in Indonesia will always be on Kalimantan, especially Central Kalimantan. This is reflected in the new coal mines that have entered into production in that region. Central Kalimantan is the next center of growth for Indonesian coal mining. Fortunately, it is also close to our AN factory.

Even if thermal coal develops in Sumatra, it may be outside our purview. They may not use explosives, as the nature of Sumatran geology is different. The overburden does not require explosives. Also, Sumatra, although rich in coal, has many logistical challenges that must be overcome before the industry will reach the size of that of Kalimantan.

What will drive MNK's growth beyond 2014?

There are several routes that MNK will take to continue its development. We may develop new AN factories in Kalimantan, MNK-3 and MNK-4, which would add at least 100,000 mt of production capacity. We will also likely diversify into services related to mining.

Internal markets will continue to be the focus of MNK. Indonesia is still a net-importer of AN. At this point in time, it would not make sense to expand abroad. Furthermore, as we are an Indonesian company with over 25 years of experience operating within the country, our place, at least for now, is in the domestic market. •

Providing More than Just Equipment

Equipment Distributors in Indonesia

With the current downturn and environment of regulatory uncertainty, many Indonesian miners have been decreasing their infrastructure spend, including that invested in new machines. As miners delay the purchase of heavy equipment, they are focusing on optimizing the pieces they already own. To achieve greater product longevity, miners are turning to the equipment distributors that they rely on for new equipment in boom times to provide additional services when costs are constrained.

One way that equipment distributors are able to assist their clients is by having nearby branch locations, allowing equipment distributors to reach the mine sites in a shorter time should a piece of equipment breakdown.

However, in an island country as dispersed and underdeveloped from an infrastructural standpoint as Indonesia, oftentimes more locations is simply not enough. Pt. ALTRAK 1978, which represents Cummins, Kawasaki and other world-class brands, has 11 branches dedicated to mining operations, with more than 1,000 technicians on staff. Despite this extensive network, Hairuddin Halim, Pt. ALTRAK 1978's COO, said: "There are emergency situations where Pt. ALTRAK 1978 simply cannot reach a remote mine site in time. It can sometimes take our technicians eight hours to reach a site or even two days if there is flooding. If a piece of equipment fails, the contractor will not allow work to be put on hold for four hours. To prevent these kinds of situations from occurring, Pt. ALTRAK 1978 trains the mechanics on site to complete easy maintenance, periodic maintenance and trouble shooting."

As the mining sector in Indonesia continues to stagnate and purchases for

Image: McElhanney

big-ticket pieces are suspended, equipment distributors can only be successful by approaching the industry with a service-focused strategy. Halim continued: "Pt. ALTRAK 1978 provides heavy equipment, but more importantly Pt. ALTRAK 1978 is a service based marketing company. In Indonesia, if the staff is trained well, the task will be completed properly. However, the differentiating factor is the way in which the service is provided."

Mineral Processing: Balancing Local and Foreign Providers

Although mineral processing services have been available in Indonesia for decades from the likes of the local heavyweight Sucofindo or internationally recognized Bureau Veritas through its local partner Inspectorate, the sheer volume of production has enticed new entrants, domestic and international alike.

One such company is the global firm SGS. While SGS has had a presence in Indonesia since 1985, it was only in 2009 that the company began to turn its attention to developing its trade inspections for coal, minerals and exploration geochemistry services which it offers to companies active around the world. Partnering with local providers, such as Pt. Surveyor Indonesia, SGS has come to learn that international players are at a slight disadvantage to established local companies. Business manager at Pt. SGS Indonesia N. Vivekanand remarked: "These local companies have been operating in Indonesia for a number of years and have had the privilege of setting up onsite laboratories for mining companies. These mining companies are dependent on these local service providers to validate the production quality that will be shipped. The mining companies then have an incentive to continue to use these same local service providers to certify that the quality produced aligns with what was ultimately delivered to the shipping vessel."

While this may prove a disincentive to newcomers looking to break into the Indonesian market, N. Vivekanand points out: "Although local companies might be preferred by local mines, the trading of mining and mineral products is a global business and many foreign traders, buyers and joint venture partners require globally recognized services, names and brands, such as SGS. Certificates issued by a company that carries the reputation of SGS are preferred in global or regional markets."

> "If a piece of equipment fails, the contractor will not allow work to be put on hold for four hours. To prevent these kinds of situations from occurring, PT. ALTRAK 1978 trains the mechanics on site to complete easy maintenance, periodic maintenance and trouble shooting.
>
> - Hairuddin Halim, Chief Operating Office, Pt. Altrak 1978"

Although a miner might be torn in choosing between a local versus international firm, it still remains that greater competition in the market can only stand to increase the quality of mineral processing services in Indonesia. •

Hairuddin Halim

Chief Operating Officer
PT. ALTRAK 1978

Can you provide us with a brief introduction to Pt. ALTRAK 1978 and its product offering and operations in Indonesia?

Pt. ALTRAK 1978 is a Sole Agent and Distributor of Heavy Equipment in Indonesia. Operating under the umbrella of the Central Cipta Murdaya (CCM) group, Pt. ALTRAK 1978 represents Cummins Diesel and Gas Engines and Power Generation, Case New Holland Agriculture Tractors, JCB Equipment, Kawasaki Wheel Loader and Grove Cranes in Indonesia.

Pt. ALTRAK 1978 does not supply products for the production line in the Mining Industry, but mostly for supporting equipment that is used in the Workshop or stock piling areas such as generating sets, cranes, tele handlers, wheel loaders, pump drive engine and lighting towers. In addition, Pt. ALTRAK 1978 also provides technical support and services for clients using various heavy equipment products that use Cummins Engines in their equipment.

The services that Pt. ALTRAK 1978 offers contribute 40% of the company's revenue. To support the volume of work, Pt. ALTRAK 1978 has 11 branches dedicated to mining operations, with over 1,000 technicians available at any given time.

Pt. ALTRAK 1978 distributes equipment and provides services to a number of industries. What are some of the unique characteristics of providing technical services to the mining industry?

The mining industry is very demanding, as it works 24 hours per day, 365 days per year and normally in very tough and harsh conditions. Miners therefore need reliable, first class quality products. They are also very strict in health, safety and environment (HSE) and do not allow long unit breakdowns. If there is a failure, they need a quick resolution to fix the problem.

Pt. ALTRAK 1978 can assist the mining industry in its second requirement, which is fast service. The mining industry demands that the task to be done once and correctly. Pt. ALTRAK 1978 has created an extensive network of technicians close to its client sites. The mechanics work 24-hour days, on two shifts. When an issue arises, Pt. ALTRAK 1978 is on standby.

In which circumstances would the mine site need to use its own technicians as opposed to Pt. ALTRAK 1978's available trained technicians?

There are emergency situations where Pt. ALTRAK 1978 simply cannot reach a remote mine site in time. It can sometimes take our technicians eight hours to reach a site or even two days if there is flooding. If a piece of equipment fails, the contractor will not allow work to be put on hold for four hours. To prevent these kinds of situations, Pt. ALTRAK 1978 trains the mechanics on site to complete easy maintenance, periodic maintenance and troubleshooting.

Pt. ALTRAK 1978, as an authorized representative and distributor of Cummins products for 30 years, has a certified training school in Jakarta and another one in Balikpapan. Pt. ALTRAK 1978's technicians have been trained by Cummins locally in Indonesia, in the United States or even in other parts of the world. Pt. ALTRAK 1978 uses these facilities to train mechanics on the mine sites and even receives students from the broader Asia Pacific region, such as Vietnam and Thailand.

How does Pt. ALTRAK 1978 implement its "Your Total Partner" philosophy to differentiate itself from its competitors?

One of Pt. ALTRAK 1978's principles is that "Every employee is a customer service officer." Pt. ALTRAK 1978 provides heavy equipment, but more importantly Pt. ALTRAK 1978 is a service-based marketing company. In Indonesia, if the staff is trained well, the task will be completed properly. However, the differentiating factor is how the service is provided. Pt. ALTRAK 1978 places great emphasis on how the service is performed, how the issues are communicated, and ultimately how the problem is solved. As a result, Pt. ALTRAK 1978 builds strong relationships with its clients.

If a client calls with an issue that needs to be solved immediately, Pt. ALTRAK 1978 will not delay providing service because of an administrative holdup. If we know the customer and have an established relationship, Pt. ALTRAK 1978 will first do the job and then handle the administrative component later. Pt. ALTRAK 1978 therefore guarantees that it provides its clients with a superior level of service.

When GBR returns in two to three years, where will we find Pt. ALTRAK 1978?

Pt. ALTRAK 1978 will continue to maintain its position as one of the top five distributors in the market. In three years, Pt. ALTRAK 1978 will have a branch in every island in Indonesia where there are mining operations. As Pt. ALTRAK 1978 sees the older generation of management naturally cycle out of the company, we will recruit younger employees, particularly those who have been educated overseas. Pt. ALTRAK 1978 is committed to providing an international class of products and services and will maintain this standard by employing new staff that fits this mold. Pt. ALTRAK 1978 is a local company but the quality of service provided is comparable to what you would find from a distributor from very developed markets, such as the United States. Clients in Indonesia will be using world-class equipment and Pt. ALTRAK 1978 gives them confidence in the quality of service that comes with that equipment. •

Authorized Distributor in Indonesia :

AL78 ALTRAK 1978
YOUR TOTAL PARTNER

PT. ALTRAK 1978

Kawasaki
One Focus Complete Solutions.

POWER AND PERFORMANCE PROVIDE UNMATCHED PRODUCTIVITY

Kawasaki wheel loaders can be found at mining sites around the world, where they have earned high marks for their powerful performance, agility and durability.

RUGGED AND DEPENDABLE

- 100% designed and manufactured by Kawasaki Japan
- Durable and reliable Kawasaki Hydraulic Components
- High power diesel engine drive
- Powerful breakout force with advanced "Z" bar linkage design
- Powerful engine range available from 83 HP up to 771 HP
- Bucket capacity range available from 1.3 M^3 up to 13 M^3
- Proven aftersales service by PT. Altrak 1978 as Sole Agent throughout Indonesia

KAWASAKI WHEEL LOADERS MINE THROUGHOUT

THE WORLD



made in Japan
Designed and Manufactured by Kawasaki

PT. ALTRAK 1978

Jl. RSC. Veteran No. 4, Bintaro, Jakarta 12330 Telp. : +62 21 - 7361978 (Hunting). Fax. : +62 21 - 7361977 E-Mail. al78@altrak1978.co.id
www.altrak1978.co.id

BRANCH NETWORKS :

JAKARTA (021) 7361978 **ADARO** (0526) 2701578 **ASEM REGES** (021) 34834511 **BALIKPAPAN** (0542) 761978 **BANDUNG** (022) 87523793 **BANGKA** (0717) 439578 **BANJARMASIN** (0511) 3251979 **BATAM** (0778) 471978 **BATU KAJANG** (0543) 5230488 **BENGALON** 081225430084 **BERAU** (0554) 25307 **BITUNG** (0438) 35078 **BONTANG** 08125417977 **CIKARANG** (021) 89901978 **CILEGON** (0254) 390678 **DENPASAR** (0361) 7427178 **GUNUNG BAYAN** 081154540 **JAMBI** (0741) 63408 **LAMPUNG** (0721) 789976 **MAKASSAR** 0811 541 4700 **MANADO** (0431) 816378 **MEDAN** (061) 8449978 **PADANG** (0751) 41978 **PALEMBANG** (0711) 364453 **PEKANBARU** (0761) 567678 **PERAWANG** (0761) 7052635 **PONTIANAK** (0561) 748670 **SAMARINDA** (0541) 260371 **SAMPIT** (0531) 34008 **SANGATTA** (0549) 23360 **SATUI** (0512) 2708078 **SEMARANG** (024) 3544469 **SUMBAWA** (0372) 635260 **SURABAYA** (031) 8471978

Sean Rodger

Country Manager
AEL MINING SERVICES

Can you provide us with a brief introduction to AEL Mining Services international and in Indonesia?

AEL Mining Services has had a long and rich history since it was first established in South Africa in 1896. For the first 70 years, the company focused on the South African market and then later expanded in Africa. The company only moved further abroad in the last seven years, carefully selecting the countries that it enters. AEL is not yet global, but has an international presence in South America, certain parts of Europe and also in Asia Pacific, beginning with Indonesia. Pt. AEL Indonesia was established in 2007 to develop business domestically and now serves as the hub for expansion into Asian Pacific countries.

On an annual basis, AEL delivers approximately 20% of the Indonesian bulk explosives market requirements. AEL operates via its license explosives partner, Pt. Tridaya Esta (TDE), and provides blasting services to the industry, namely prime, load, tie and shoot (PLTS) or down the hole (DTH), as a mining services company. For Indonesia, up until now, AEL has been importing products for initiating systems from the company's central manufacturing hub in South Africa. Going forward, the strategy is to decentralize and assemble our detonators in Indonesia for the Asia Pacific region.

When AEL and TDE have completed the construction of TDE's detonator assembly plant in Indonesia, which is scheduled to be operational by early 2015, imported components will be assembled locally, which will allow for greater focus on quality control and assurance. Our customers will also benefit from significantly reduced lead times and increased flexibility of detonator timing delays and lengths along with many other advantages.

AEL prides itself on applying the latest generation products and service offerings for blasting operations. What innovations has AEL introduced to the mining industry in Indonesia?

In March 2014, AEL began sourcing Ammonium Nitrate Solution (ANSOL) from the Pt. Black Bear Resources Indonesia (BBRI) ANSOL plant in Bontang to one of our customers, Pt. Kaltim Prima Coal (KPC). This was the commencement of the first successful and ongoing supply of ANSOL in Indonesia. AEL has a joint venture with BBRI for the production of ANSOL. ANSOL is a concentrated aqueous solution of ammonium nitrate (AN) used in the manufacture of emulsion matrix. Although ANSOL is not a new innovation per se, AEL is the first to introduce it into emulsion manufacture in Indonesia.

AEL has improved the process of manufacturing of explosive emulsion by using ANSOL, making it more cost and time efficient, as the previous melting process of AN prill is not required, thus reducing AEL's customers energy costs and in adding significant environmental benefits, such as carbon footprint reduction. Previously, AEL had been sourcing AN prill from qualified sources from across the world to manufacture emulsion, but as with the detonator assembly plant, AEL is moving towards the supply of locally produced product. The output from this ANSOL plant will initially service two of AEL's projects, Pt. KPC and Pt. Leighton Contractors Indonesia (LCI) at MSJ Coal Mine, and will later expand into other projects.

AEL have also recently reached the milestone of achieving 80% diesel replacement with used oil in our emulsion products. This is a first in the mining industry and delivers a reduction in diesel consumption of 200,000 to 250,000 liters per month for KPC, AEL's largest customer in Indonesia.

AEL Mining Services works largely with coal mining operations in Indonesia. Given the low prices for coal, will AEL adjust its strategy?

Beginning in 2013 and moving into 2014, AEL shifted its focus to collaborating further with customers to look for efficiencies and drive cost reductions. AEL examines not only the explosives per se, but also how they affect the whole mining process, upstream and downstream. AEL's innovative proposals have helped customers to identify how explosives influence other elements, such as loading and hauling. AEL was recently awarded the blasting services for the Tembang silver and gold project with Sumatra Copper and Gold. This project, which is partly underground and partly surface mining, is AEL's first outside of coal in Indonesia, which is in alignment with our strategy to diversify into alternative commodities.

When GBR returns in two to three years, where will we find AEL Mining Services?

AEL has been preparing to expand once the market improves but expects that growth will be tempered by the fact that the market is now much more competitive than when the company first entered the country. AEL's strategy is to expand sustainably and it will be selective taking on projects.

AEL has illustrated through its innovative and cutting edge technology, working in collaboration with our partners, our internal training and development programs, and further regional investments, such as the upcoming detonator assembly plant, operated by our partner, TDE, that it is committed to fulfill the evolving immediate and long-term requirements of the market. AEL will continue to operate in the country in this fashion, cementing itself for future growth and opportunity. •

N. Vivekanand

Business Manager
PT. SGS INDONESIA

Can you provide us with a brief history and introduction to SGS's operations here in Indonesia and its work in the mining sector?

SGS Indonesia first started its operations in 1985 through its Government and Institutional Services business line. The work that SGS Indonesia was focused on at the time related to customs inspections. Over the years, SGS Indonesia grew and started to build up different business lines with testing and certification servicerepresenting the company's main area of growth. Offering trade inspections for coal, minerals and exploration geochemistry services to companies active around the world, SGS Indonesia began to focus on developing these business lines in Indonesia in 2009. However, as the Negative List stipulates that no foreign multinational can perform surveying services on the import or export of cargo in the country, SGS Indonesia Minerals has developed relationships with local providers, such as Pt. Surveyor Indonesia.

What is the process by which SGS Indonesia works with Surveyor Indonesia to deliver surveying services?

SGS Indonesia receives the order from a buyer, be it local, regional or international, and takes full responsibility for making sure that the order is completed to the company's global standards. To do this, SGS prepares the work instructions and sends them to the site where the Surveyor Indonesia team is waiting to execute the job. SGS Indonesia also nominates one of its field auditors to go to the site to ensure that the sampling plan is executed according to the job-specific instructions. SGS Indonesia works very closely with Surveyor Indonesia to train its employees and build and maintain capacity.

Once the inspection team has completed its work on the site, the samples are transported back to the sampling facilities, where they are prepared. SGS Indonesia owns and operates sites in East Kalimantan, South Kalimantan and Sumatra. In July 2014, the company opened a new laboratory in South Kalimantan at Banjarmasin.

As a new entrant to the Indonesian market for mineral and coal surveying, how does SGS Indonesia compete against both local and international players?

SGS is recognized globally for providing high quality inspection and testing services. If a longstanding client of SGS is entering the Indonesian market, they will generally prefer to work with SGS Indonesia because they have confidence in the service they will receive and SGS' reputation, ethics and corporate network.

However, within the Indonesian market, international players are at a slight disadvantage to local players. These local companies have been operating in Indonesia for a number of years and have had the privilege of setting up onsite laboratories for mining companies. These mining companies are dependent on these local service providers to validate the production quality that will be shipped. The mining companies then have an incentive to continue to use these same local service providers to certify that the quality produced aligns with what was ultimately delivered to the shipping vessel.

Although local companies might be preferred by local mines, the trading of mining and mineral products is a global business and many foreign traders, buyers and joint venture partners require globally recognized services, names and brands, such as SGS. Certificates issued by a company that carries the reputation of SGS are preferred in global or regional markets.

Given the lower commodity prices that we are seeing in the market today, how has SGS Indonesia seen demands for its services from the mining industry change?

The lowering of commodity prices has created an incentive to evaluate quality right through the supply chain, from mining all the way to consumption. Every stakeholder of that cargo at any given point in time wants to ensure that they can trust in the quality and quantity of the specifications they have received for this parcel so that they can confidently minimize their financial risk and trade fairly. Thus, for SGS, lower commodity prices have a dual effect. While they increase the need for a trusted inspection company, generating more work, they also create lower trade volumes, which then translates into higher competition. In response, SGS relentlessly delivers top quality service and earn this volume of work.

When Global Business Reports returns in two to three years, where will we find SGS Indonesia?

At present, SGS Indonesia has four major business lines established in the country and it expects that in a few years, the company will be delivering another six. In terms of our mining operations, this business will only continue to grow. The mining aspect of SGS Indonesia's portfolio is important both in the region and within a global context. SGS's global strategy will include an increased focus on Indonesia because we realize that this emerging market will be a growth engine in the region and thus a significant source of future development. •


DOOSAN
004

Into the Future: Final Thoughts, Company Guide, and Index

"China continues to invest heavily into the Indonesian mining industry and will likely remain a strong player in the local mining industry's development moving forward. India also requires Indonesia's resources, but does not yet have the capacity required to invest heavily into the domestic market. Singapore could emerge as new capital market. Indonesia cannot adequately fund itself internally; investment funds will have to come from elsewhere."

John Bishop, President Director, Pt. CSA Global Indonesia

Image: Pt. Ahdadia Coal

"There are two forthcoming government regulations that will significantly alter the surveying market. The first, issued by the Ministry of Trade, is to come into effect in September 2014. It will require coal companies to acquire registered exporter (ET) license to be able to get export verification (LS certificate). It will now be compulsory for mining companies to contract a surveyor, which must be registered through the Ministry, to verify coal sources, meaning the physical location of the coal and which company produced it, so that the government will be able to extract a royalty from the mining company. The second regulation, issue by the Ministry of Energy and Mines, is that foreign companies cannot act as the main surveyor, but can only act as a subcontractor."

- Ganjar Gautama, President Director & CEO,
Anindya

.....

"Land acquisition in Indonesia is a real issue and must be addressed before any form of development is to proceed. The first step is to get clarity on the acquisition of land either by the company investing upfront, purchasing all of the land before doing any kind of study, or by working with the local authorities during the acquisition process. If Sewatama does not have clarity in this regard, the company will not go forward. This is especially true in the development of hydropower plants in which case Sewatama has already agreed upon a certain level of environmental and social assessment by IFC's standards."

- Hasto Kristiyono, President Director & CEO,
Pt. Sumberdaya Sewatama

.....

"Before the Asian Financial Crisis, the PLN was focused on cheaper power plants, particularly coal-fired, but most of the large projects were abandoned. Diesel appeared to be an easy, fast and relatively cheap solution. However, the country made the wrong bet as the price of diesel has gone up significantly in the last decade. There has always been an enormous opportunity for gas, but it simply was not discovered. Today, gas infrastructure itself is limited and investments are concentrated in the upstream oil and gas business as the country shifts from oil to gas."

- Arno Hendriks, CEO,
MAXPower Group

.....

"After the Asian Financial Crisis, commodity prices boomed and foreign mining entities in Indonesia were seen to be reaping large profits. In the coal space, local investors stepped in and the largest coal players became Indonesian-controlled. Thus, there is a view that this can be replicated in the metals sector. Indonesia sees no need to hurry in extracting minerals for what are perceived to be low royalties - the end goal will be to create a stable mining industry that will contribute to the greater development of Indonesia in a holistic sense. The broader aim is for Indonesia to escape the "middle income trap". If there is to be an amendment to 27/2013, it will occur in the context of a trade-off in which the foreign mining industry implicitly accepts some of Indonesia's demands for greater local control and value added in the domestic mining industry."

- Michael S. Carl,
Senior Foreign Advisor

"What will happen with regulation is unclear. For instance, mining companies are obliged to give the Indonesian government and regional government a certain percentage of shares, but there are thousands of mining companies, and the government has no intention to acquire them all, as it does not have the money or the institutions to take care of this many investments. The government does, however, want to have a percentage in the most strategic mining companies, those with the largest reserves or mineral concentration. It will be interesting to see how the government manages this process and how the process will evolve."

- Arifdea Saraswati, Partner,
Akset Natural Resources

.....

"The rapid decentralization of authority, in particular governing permitting, has greatly complicated mining within Indonesia. The main difficulty that the industry faces is that there is no solid, clear regulatory framework for the industry: decrees are issued every week and reinterpreted constantly. The environment is perpetually shifting."

- Malcolm Baillie,
Indonesian Forum for Mineral Exploration and Development

.....

"Prior to 2012, Expatriates comprised 30% of the workforce while Nationals made up only 70%. Today we see that Expatriates comprise only a fraction, just 10%. There are several factors that have contributed to this shift. While the expense cutting measures is the most obvious reason, as Expatriates are more costly given the packages that they require, of more significance has been a change in the law. UU No.3/1958 about Expatriates working in Indonesia should guarantee working opportunity for National or Indonesian citizen and supported by Peraturan Menteri Tenaga Kerja dan Transmigrasi no. Per.02/Men/III/2008 stipulated that for every Expatriate, a company needed to hire three Nationals. The purpose of this was to encourage a knowledge transfer from these Expatriates to the Indonesians so that over time, the local talent would learn to be more productive and possess the necessary skillsets. For certain positions, particularly managerial ones, companies continue to hire Expatriates because the local market is still not able fill this need. For example, one of the most difficult positions to fill is Geotechnical Specialists."

- Aphrodite Amandita, Country Manager,
Verity HR

.....

"Given the level of Indonesia's agricultural output, agro waste, which can be used through a gasification combustion system to produce electricity, is a natural choice for renewable energy generation in the country. Electricity through agro waste has the potential to work anywhere in Indonesia as long as the logistics, amongst others, the feedstock is secured. In 2011, I approached the Bureau of Logistics (BULOG), the largest government institution for the distribution of food, such as rice, sugar and flour, to acquire the rice husk that is a byproduct of the rice milling process. Within just two weeks, SyRes Indonesia signed the contract with BULOG and later secured a grant through the Dutch government to build two rice husk power plants, one in Sulawesi and another in Java. By using rice husk as feedstock for the gasification, BULOG is able to reduce its operational cost by 70%."

- Hoedani Hadijono, President Director,
Pt. SyRes Indonesia

Image: Andritz Hydro

This list represents a selection of the companies operating in the Indonesian power and mining industries and should not be considered a comprehensive guide. GBR holds an exclusive and extensive power and mining company database for Indonesia and the wider region. For further information on database access packages, please contact info@gbreports.com or call +44 20 7612 4511.

EDITORIAL AND MANAGEMENT TEAM

Power and Mining research conducted by:
Senior Project Director: Vanessa Acuna Chapela (vanessa@gbreports.com)
Journalists: JP Stevenson (jpstevenson@gbreports.com) and Josie Perez (jperez@gbreports.com)

Managing Editor: Mungo Smith (mungo@gbreports.com)
Executive Editor: John V. Bowlus (jbowlus@gbreports.com)
Graphic Designers: Leigh Johnson (leigh@gbreports.com) and Gonzalo Da Cunha (gonidc@gmail.com)
Regional Director, EMEA: Sharon Saylor (ssaylor@gbreports.com)
General Manager: Agostina Da Cunha (agostina@gbreports.com)

For updated industry news from our on-the-ground teams around the world, please visit our website at gbreports.com, subscribe to our newsletter by signing up to our VIP list through our website, or follow us on Twitter: @GBReports.

Additional copies of this book can be ordered through Elif Ozturk (elif@gbreports.com)

THANK YOU

GBR would like to extend our thanks to the following organisations for the assistance provided during the research of this publication:

INDONESIAN MINING ASSOCIATION
http://www.ima-api.com/

INDONESIAN FORUM FOR MINERAL EXPLORATION AND DEVELOPMENT (EMD)
http://emdindonesia.com/

INDONESIAN COAL MINING ASSOCIATION
http://apbi-icma.org/

CHRISTIAN TEO PURWONO & PARTNERS (IN ASSOCIATION WITH STEPHENSON HARWOOD LLP)
http://www.cteolaw.com/

MINISTRY OF FINANCE REPUBLIC OF INDONESIA
http://www.kemenkeu.go.id/en

INVESTMENT COORDINATING BOARD BKPM
http://www.bkpm.go.id/

We would also like to sincerely thank all the companies that took the time to give their insights on the market and share their experience and knowledge.


Living Room
Aston Rasuna Jakarta


Cafe • Bar • Lounge
Aston Rasuna Jakarta

The Bridge Function Room
Aston Rasuna Jakarta

PERSONAL & COMFORTABLE

Combining all the facilities of an International hotel and the comfort and personal service of a residence. The Aston Rasuna offers guests affordable luxury in the very heart of Jakarta's CBD.

Rate Starting From Rp. 1.108.800 ++ *

ASTONRASUNA
JAKARTA

Tower A – Lower Ground, Kompleks Apartemen Taman Rasuna Jl. H.R. Rasuna Said – Jakarta 12960
t: +62-21 - 8370 5555, 9390 1000 f : +62-21 - 8378 6244 | e: Info@AstonRasuna.com
Rasuna.AstonHotelsAsia.com | www.Aston-International.com

: astonrasuna : @astonrasuna

GLOBAL BUSINESS REPORTS