

### Infrastructure

#### Introduction

Indonesia has long recognised the need for investment in its infrastructure and the wish list extends to hundreds of worthy projects and many billions of dollars to finance them. The challenge of legal certainty for foreign investors and the priority issue of land acquisition, particularly for the use of public purposes on land transport infrastructure, still hinders development. Without land connectivity the upgrades to airports and seaports becomes somewhat academic if there is no functional network back to the hinterland. In this reporting period, however, progress has been made on the latter issue of land acquisition, as discussed in more detail below.

Power requirements are being addressed, albeit slowly, and the State Electricity Company (PLN) has made some progress towards improving the investment climate, although additional transmission capacity needs a more efficient distribution system and that is still far from complete. There is some increasing recognition that in order to attract investment for renewable types of energy, such as geothermal, improvements in the terms and conditions and returns for investors are required.

President Yudhoyono signed the Government's draft Bill on Land Acquisition in December 2010 and this was submitted to Parliament in early 2011. Having missed several deadlines the necessary following Presidential decree to activate implementation was passed in January (Law 2/2012) with the Government Regulation to facilitate implementation approved in August 2012. It is expected that by 2013 the law and implementing regulation will receive their first tests. The importance of the law is that it sets out a clear procedure and time limits for objection against a given land purchase for a proposed infrastructure project. The unlimited timetable for objection that has previously held back the construction of land infrastructure, especially in the case of toll roads, should then be a matter of the past.

Each year, These papers continue to reflect on the ongoing deterioration of the existing infrastructure, particularly in terms of the road network, and the massive impact it is having on industry's cost of doing business in Indonesia. There are significant delays in sea, rail and road transportation, with road transport now the most costly in Asia, and seaport operations compare unfavourably with those of neighbouring countries.

A number of factors have contributed to this continuing condition: the ratio of infrastructure spending to GDP continues to fall; the funds that do exist are often poorly allocated to peripheral services rather than physical infrastructure; disbursement of funds through many related departments is slow in any budgetary year, and the regulations that control the quality of infrastructure built are not always enforced. All these areas must continue to be addressed assiduously by the relevant Government departments to meet the optimal use of the national expenditure budget for infrastructure.

In recognition of budgetary shortfalls, the continuing difficulty to attract private sector funding and to bolster flagging growth in the many industries that have evolved on the back of heavy Japanese investment over a number of years, particularly in western Java, the Japanese government signed a USD24 billion loan agreement with the Indonesian government to fund targeted infrastructure. The prime focus of this is on the Greater Jakarta / western Java area, with sea and land transportation and power being particularly indicated. This loan makes a good contribution towards the amount that the government has calculated as being required from non-budgetary sources for the current and ensuing 5 year period, estimated to be in the order of USD150 billion or more. Japanese funding is now being applied to the feasibility stage of both seaport and airport projects in west Java.

The Chinese, Korean and Russian governments have also signalled interest in providing funding support for infrastructure projects. This may take some pressure off the amount of funding that the government is still hoping to realise from private sources through various mechanisms, with Public-Private Partnership (PPP) arrangements being particularly emphasised. On the other side, there is increasing recognition that the PPP approach cannot be applied *carte blanche* and a number of required projects would be better delivered by normal, well-tried methods. Nevertheless, the Government must not forget that short-cut financing solutions do not build a nation; its neighbours continue to prioritise and invest in infrastructure assets and Indonesia cannot afford to slip further behind, especially since Indonesia's transport logistical costs are the biggest in Asia.

Over the past few years the government has introduced some special organisations or arrangements to ease the facilitation of specific infrastructure projects. These are; the Indonesia Infrastructure Fund (IIF), (which also incorporates funding from the multilateral and some bilateral sources along with government inputs) which has been involved in large power projects, the Sarana Multi Infrastruktur (SMI) which concentrates on infrastructure financing in Indonesia, and the relatively new Indonesia Infrastructure Guarantee Fund (IIGF), which has been supporting the development of some main water projects and which should be awarded in a few months' time. Earlier, a Revolving Fund was set up to ease the acquisition of land for toll road concessions and this has been used for some ongoing developments. The new Land Acquisition law, once at implementable stage, should see the gradual withdrawal of the need for this support.

Arguably the most important step that the government has taken has been the unveiling in mid-2011 of its 6-corridor economic development plan, MP3EI, which has divided the archipelago into 6 main self-contained areas for economic expansion. Within the detailed plan 22 economic development targets have been highlighted, such as education with particular attention to science and technology, agriculture, tourism and very importantly infrastructure, without which many of the other goals could not be achieved. The plan recognises that Indonesia cannot optimise its potential without uplifting the economic development of the regions outside Java. It will also heavily rely on the political leadership of the regions to facilitate delivery. It is recommended that potential European investment interest take note of this and the opportunities that could be expected to emerge during implementation of the plan.

### Priority Recommendations

- Recognising that there will be very considerable shortfall required budget for infrastructure in the coming year, immediately take steps to address the distortion to the economy such as corruption and start preparing to allocate 5% of GDP per annum for subsequent years and continue this for the 10 years thereafter. In addition, ensure that the funds are spent optimally in a timely manner and properly on physical infrastructure and not on peripheral consulting, planning, monitoring and supervising services;
- Proceed with the implementation of the land acquisition bill as promptly as possible and ensure that execution brings about the necessary legal and physical power to execute compulsory purchase without delay;
- Empower all government departments to complete all outstanding implementing regulations in all sectors (no exceptions) to allow a comprehensive investment in infrastructure as a whole;
- Strongly support the implementation of the 2011 6-Corridor Economic Development Plan (MP3EI), and ensure that the local governments in each corridor play their role in the realisation of the Plan's objectives.
- In keeping with the MP3EI continue to actively pursue the programme for PPP projects, but without prejudicing other forms of private and unsolicited investment that are often more relevant to commercial enterprise.

### Power Generation (Electricity)

#### PLN crash programmes

The first 10,000MW *crash* programme set out in 2006 and primarily based on coal-fired power has been far from a success story. Originally the whole 10,000MW was scheduled to be in commercial operation by the end of 2009 – in fact, by the end of 2009 only 600MW of the crash programme was in operation and further additions have been coming forward slowly. Projections are now showing that achieving completion of the first programme will continue to take some more time. The proposed implementation to deliver the programme was heavily weighted towards Chinese inputs, but this approach was lost along the way and was an indictment of putting faith in one source only – almost exclusively these projects were originally being let on an Engineering, Procurement and Construction (EPC) basis to Chinese contractors with no experience in Indonesia, and whose only interest appeared to be a short-term aim of supplying Chinese-made equipment. Early results were disappointing which led to a brake on continuing down this path.

Notwithstanding the failure of the first crash programme, there were a couple of bright spots early in 2010, when both the Paiton Expansion (815MW supercritical) and Cirebon (660MW supercritical) projects closed financing. These projects are both Independent Power Producer (IPP) projects, and both began construction significantly before the financial close, with project sponsors in each case taking the construction financing risk during the pre-financial close period. Both projects are now in operation.

Far from being discouraged by the dismal story of the first crash programme, PLN announced the second 10,000MW crash programme, with several differences that may be viewed as improvements from first time round. Although most projects continue to be PLN-owned, there is a significant portion being designated as IPP-owned. There is also to be a greater proportion of power to come from renewable energy sources, mostly in the form of geothermal generation, with less than half of the new capacity to be coal-fired.

In 2011, PLN undertook pre-qualification exercises for a number of coal-fired IPP plants falling under the second 10,000 MW crash programme, in Kalimantan, Sumatra and Java, and there was significant interest from international candidates.

Under the aegis of the current Bappenas' PPP programme, three power projects, for which pre-feasibility studies have been carried out, have been designated as priority. These are a 460MW hydro in West Sulawesi (est. cost US\$1,335m), a 2x400mW coal-fired plant in Jambi (est. cost US\$1.040m) and 2x600MW mine mouth-sourced coal fired plant in South Sumatra (est. cost US\$1,560m).

### Renewable energy

Renewable energy projects have also made some progress in 2011, although not much additional has happened in the past year. GOI has been progressively liberalising the energy / renewable energy sectors. For example, GOI now allows independent power producers (IPP) to generate their own electricity and sell back to the Indonesian Power Utility (PLN) while foreign developers can invest in RE projects less than 10 MW. Additionally, the Ministry of Finance and the Ministry of Energy and Natural Resources have implemented numerous incentives and feed-in tariffs to stimulate RE development. These policy adjustments have significantly opened up the RE market to developers that can come up with the capital and expertise to build projects.

Geothermal tenders for several concession areas in Java, Sumatra, Sulawesi and Maluku were completed and the results were significantly better than the earlier tenders, which were largely granted to state-owned enterprises with little experience and even less available capital. The Government has also firmed up the regulatory structure and set a nation-wide cap on tariffs at 9.7 US cents/kWh.

However, the weak link in the geothermal tendering process (in addition to the land acquisition issue, for which progress is now being made) and government support, as well as the expected development of power stations is that intentionally or not, the Government did not involve PLN in the tendering process. The result is that although the lowest responsible bidder may have tendered a tariff of 8.5 US cents/kWh, PLN has no obligation to pay such a price and to date PLN has indicated that it has no legal authority to accept such a tariff. The result is that the two big projects in Sumatra are still awaiting their PPA's to allow progress to continue.

While the Government is in the process of issuing a regulation that will either require or allow PLN to accept such a tariff, the issue remaining is whether PLN will agree to any tariff before the developer has undertaken drilling activities to justify a fuel "price" for its steam, akin to what a coal project

would charge. Many developers are unwilling to undertake the significant costs of drilling until they know that PLN will indeed purchase their power at the feed-in tariff rate. This is now being addressed by government, although not gazetted at the time of writing, with tariffs being linked to geographical location and ease of project development.

A number of privately driven solar power projects have been successfully undertaken in East Indonesia, which has a climate suitable for solar solutions. Further future developments will be aided by the lowering price for solar panels, and the need by the government to provide a viable Grid Feed-in Tariff, an issue which is under consideration and is expected to be effective from next year, although past procurement practices have to be resolved. This should also encourage the private sector to take the largely stalled 100 islands project more seriously and other planned projects that are earmarked to follow.

A wind farm project is to be developed on the South Java coast at Samas. However, overall the general lack of wind in most places indicates that wind-generated power will have little more than a peripheral impact on Indonesia's power needs, although a number of small to medium sized projects in identified wind pockets can be expected to proceed.

PLN and the Government have also indicated support for small-scale hydro projects, although these remain stalled on the starting grid given the lack of a realistic land acquisition law (now being addressed) and low tariffs. The Government has indicated that new land acquisition laws should give greater certainty to land acquisition costs, which can constitute a significant portion of the cost of a hydro project. Micro-hydro projects (less than 1MW) are proceeding well, but are largely the domain of cooperatives and local governments.

#### Future challenges

PLN payment default – there is still no specific government guarantee for the IPP projects falling under the second programme; the documents simply refer to PERPRES 4/2010 under which the Government “ensures the business viability of PLN in accordance with stipulations in laws and regulations.” According to Indonesian counsel, this would not constitute a guarantee under Indonesian law and therefore would not satisfy international lenders. PPP projects, such as the Central Java Project are intended to be covered under the new Indonesian Investment Guarantee Fund (IIGF); however, the budget allocation to the IIGF would seem to be insufficient to provide comfort to all power projects at this time, so the jury is still out on its general acceptability to international lenders and different types of power project.

Land acquisition – The long-awaited new law for Land Acquisition (Law 2/2012) appeared in December 2011, was ratified in January 2012, and the Presidential Regulation towards implementation signed in August 2012. This is a welcome step forward; it is expected that the first testing of the terms and conditions to prevent indefinite delay in land acquisition for projects will surface in 2013. Although Bappenas and the Government are promoting the concept of Public Private Partnerships (PPP) for many infrastructure projects, this often remains more to form than substance. Land provision needs to be the prerogative of the Public sector and should become an essential part of their commitment to the PPP format. The government must also quickly recognise

whether an economically important project would provide a sufficient return to the Private sector under the usual terms of engagement for a PPP project or whether the project needs to be approached with some other workable, say hybrid, approach.

Forestry permits – a number of hydro projects are stalled, especially in upper reaches of rivers, where the land is under the purview of the Forestry Ministry, and permits have not been forthcoming.

### Recommendations

- Provide a transparent Government guarantee / support for PLN in the event of payment default;
- Using progress from the Law and Regulations on Land Acquisition, resolve remaining land acquisition issues and use the law for timely execution of all future compulsory purchases;
- Resolve the tariff issue with PLN for geothermal power project developments, and ownership and tariff and forestry permit issues for other renewable energy projects to provide fair reward for the interested investors in this area;

### Airports & Airlines

Air travel in Indonesia continues to expand at double digit growth, with the domestic market now causing a severe strain on the capacity of the airport infrastructure. This has been recognised in the recently presented government budget for 2013, where the plan focuses on the building of 15 new airports and the upgrading of many others, highlighted in a government commitment for 2013 of US\$20 billion for the transport sector as a whole, although this is recognised as still being below requirement.

The Airports Council International (ACI) ranked Jakarta's Soekarno-Hatta Airport as the world 12<sup>th</sup> busiest airport, with annual passenger traffic reaching 52 million. It has now surpassed Singapore in passenger traffic carried and this has prompted the construction of a new terminal and further capacity to the road network servicing the airport. The official stated that the expansion and renovation of Soekarno-Hatta international airport would be made in light of a 4.1 – 5.7 percent annual increase in the number of flights in the Asia-Pacific region over next 20 years.

Airlines – in 2009 the state carrier Garuda Indonesia unveiled its ambitious expansion programme known as “The Quantum Leap”. There has been a continuing witness to the airline's impressive achievements following from that programme. In June 2010, daily flights to Amsterdam were resumed and more recently, in 2011, its daily operations from Jakarta to Sydney have also resumed following the aircraft additions to its fleet. The airline survey organisation has continued to award Garuda with performance accolades.

In 2011 Garuda announced that it would become part of the global airline alliance SKYTEAM, joining both KLM and Air France. As part of the preparation for the inclusion of Garuda Indonesia, the airline established Terminal 2E at Soekarno-Hatta in Jakarta as a dedicated base for SKYTEAM airlines with facilities based on the high quality service standards that SKYTEAM demands.

Cargo – in 2010 the Indonesian government introduced a new regulation related to security on air cargo transportation, the so-called “Regulated Agent” policy. In essence, cargo handled by a cargo company certified as a Regulated Agent is deemed to be “safe & secure” and can be transported by any carrier without a further security check. While the initiative has been welcomed to enhance aviation security, the number of licensed Regulated Agents is limited, which may still cause delays in cargo transportation. It is considered that the introduction of the regulations should be done step-by-step with great care and thoughtful planning. The limited manpower availability of the officials within the Directorate General of Civil Aviation to certify cargo handling companies should also be taken into account.

PPP Airports – In the Infrastructure Asia 2012 Conference, held in Jakarta from 28-30<sup>th</sup> August 2012, the Government indicated a number of potential airport projects to be offered to the private sector on a PPP basis, although key expansions at the major airports would be assigned to SOE’s. The projects offered to the private sector concern the development of green-field airports of medium and large size, while the remaining projects are small-scale airports in remote areas which will be undertaken through the Directorate General of Civil Aviation.

The concern for the projects being put forward for PPP relates to the viability of the financial return for attracting private sector interest as well as to the limitations of foreign shareholdings which enhance risks and exposure.

#### Future challenges

Annual passenger traffic development continues to show double digit growth. It is anticipated that total passenger movement at Soekarno-Hatta Jakarta Airport will reach 60 million passengers a year within 2 years, which is well beyond the design capacity of the existing facilities that already stands at 234%... The traffic at Ngurah Rai Airport in Denpasar, Bali and Juanda Airport in Surabaya have also surpassed design capacity, which is now showing traffic levels of 12 million passengers per annum. Thus, the immediate challenge is to ensure that the current expansion of their facilities will be sufficient to meet short to medium term needs especially for increasing inter-island traffic demand.

Garuda has made significant steps, but it is a commercial fact that the world’s successful airlines have been supported by; a high quality airport facility at their home-base, through the managed expansion of airport capacity and the ability to grow the airline network and its service distribution. The future position and sustainability of Garuda Indonesia in the global alliance will, thus, depend to a large extent on the quality of its home-base airports meeting the standard of services of the SKYTEAM group.

The government has also announced through the media, invitations for foreign airport operators to participate in the improvement of the main international airports in the country in order to improve the quality and capacity of airport services. This might be attractive for major players in the airport industry, but to date there has been no clear indication from the Government or the state-owned airport operators (Angkasa Pura I & II) when such projects might be tabled.

In Presidential Regulations PP 67/2005 and PP 13/2010, a provision was provided for investors presenting unsolicited proposals. The regulations make provision on how the Government will compensate the investors if their unsolicited proposal is taken over by the Government as a tender document / process. In recent media coverage, the Government has refused to recognise PT Rail-Link as the initiator of the project for the light-rail connection between the city of Jakarta and Soekarno-Hatta Airport; in fact their proposed route has been rejected and one largely using existing rights-of-way is to be used. Progress is expected later in 2012.

As a consequence of the changes, there will be no compensation for the unsolicited works of PT Rail-Link in preparing the technical specification for their particular routing. Industry is observing this particular case very closely indeed, as it might set a difficult precedent for future unsolicited bids.

### Recommendations

- Prioritise the development of the home base airports for Garuda Indonesia, specifically Jakarta, Surabaya and Bali, in terms of airport capacity, quality facilities and expanded services to allow future airline growth and sustainability;
- The Government should ensure that the introduction of the “regulated agent” policy does not create delays or “high cost” processes in the cargo industry in Indonesia through a lack of certified companies;
- The Government should be encouraged to produce a clear PPP plan with realistic terms of engagement for projects, to be seen as a showcase for Indonesian Airport PPP projects in order to maintain confidence in the sector;
- The Government needs to give a clear indication whether it is still committed to providing compensation to private sector companies that have submitted an unsolicited PPP proposal and need to protect their Intellectual Property Rights when such documents are being used for a public tender under Government procurement guidelines.

### Seaports & Shipping

Some 95% of all domestic and international trade is carried by sea transportation, so capacity and connectivity development of the country’s seaports is crucial to growth and is a Presidential priority. The port authorities have been aware of the issues and recognise that; today the ports are not serving the needs of the people or the economy, users do not expect to pay more for port services than they do in neighbouring countries, and that everyone in the sector needs to accept that they are all part of the problem and need to change. This was stated by *R.J. Lino, President Director, Pelabuhan Indonesia II*, at the EIBD Conference, held in Jakarta in 2010.

The currently applying shipping law (17/2008) was introduced in mid-2008 with the Government expecting it to be gradually effected over a subsequent three-year period. Industry commented however that certain directives would take considerably longer to be implemented, e.g. with respect to cabotage for example (see below), in an attempt to increase the domestic shipping involvement for in-country cargos. In general, the law is viewed as a step in the right direction to encourage



investment in the sector. Nevertheless, the main players in the shipping industry are working on finding alternative solutions for future operations.

### Future challenges

International connectivity remains poor with high domestic transport costs and poor logistics as well as less than optimum operational efficiency hampering Indonesia's export competitiveness and raising import costs. The private sector is especially critical of border management, which includes customs procedures and the restriction on the number of functional gateways (including airports), which also raise the cost of external trade. To make matters worse, Tanjung Priok (the national gateway in Jakarta) has effectively reached full capacity and already handles 70% of Indonesia's general cargo/container export and import traffic. In order to cater for the fast expanding container traffic Pelindo II has been appointed by government to oversee the construction of a major extension to the container handling facilities with a first phase of berths to handle 3 million TEU's, with this to be continued steadily in subsequent phases to handle a further 5-6 million TEU's. It is expected that the first berth will in operation by late 2014 / early 2015. In addition to the additional container handling, two berths are to be laid out as a significant tank farm for petroleum products. The location of the new facility is directly offshore from the existing port, and separate access to this is to be provided by a dedicated toll road coming off the east end of the new terminal.

In parallel with the expansion at Tj Priok, designated *New Priok*, a study is under way for the next major port to serve western Java at Cilamaya, along the north Java coast, east of Tj Priok. It is recognised that the current expansion and the phases to follow will only satisfy market conditions for the next 8-10 years, which sets an important time frame for the next port. It is likely that the port opportunity provided by the deep water conditions at Bojonegara, in Banten province, will again be revisited.

The financial condition of Pelindo II, and to a lesser extent the three other SOE port companies, Pelindos I, III, IV, have all been improving as, despite the global turn down in trade, Indonesia has overall been seeing steady growth in sea transport activities. Pelindo II, whose trading effectively is as large as the other three sister SOE's put together, has recently been rebadged as *Indonesia Port Corporation*, and by taking on the expansion of Sorong Port in East Indonesia, is expanding its geographical reach beyond its given jurisdictional boundaries.

Separately, several local governments perceive opportunities to establish regional ports out of the control of the Pelindos, and a few schemes are at various stages of the development cycle. This trend is likely to continue and should have value in sea trade, provided the local governments avoid directly competing with the long-established Pelindos.

Coal and other commodities— coal movement has seen tremendous growth in barging and shipping traffic. The demand forecast of 400 million tonnes of coal movement in 2010 is expected to reach 1.2 billion tonnes by 2030. This massive increase will seriously challenge the public and private port sector and the related traffic that it will bring as a result. There is currently no coordinated plan for the coal/port sector interface, but such traffic will need to be addressed immediately to avoid hampering export growth. These conditions are expected to hold despite the temporary turn down

in coal orders, especially in East Asian countries as a result of the current world economic crisis. Current forecast is for orders to pick up in 2013.

Expansion in production output in and shipping out of other commodities, e. g. CPO, are also expected to see steady growth in the future.

Cabotage – the oil and gas industry has been extremely concerned with certain provisions of Law No. 17/2008 on Shipping, specifically related to the cabotage principle. Some accommodation was found to meet an imposed deadline of May 2011. In order to support oil and gas operations offshore, highly specialised vessels are needed for exploration and production activities and currently only a limited number of Indonesian-flagged vessels are able to meet such specific requirements. The Indonesian Petroleum Association (IPA) has been extremely proactive on this matter since the very inception of Law 17/2008 and, together with other bodies, has been successful in raising their concerns at a Ministerial level. The IPA has been working together with the Government to find an acceptable amendment to Law 17/2008. As a result, an exception to the rules allows several types of foreign vessels used in oil and gas drilling and production activities to operate until 2014, as local companies still cannot provide the technologically advanced facilities and personnel needed for sophisticated extraction activities. The exemption include foreign vessels that perform surveys, drilling, offshore construction, offshore activities, dredging work, salvage jobs and underwater activities for the Oil and Gas sector.

#### Recommendations

- Enormous effort is required in the renewal and maintenance of port infrastructure to handle the right size of ships, ensure that ships do not wait for berths, increase productivity levels to match international best practices and provide systems and services that give users confidence;
- Under the cabotage issue, make the Indonesian flag an open register in order to attract rather than dictate to asset owners. This needs to be coupled with incentives for more training and education for seamen, officers and engineers, as well as technical positions in the offshore Oil and Gas sector;
- Consider establishing a port sector team to manage the future growth of coal movements;
- Continue supporting the capacity build out at Tanjung Priok and commit to upgrading and expanding new port facilities as identified across the archipelago.
- Continue to improve the efficiency of port operations in the regions and close the gap in output compared with that of other regional ports;
- Making trade between economies easier by having efficient trading across borders, which include; a small numbers of documents needed for doing export – import, short time to do export – import and competitive costs in doing export – import;

Pursue the Pendulum Nusantara programme which creates a single sea corridor for moving goods within Indonesia to reduce logistics costs by 20-30 percent from current conditions.

## Railways

Railway has been a very important mode of transport because it is a mass transport which is affordable for most Indonesian people. Rails can also support the freight movement because of its increased land transport capacity. Despite its importance, the development of this transport is lagging behind other land transport, especially highways and toll roads.

The railways are still under performing. The railways share of passenger transportation has remained stagnant through several years standing at 7 percent of total passenger transport, and the share of cargo transportation is still under 1 percent.

As of today, the government has not yet considered railways as the most economic transport system for freight transport or for investment because of several factors, even though studies have shown railways to be cheaper than roads (Margner, H, 2012):

- Transportation on rail track is still lacking in logistics (loading and unloading) and weakened by unmaintained tracks;
- Lack of coordination between the different transport systems;
- No coordinated schedules between the different systems;
- No logistic management. Specifically in the exchange between systems, like truck to railway, train to ship, ship to truck;
- No political will which is showed by the low budget for the development of railways in comparison to roads;
- There has been further continuous planning and early development activities for freight railways since 2011, but there has been little tangible progress to record in commuter line development. One exception is a steady programme to double-track key routes in Java.

Coal transportation has been driving the freight rail development programmes, particularly in both Kalimantan and Sumatra. However, progress in these across the board has been stymied by unfavourable cost-benefit appraisals towards private sector investment, even though projects are being addressed as PPPs.

In a recent presentation of the 2013 budget, the President indicated the inclusion of funds for the development of 380 km of new rail line.

### Freight lines

The key initiative of 2010 was that from Minerals, Energy & Commodities (MEC). They planned to build the first freight rail solution for East Kalimantan, from their mine concession at Muara Wahau in Kutai Timur, some 130km from the coast, north of Sangatta. The challenges for such a project are both commercial (coal quality & off-take) and technical (land acquisition & geotechnical stability). Despite MEC's endeavours, effort is still mired in unresolved issues and, with the current downturn in coal price the returns on investment will have been affected.

The MEC plan is not without its opponents, e.g. from other large mining companies who are trying to resolve similar access issues. The main companies in this have been Churchill Mining (overland conveyor) although this company's plans are now embroiled in a legal dispute with the government, Ithaca Resources (alternative railway) and PT Bhakti Energi Persada (haulage road). Nevertheless, the logic of building multiple linear infrastructure corridors when only one is required has to be questioned. Bringing any of these projects to fruition is costly and yet, to date, coal concession owners have been driving this process separately even though the individual project economics are not robust enough to support a single user corridor of some 150km in length to the coast, let alone the need for a major new port loading facility as well.

This predicament is not unique to East Kalimantan. Central Kalimantan has its own plan for an initial freight railway solution from Puruk Cahu to Bangkuang to circumnavigate the unseasonal upper reaches of the Barito River with ultimately an extension to the coast with branches all over the province. This project started life as a private sector initiative, but was then converted into a PPP project. As reported previously, without hands-on commercial practitioners the signs are already there that the impetus may have been lost, since this project has been in the pipeline for many years. The lack of clarity in the initial tender process caused confusion and lacked direction, resulting in a further 12 months being lost in the procurement dialogue. The Russian government is also seriously examining a further rail project for coal in South and Central Kalimantan.

Southern Sumatra presents another example with billions of tonnes of brown coal deposits that until recently were only worked by the State Coal Company (Bukit Asam or PTBA). Historically, they have been hampered by geographical constraints with the topographical challenge of the Barisan Mountain range to the west and 200-250km of flat-lying wetlands to the north and east. Present production barely reaches 12 million tonnes per annum, shipped mostly down a narrow gauge railway built originally by the Dutch over a century ago and nursed ever since by the State Railway Company (PT Kereta Api). A new modern standard gauge line of 278 km is planned to be built from Bukit Asam to a new special purpose port on the south Lampung coast by Indonesian conglomerate, Rajawali Corpora, with financial assistance and technical input offered from Chinese sources. Other groups have also shown interest in building rail links in Southern Sumatra, with some off-take from Bukit Asam and other mines but taking either easterly or north-westerly routes. While outlined agreements have been drawn up and the outline work carried out, no real progress can be reported at this stage.

Sumatra is a major source of coal within the Indonesian archipelago but exploitation has been hindered by the distance of suitable port transfer outlets. Apart from the projects discussed above, mining from other provinces in Sumatra are now receiving attention and, in some cases, may involve rail solutions.

Trans-Java double-track railways on the east and north coast is now being in construction on many parts. This railways will be used both for passenger and cargo transport. The physical process is now reaching 50 percent completion. This track is intended to move the freight movement from the road. It is expected that the capacity of the railway will increase from 64 rails per day to 200 rails per day with the freight up to 15000 TEU from the current capacity of 5000 TEU's

Other rail developments include tracks that connect to both dry and sea ports. Developments of rails to seaports include the areas of; Tanjung Mas (Semarang), Tanjung Perak (Surabaya), Belawan (Medan) and Teluk Bayur (Padang). Rails to dry ports include the areas of; Jababeka/Cikarang, Cirebon and Pelabuhan Panjang (Lampung). Other developments include the expansion of the container terminal at Gedebage dry port and a direct rail link to Tanjung Priok and Cimalaya.

### Commuter lines

As stated above, apart from continuing double-tracking work on railway lines in Java, also known as called the Trans-Java railways, no other serious development has taken place over the past year. The sector remains as one that requires very high levels of investment for upgrading some of the existing rail tracks, as well as for the building of new lines. This should be carried out with the aim to provide greater commuter access within large urban communities such as greater Jakarta.

Some early work has been undertaken to reinstate the line between Lhoksemauwe and Banda Aceh in northern Sumatra as a first step towards linking up to Medan. This is a part of a Mega project that will link Banda Aceh with Lampung, however, progress has stalled and the service on the link that has been constructed is extremely limited.

Plans have continued to progress, albeit slowly, for the MRT for the city of Jakarta, though the public perception is one of no action because there is no visible progress. There is an expectation that the project will show some activity once the current gubernatorial election for the city of Jakarta has concluded. A decision on monorail construction also awaits this political event.

A Japanese plan to provide a high speed rail route between Jakarta and Bandung has been tabled. A high speed rail passenger route between Jakarta and Surabaya, first raised in the 1990s, also receives some spasmodic attention. The latter may also benefit the almost non-existent freight market in Java.

### Recommendations

- Ensure private enterprises are encouraged to continue their interest in the development of freight railways for coal in Kalimantan and Sumatra. The Government should consider forming a task force to ensure these projects progress in a timely manner with a form of PPP that is workable and provides the private sector sufficient comfort to invest; this may require separating out the land acquisition, which can shortly be assisted with implementation of the Land Acquisition Law, from track and operations, which themselves could be treated separately.
- Accelerate commuter rail infrastructure programmes, especially those involving various requirements for Jakarta suburban rail, the MRT, and bring about the completion of the stalled Jakarta monorail project and other links that are being considered for the city of Jakarta and other main cities in the country.
- Support the development rails in the island of Java to be a substitute to the existing connecting roads, and move all the cargo to rails to hinder the congestion on roads. This needs to be

supported by sufficient logistics management specifically in the exchange between systems, like truck to railway, train to ship, ship to truck, etc

### National & Toll Roads

One of the highest priorities in the infrastructure programme in the years ahead is the completion of the Trans Java Toll Road network and key toll roads around and connecting off-Java large conurbations. On Java itself construction is either underway or expected soon for a number of key links in the network where concessions are in place. The passing of the Land Acquisition Law in December 2011 is of particular significance towards breaking down what has been a major stumbling block on the roll out of the toll road programme. The necessary next step through presentation of implementing regulations was taken in August 2012 through Keppres and it is anticipated that the new law will be able to be tested from 2013 onwards, which should greatly facilitate the necessary build out of new toll road sections and the road network in general. The 2013 budget has highlighted the construction of some 3,800 km of new road towards the very extensive programme needed right across the country in order to allow regional economies to prosper.

Of the 25 priority projects listed in the most recent Bappenas PPP book, 13 are toll road projects, 7 on Java and 4 on Sumatra and 1 for each Kalimantan and Sulawesi. It is recognised that most of these projects will need a considerable level of public sector support, especially since the economic necessity for construction is sound, the poor financial rate of return on many projects would make it extremely difficult to bring in any private sector response, if even only from the inability to attract debt financing. These projects need further attention, such as separation of the different elements of a given project to allow the private input to show an acceptable return on investment. It is understood that such an approach is being considered in one case with land acquisition being separated from each of the construction and operational phases.

The growth in sales of motor vehicles and motorcycles continues unabated and each year that expansion causes increasing stress on the existing road network, particularly in urban and peri-urban areas. This has now reached crisis point in the greater Jakarta area, now the second largest conurbation in the world. The local government in Jakarta has started several projects aimed at improving the traffic situation in the nation's capital. Unfortunately, poor planning, lack of financing and confusing implementation has created a situation that is hurting confidence among both local and foreign businesses. The bus-way, whilst designed to aid passenger movement in/out of the city has not really helped by robbing the city of 25% of its available road space while not being operated at efficient levels. The lack of progress on other connecting modes such as the MRT and monorail, which are desperately needed, has not helped towards alleviating the situation.

The political will of the government with regards to public transport is also being questioned. None of the incentives given to improve public transport in an aim to attract passenger movement from private vehicles have worked. Nevertheless, the central ignorance from the government in the important of commuter rails for Greater Jakarta has led to increased congestion, which is now in the level of obesity.

### Recent developments

There have been some small advances on the toll road programme in terms of section completions and the securing of rights-of-way and financing for other sections, although overall the programme has moved slowly and progress remains disappointing. However, the Government has completed toll road links that would connect to Jakarta ports to improve access to the hinterland, although an additional capacity will be required in a short time especially with the large expansion programme for container handling facilities about to enter the construction phase. Within the next 2 years the 7 km missing link of the Jakarta Outer Ring Road, the section W2, is due to be completed. This will certainly improve traffic flow on the west side of the city, and progress is due on some key sections of the Trans Java Toll Road, e.g. on the long Cikampek to Palemanan link.

Within the city of Jakarta, some new effort is being made to pursue a proposed plan for six defined inner-city toll roads, using as far as possible, already existing rights-of-way. The city has presented the plan as a whole and with a price tag in excess of US\$4 billion, this has made it difficult for many companies investing in toll roads to come forward with serious development plans. The plan is very much in the hands of the city government and currently seems to be without private sector interest.

### Future challenges

While most focus continues on the development of the toll road programme, there is an enormous backlog of national and sub-national road development requiring serious attention, estimated to be in the order of 500,000 kilometres. Pushing ahead with this programme is essential if the untapped growth potential of much of the country is to be realised. While building national road links can be supported by aid financing, there is multi-national agency support for areas of east and west Indonesia. Most of the sub-national road development and routine maintenance is normally financed through the country budget. Sub-national roads account for 90% of the total road network so they cannot be ignored. There is recognition that government investment has to be made on both national and sub-national roads and the recently unveiled budget for 2013 shows the intention of adding a further 4,431 km to the network financed from government sources.

The cost of land continues to escalate and with the significant rises in world oil prices during 2008, there has been an inevitable impact on the cost of construction materials and thus construction prices, adversely affecting forecast returns on investment. Nevertheless, completion of the Trans-Java toll road remains a Government priority and there has been early implementation of a revolving fund to facilitate the acquisition of land, a key bottleneck in toll road development. Funding for this activity is expected to increase in 2013, although it remains inadequate to address the enormity of the challenge ahead. However, the progress on a better legal framework for Land Acquisition, as reported above, is expected to have a significant impact on speeding up the build out of the Toll Road programme and infrastructure generally.

### Recommendations

- Resolve outstanding issues affecting delays in completing the Trans-Java Toll Road links;

- Create and implement a long-term plan for road development and update existing integrated transportation plans for greater Jakarta;
- Reactivate the extension of road networks in provinces/districts to improve access to markets, and deal with the contractual and capacity issues that cause significant continuing under-performance.
- Activate the use of the new Land Acquisition Law when current steps towards setting up the implementing regulations are complete.

## Water & Sanitation

Overall, Indonesia is well-blessed with water resources although their location does not always match the demand or with environmental needs. Of the 3,000 m<sup>3</sup> per year of rainfall, less than one percent is harnessed for use, mostly for rice irrigation and also to meet domestic, municipal or industrial (DMI) demands where surface water is collected. There are 141 river basins across the archipelago, but more than 70% are in stress mode because of the lack of balance between extraction and replenishment, especially in drier seasons.

Water supply to the population in general, where this is formally handled, is provided very largely through local government owned water utilities, PDAM's. There are more than 400 of these, but unfortunately only about one-third of these are functioning reasonably well with a further third in need of an upgrade. The balance of companies are in very poor condition both technically, administratively and operationally. While nationally the Millennium Development Goals (MDG's) may be deemed close to the 2015 target, there remain significant anomalies across the provinces. There are a handful of private sector concessions, most notably the two 25 year ones for the city of Jakarta which have been in operation since 1998, but with greater Jakarta now gaining the mantle of the second largest conurbation worldwide. More attention will have to be paid to the future requirements as the city grows and adds wealth. Systems of storage, particularly for the northern section of the city, and recycling will have to be taken more seriously from now on.

With regard to sanitation, the country languishes far behind the MDG's and much has to be done to improve city conditions with wastewater as well as solid waste treatment facilities. Much also has to be done for rural communities, although solutions and systems could be simpler and tailor-made to a given situation. Help is being provided on a project by project basis through USAID, the Dutch government and privately driven initiatives.

Despite the notable exception of ongoing multilateral or bilateral aid projects, insufficient progress has been made towards investment in this sector, while the projected investment requirement of USD20 billion by 2015 remains largely unrealised. Of this target, approximately 50% has been expected to come from the state budget, 18% from multilateral or bilateral aid programmes, and the balance through private sector financing. The Government is attempting to promote PPP programmes in this and other infrastructure sectors, but work is still required by the bureaucracy to present attractive implementation regulations or formats for execution. Following regionalisation in 1999, unlike other areas of infrastructure, the responsibility for the management and development of the water sector was divested to the regions, except for cross-boundary jurisdictions that



sometimes affect sources of supply for a given project. Regional developments vary from very good to none, and apart from the aid-based projects, referred to above, progress much depends on the quality and vision of the local government head and his or her relationship with local government politics and legislature. But very many relatively low investment projects in this field remain to be done.

### Recent developments and Future Challenges

Three major projects are receiving attention from the Government;

- The Umbilan Spring major water supply project in East Java, the feasibility of which was first studied more than 20 years ago. While there has been little progress to record over the past year, there is some anticipation that an award will be made before the end of 2012
- The Umbilan project and another water supply improvement project for Lampung are being supported by the Indonesia Infrastructure Guarantee Fund (IIGF), which is hoping that the Lampung project may also show similar progress before the end of 2012.
- A new initiative to bring Jakarta's main water supply from the Jatilahur reservoir, some 70km to the east, by pipeline to avoid the considerable contamination that occurs through the open-channel system currently in use, is also expected to proceed along with further water supply projects based in the Karian and Banten province as well as Pondok Gede in the east of Jakarta, this latter also to provide hydropower.

All these projects are recognised as appropriate to PPP arrangements, depending on sources of funding and local government appetite and understanding. These and a few other water supply projects have been listed as priority projects by Bappenas, along with three solid waste projects, as well as a long list of projects itemised in the potential category.

The longer term plan for the city of Jakarta is a major seawall defence structure to be installed to protect the city from flooding, the north of the city having sunk significantly largely as a result of unrestrained groundwater extraction. The plan also shows the establishment of flood control and freshwater lakes behind the seawall, which can be used as a basis of water supply for development of the northern part of the city. The necessary implementation of the dyke, to be located at the 50m depth mark, well offshore, will have a profound influence over the development of the north part of the city.

### Recommendations

- Accelerate the programme for water conservation and set in motion the macro-changes required for the changing demand on Java, e g from rapid urbanisation;
- Address the necessary investment needed in irrigation for upgrading neglected paddy infrastructure in Java and required increased agricultural production outside of Java;
- The skills base in the water sector is weak and while some programmes in training and development are taking place, many more are needed;

- Support government initiatives, through special financing and support mechanisms, to upgrade the quality of regional water companies and consider various possible local government capacity improvements, which should include opportunities to upgrade the skills base, as referred to above.