KDN NO: PP9914/10/2012(030812)
PF 92691

PRE-SALE REPORT

CREDIT ANALYSIS

Project Finance
Infrastructure & Utilities - Power

MALAYSIAN RATING CORPORATION BERHAD
(364803-V)

JIMAH EAST POWER SDN BHD

Initial Rating - 2014

Date	Rating Action	Rating	Outlook
October 2014	Assigned	AA-*IS*	Stable

Issue	Sukuk Murabahah Programme of up to RM8.4 billion
Tenure	23 years
Issue Date	To be determined
Lead Arranger	AmInvestment Bank Berhad
Facility Agent	AmInvestment Bank Berhad
Trustee	AmTrustee Berhad

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Methodology	Independent Power Producer Ratings

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to MARC as of October 7, 2014. Investors should be aware that certain issues concerning this transaction have yet to be finalised. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, MARC will assign a final rating to this transaction. The final rating may differ from the preliminary rating.

Publication Date: October 10, 2014

JIMAH EAST POWER SDN BHD

Major Rating Factors

Strengths

- Predictable cash flow stream provided by availability-based capacity payments;
- Adequately structured project agreements;

Challenges/Risks

- Potential construction delays and cost overruns;
- Managing technology risk and owner-operated model;
- Weak cash flow protection.

Rationale MARC has assigned a preliminary rating of **AA-*IS*** to Jimah East Power Sdn Bhd's (JEP) proposed Sukuk Murabahah Programme of up to RM8.4 billion. The outlook on the rating is **stable**. JEP is a 70:30 joint venture between Pelita Merpati Sdn Bhd (PMSB) and 3B Power Sdn Bhd (3B Power) that was set up to finance and develop a greenfield 2x1,000MW ultra-supercritical coal-fired power plant (Project 3B or project power plant) in Negeri Sembilan. PMSB is an indirect 100% subsidiary of government-owned 1Malaysia Development Berhad (1MDB) while 3B Power is 100% owned by Mitsui & Co., Ltd. (Mitsui), one of the largest trading house in Japan. PMSB will be made a direct wholly-owned subsidiary of 1MDB Energy Group Sdn Bhd (1MDB Energy), which in turn is an indirect wholly-owned subsidiary of 1MDB and one of the project sponsors under the proposed Sukuk Murabahah Programme, upon the conclusion of a corporate restructuring exercise.

The proceeds from the Sukuk Murabahah will largely fund the development, design and construction of the RM11.1 billion project power plant under a 73.5:26.5 sukuk and equity financing mix. The equity of about RM2.9 billion, which is in the form of ordinary shares and redeemable preference shares, is back-ended after the drawdown of the sukuk but before the scheduled project completion date on May 15, 2019. JEP will also procure working capital facilities of up to RM350 million, which will be maintained throughout the sukuk tenure. The sukuk will begin amortising from 2020 onwards with the final repayment in 2037, six years before the end of the 25-year power purchase agreement (PPA) with offtaker Tenaga Nasional Berhad (TNB).

The assigned rating primarily reflects JEP's predictable cash flow streams provided by the PPA's availability-based capacity payments as well as the pass-through of fuel and variable expenses to TNB, on which MARC currently maintains a senior unsecured debt rating of AAA/Stable. The assigned rating also incorporates the strong commitment from the project sponsors to Project 3B, the moderate construction and operation and maintenance (O&M) risks as well as low fuel supply risk. In terms of project equity contribution totaling RM2.9 billion, 1MDB Energy will procure a standby letter of credit (SBLC) from a financial institution which carries a minimum MARC rating of AA- or its equivalent while Mitsui will provide a corporate guarantee. The rating is, however, constrained by risks associated with the power plant design and relatively new ultra-supercritical technology as well as weaker cash flow coverage from Project 3B relative to other power plant projects in the same rating band.

The engineering, procurement and construction (EPC) contract has been awarded to a consortium chiefly comprising Japan's IHI Corporation (IHI) and Toshiba Corporation (Toshiba), and South Korea's Hyundai Engineering & Construction Co. Limited and Hyundai Engineering Co. Limited. MARC notes that the fixed-price turnkey contract has adequate performance guarantees and an achievable construction schedule. While construction-related risk is mostly mitigated by the experience and credit strength of the EPC consortium's key parties, MARC observes that the track record of IHI and Toshiba in supplying boiler and steam turbine generator models in accordance with the project power plant's specifications are somewhat limited. Nonetheless, the rating agency acknowledges the assessment from the independent technical advisor, Pöyry Energy Sdn Bhd, that any technical risk can be sufficiently addressed during the detailed design stage.

The project power plant will employ an owner-operated model with selected employees transferred from the O&M team of the existing 1,400MW Jimah Power Station located next to Project 3B. MARC draws comfort that IHI and Toshiba will provide technical assistance during the initial operational phase, and planned outage services for the boilers and steam turbine generators throughout the PPA tenure to resolve any difficulties that may arise from the power plant operations. However, given that the O&M risks are not allocated to a third party, as has been the case for similar power plant projects, JEP would need to rely on its adequate resources to meet any challenges that could arise during the operational phase.

Under the base case financial projections, Project 3B is expected to generate minimum and average finance service cover ratios (FSCR) with cash balances of 1.72 times and 1.83 times respectively. Among the factors the base case scenario incorporates are a net plant capacity factor of 85%, heat rates that are within specified limits of the PPA as well as drawdowns under working capital facilities to bridge short-term funding gaps which in turn help to smoothen JEP's FSCR profile under mild stress scenarios. Based on MARC's sensitivity analysis, Project 3B's cash flows are most susceptible to construction delays, unplanned outage limit breaches and higher-than-forecast increases in fixed costs. MARC also notes that under more severe stress scenarios, JEP would need to rely on retained cash to meet finance service, and therefore the company would have to ensure prudent liquidity management to address any potential funding gaps. In this respect, MARC expects the working capital facilities to remain as reliable sources of liquidity throughout the sukuk tenure.

Providing some uplift to JEP's weaker cash flow protection metrics under stressed situations is the potential strong support from the project sponsors, 1MDB Energy and Mitsui. In addition to their significant strategic and financial interests in Project 3B, MARC expects support to be forthcoming given that Project 3B is the project sponsors' first power plant development project in Malaysia. 1MDB Energy's financial capacity to provide support will be complemented by the SBLC to be procured for its equity portion of the project. In respect of Mitsui, the rating agency maintains a positive view on the company's high credit strength.

The stable outlook reflects MARC's expectations of timely completion and commissioning of the project power plant within the allocated budget, as well as continued strong support from the project sponsors. Downward rating pressures could be triggered by project delays and/or construction cost overruns which would weigh on project cash flows.

Exhibit 1: Base case financial projections (RM million)

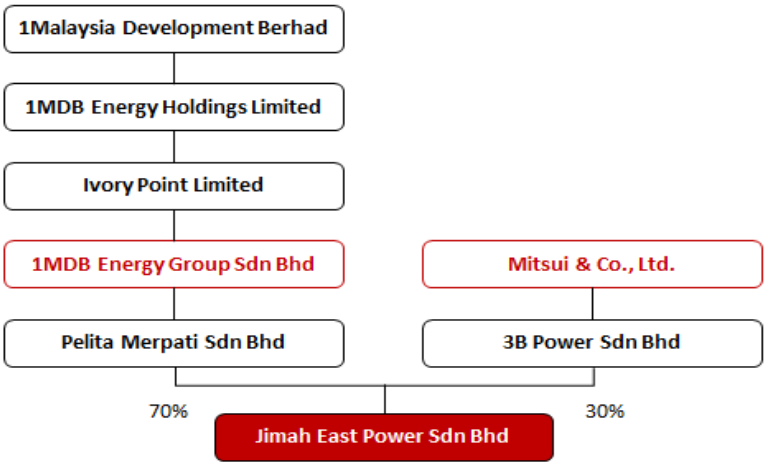
FYE March 31	2019	2020	2021	2022	2026	2030	2034	2038
Revenue	563.2	2,778.4	2,865.6	3,033.5	3,317.9	3,892.0	4,092.2	4,056.9
Operating expenses	(423.2)	(1,898.1)	(1,989.2)	(2,130.7)	(2,436.3)	(2,765.5)	(2,853.6)	(3,669.3)
EBITDA	140.0	880.3	876.4	902.7	881.6	1,126.5	1,238.6	387.6
Changes in working capital	(291.1)	(281.4)	(36.9)	(42.6)	(44.2)	(40.7)	55.7	45.7
Taxes	(0.0)	-	-	-	-	-	(230.0)	(74.8)
Cash flow from operations	(151.1)	598.9	839.5	860.1	837.4	1,085.8	1,064.4	358.5
Capital expenditure	(597.2)	(77.6)	-	-	-	-	(138.2)	-
Finance service (profit/interest/fees)	-	(336.7)	(507.4)	(488.9)	(429.4)	(336.3)	(187.3)	(13.4)
Finance service (principal)	-	-	(210.0)	(230.0)	(300.0)	(595.0)	(610.0)	(320.0)
Net repayment - working capital facilities	168.9	169.2	(308.0)	10.9	-	-	(31.3)	26.1
Net shareholder distribution	1,085.6	180.8	(56.1)	(140.4)	(101.4)	(163.9)	(90.2)	(210.5)
Ending cash balance	-	469.7	220.1	228.4	225.4	280.8	254.5	-

EBITDA – Earnings before interest, tax, depreciation and amortisation

COMPANY AND PROJECT BACKGROUND

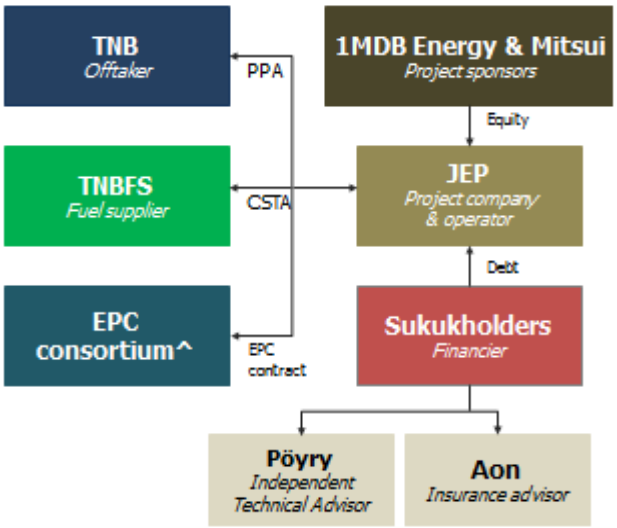
Jimah East Power Sdn Bhd (JEP) is the project company of project sponsors 1MDB Energy Group Sdn Bhd (1MDB Energy) and Mitsui & Co., Ltd. (Mitsui) which is responsible for developing and operating a new coal-fired power generation facility with a net capacity of 2,000 megawatts (MW) (Project 3B or project power plant). 1MDB Energy is currently dormant and will hold the energy assets of its ultimate parent company 1Malaysia Development Berhad (1MDB) upon completing a corporate restructuring exercise. Post-restructuring, 1MDB Energy and Mitsui will have indirect stakes of 70% and 30% respectively in JEP as shown in Exhibit 2.

Exhibit 2: Shareholding structure of JEP (post-1MDB's corporate restructuring)



A power purchase agreement (PPA) was executed between JEP and Tenaga Nasional Berhad (TNB) on July 22, 2014 under which TNB will purchase electricity generated by the project power plant over a 25-year period commencing from the scheduled commercial operation date (SCOD) of its first generating unit on November 15, 2018. The engineering, procurement and construction (EPC) works for the project power plant (including the jetty) were contracted to an EPC consortium comprising IHI Corporation (IHI), Ishi Power Sdn Bhd (Ishi Power), Toshiba Corporation (Toshiba), TOS Energy Malaysia Sdn Bhd (TOS Energy), Hyundai Engineering & Construction Co. Limited (Hyundai E&C) and Hyundai Engineering Co. Limited (Hyundai Engineering), under a lump-sum turnkey contract. Fuel requirements (coal) for the project power plant will be supplied by TNB Fuel Services Sdn Bhd (TNBFS) under a 25-year coal supply and transportation agreement (CSTA).

Exhibit 3: Project structure



^ Comprising IHI, IPSB, Toshiba, TOSEM, Hyundai E&C, Hyundai Engineering

Project site

The project power plant will be a standalone plant located to the east of the 1,400MW coal-fired Jimah Power Station in Negeri Sembilan; there are no shared facilities with the existing plant. The project site comprises reclaimed land, mud flats and mangrove swamps that are subject to soil improvement and land reclamation works to be undertaken by the EPC consortium.

Power plant design

The project power plant will comprise two generating units with a net capacity of 1,000MW each. Both generating units will be equipped with a pulverised coal boiler and a steam turbine generator with ultra-supercritical (USC) technology and associated auxiliary equipment. The boiler and turbine are supplied by IHI and Toshiba respectively. Given Project 3B's significant generating unit size of 1,000MW and expected base load operations, the use of USC technology was preferred as it is expected to deliver the lowest levelised cost of electricity. The USC steam conditions are expected to result in fuel cost savings that outweigh the higher capital and operations and maintenance (O&M) costs of the technology.

MARC notes that although IHI and Toshiba have considerable supercritical and USC references worldwide, references of 1,000MW and above units with somewhat similar USC operating conditions as Project 3B are limited (Exhibit 4). Nonetheless, the independent technical advisor, Pöyry Energy Sdn Bhd (Pöyry), has reviewed the power plant design of Project 3B and concluded that IHI and Toshiba have sufficient USC experience and capability to substantially mitigate any technical risk during the detailed design stage.

Exhibit 4: Reference list of IHI and Toshiba with somewhat similar USC operating conditions as Project 3B

Project name	Location	Plant capacity	COD/SCOD	IHI boiler	Toshiba turbine
Tachibana-wan #1	Japan	1,050MW	2000	✓	✓
Taizhou #1	China	1,000MW	2007	x	✓
Taizhou #2	China	1,000MW	2008	x	✓
Samcheok Green Power Plant #1	South Korea	1,100MW	2015	x	✓
Samcheok Green Power Plant #2	South Korea	1,100MW	2015	x	✓

COD – Commercial operations date; SCOD – Scheduled COD
Note: IHI and Toshiba have other references for 1,000MW units or larger but with different USC operating conditions from those specified for Project 3B.

Project sponsors

1MDB Energy

1MDB Energy is currently an indirect wholly-owned subsidiary of 1MDB, a federal strategic development company which was established in 2009. Wholly-owned by the Government of Malaysia, 1MDB undertakes initiatives to support the long-term economic development of the country, in particular through energy-related activities and real estate development. 1MDB is the country's second largest independent power producer (IPP) with an effective generating capacity of 3,111.5MW through the company's equity interest in five operating power plants. In addition, 1MDB owns energy assets in the Middle East & North Africa and South Asia regions which have an effective generating capacity of 2,483MW.

1MDB Energy was set up to facilitate the aforementioned corporate restructuring exercise to hold 1MDB's energy assets. MARC understands that 1MDB's acquisitions of sizeable power generation assets in 2012 were heavily funded by debt. As a result of the group's moderate liquidity position relative to its sizeable debt obligations, its debt repayments have been rescheduled on several occasions. MARC views 1MDB's ability to extend its debt repayment profile stemmed from its status as a government-owned company.

Mitsui

Mitsui is one of the largest trading house in Japan which is primarily involved in metals, machinery & infrastructure, chemicals, energy, lifestyle and innovation & corporate development. Under its energy portfolio, Mitsui has ownership in over 60 power generation projects around the globe with an effective generating capacity of over 8,000MW. Mitsui's key credit strengths include strong and relatively stable profit and cash generation capabilities and healthy liquidity, moderated by its high financial leverage.

Advisors

Pöyry Energy Sdn Bhd (Pöyry)

Pöyry was appointed as the independent technical advisor, responsible for reviewing the project and project documents from a technical, operational and environmental point of view. Pöyry is the local arm of Pöyry PLC, a global consulting and engineering firm specialising in the energy and industrial sectors. Pöyry PLC was established in 1958 and has been listed on the Helsinki Stock Exchange since 2006. The group has extensive experience in coal-fired power plant development projects and is currently involved in the implementation of more than 10,000MW of coal-fired power generation in the Asia Pacific region. Among the projects it is involved in is the Manjung 5 project, a new 1,000MW USC coal-fired power plant in Janamanjung, where Pöyry is an independent consulting engineer.

Aon Insurance Brokers (Malaysia) Sdn Bhd (Aon)

Aon was appointed as the independent insurance adviser to review the proposed insurance programme in relation to Project 3B. In its review, Aon would assess if the protection provided under the insurance policies to JEP and the lenders via the protection of assets and operational revenue stream is adequate and in line with the contractual obligations imposed by the project and financing documents. Aon is a subsidiary Aon PLC, a leading global provider of risk management, insurance and reinsurance brokerage services, and human resources solutions and outsourcing services.

FINANCING STRUCTURE

The project cost estimate of RM11.1 billion is expected to be funded by debt and equity at a ratio of 73.5:26.5 as per Exhibit 5.

Exhibit 5: Sources of funds

Sources of funds	RM million	%
Share capital	5.0	0.0
Redeemable preference shares	2,928.4	26.5
Sukuk Murabahah Programme	8,130.0	73.5
Total	**11,063.4**	**100.0**

Exhibit 6: Uses of funds

Uses of funds	RM million	%
EPC costs	7,409.9	67.0
Other hard costs	473.2	4.3
Development expenses	156.2	1.4
Pre-operating expenses	458.6	4.1
Consumables	432.7	3.9
Hedging costs	204.8	1.9
Financing costs	1,915.5	17.3
Fuel stockpile & spares	205.5	1.9
Reserve accounts	6.0	0.1
Pre-SCOD2 operating cash flows*	(199.0)	(1.8)
Total	**11,063.4**	**100.0**

** Cash flows from operations of the first unit for the period commencing on November 15, 2018 until May 14, 2019 (one day before SCOD of the second generating unit).*

Pöyry has reviewed the overall project cost estimates and concluded that the EPC cost is in line with industry expectations. The project cost estimates include a contingency sum equivalent to 2.5% of the EPC contract price. In addition, the project sponsors will provide supplemental undertaking to fund project cost overruns of up to RM185.3 million. This supplemental undertaking, which amount is equivalent to 2.5% of the EPC contract price, helps align Project 3B's total contingency sum to be more consistent with other power plant projects (typically ranging between 5% and 7% of the EPC cost).

PRE-COMMISSIONING RISKS

Construction risk

Experience of contractors

Exhibit 7: Contractors' scope of work

EPC consortium	Scope of work
IHI	Engineering, manufacturing, procurement and ocean freight outside Malaysia of boilers and their auxiliaries
Ishi Power	Procurement, inland transportation, erection and commissioning of boilers and their auxiliaries
Toshiba	Engineering, manufacturing, procurement and ocean freight outside Malaysia of steam turbines, generators and their auxiliaries
TOS Energy	Procurement, erection and commissioning of steam turbine, generators and their auxiliaries inside Malaysia as well as offshore marine works
Hyundai consortium*	Engineering, manufacturing, procurement and ocean freight outside Malaysia of balance of plant including onshore civil works

** - Hyundai E&C and Hyundai Engineering*

Construction risk of the project power plant is mostly mitigated by the strong track record and financial strength of the main parties of the EPC consortium, namely IHI, Toshiba and the Hyundai consortium. The EPC consortium has joint and several responsibilities to fulfil its contractual obligations under the EPC contract. IHI, Toshiba and Hyundai E&C are public-listed multinational companies with a combined market capitalisation of over US$15 billion.

The Hyundai consortium has extensive experience in the construction of large scale coal-fired power plants. It has completed numerous supercritical coal-fired power plant projects and is currently involved in two USC coal-fired power plant projects, namely the 2x1,100MW Samcheok Green Power Plant and the ninth and tenth 1,000MW generating units of the Dangjin Power Plant which are all due to enter commercial operations between 2015 and 2016. Nonetheless, Pöyry has highlighted that the balance of plant works are relatively similar for all types of technologies and thus the Hyundai consortium's USC experience is not essential for Project 3B. MARC derives further comfort from Pöyry's view that the scope of works under the EPC contract are appropriate with acceptable level of details.

EPC contract provisions

The fixed-sum EPC contract price comprises three currency components: RM3.3 billion, JPY56.0 billion and US$738 million. The US dollar and JPY-denominated payments will be hedged, in part or in full, via currency swap contracts and/or foreign exchange forward contracts. MARC views Project 3B's construction schedule of 55 months (49 months for the first generating unit) is comparable to other power plant projects of similar scale.

Exhibit 8: PPA critical milestones

Milestone	Date
Scheduled commencement date	November 14, 2015
Initial operation date for first unit	May 9, 2018
Initial operation date for second unit	November 9, 2018
Scheduled commercial operation date for first unit (SCOD1)	November 15, 2018
Scheduled commercial operation date for second unit (SCOD2)	May 15, 2019

The EPC consortium has provided guarantees for completion delay and performance shortfall (Exhibit 9). In relation to completion delay, liquidated damages (LD) payable by the EPC consortium under the EPC contract is sufficient to cover JEP's liability under the PPA of RM0.6 million for each day of delay of the relevant unit, as well as loss of potential operating income of about RM1.3 million per day. Meanwhile, the performance guarantees relate to the guaranteed values for the project's power plant net output and net heat rate (high heating value). MARC notes some headroom in the PPA heat rate requirement as the guaranteed heat rate under the EPC contract is about 2% lower than the PPA requirement of 9,106 kilojoules per kilowatt-hour (kJ/kWh).

Exhibit 9: EPC contract – Provisions for liquidated damages

Type of LD	Amount
Delay in achieving SCOD	RM2.3 million for each day of delay for the first 90 days of delay; RM2.5 million for each day of delay thereafter until COD or 180 days
Output shortfall	RM12.0 million for each MW of output shortfall
Heat rate shortfall	RM1.2 million for each kJ/kWh of heat rate shortfall

LD payable for completion delay or performance shortfall is capped at 15% of the EPC contract price with an aggregate cap at 25% of the EPC contract price. MARC notes that the EPC consortium's maximum liability for LD is higher than the performance bond amount to be provided during the construction period which would be equivalent to 20% of the EPC contract price. However, Pöyry considers the performance bond amount to be generally in line with the market.

Interconnection facilities and transmission lines

JEP has an option under the EPC contract (TL option) to construct a 43-km transmission line to connect the project power plant's proposed 500-kilovolt (kV) substation to TNB's 500/275kV Olak Lempit substation. If the TL option is not exercised by the expiry date on January 31, 2015, JEP may contract directly with shortlisted local contractors, namely HG Power Transmission Sdn Bhd and Multi Discovery Sdn Bhd. JEP has budgeted RM145 million for the cost of the works and construction is expected to take 18 months. Under the PPA, the interconnection facilities and transmission lines have to be commissioned by February 8, 2018.

Construction insurance

Under the PPA, JEP is required to procure the necessary insurance policies to mitigate risks arising from unexpected events during the construction and operational phases. JEP's proposed construction insurance programme which includes construction/erection all risks and third party liability insurance, marine cargo open cover, workmen's compensation insurance and employer's liability insurance is in compliance with the PPA's requirements. MARC understands that the insurers/reinsurers would be at least A- rated by Standard & Poor's or A.M. Best, subject to compliance with Bank Negara Malaysia guidelines.

Pre-commissioning force majeure risk

The impact of a force majeure on JEP (including those affecting the EPC consortium) during the construction period is moderated by the PPA provisions which allow an extension of the affected generating unit's SCOD according to the duration of the force majeure event. The provisions also allow for a waiver of JEP's liability for damages during such a period. In addition, for any delay due to a force majeure event affecting TNB, the offtaker will pay JEP the costs of servicing debt after the date of such force majeure event and unavoidable costs that are not covered by insurance during such duration. This ensures that JEP's finance service ability would remain intact during a force majeure event affecting TNB that persists for less than 180 days[1].

[1] *The PPA may be terminated if a force majeure event prevents either TNB or JEP from substantially performing any material obligation under the agreement for a period exceeding 180 days.*

BUSINESS AND OPERATIONS RISKS

Availability-based capacity payments

JEP is not subject to demand risk and would earn available capacity payments so long as it meets the offtaker's availability requirements for dispatch. The available capacity payment is designed to cover the Project 3B's fixed operating costs, including finance service costs and shareholders' return. The PPA performance standards that JEP is required to comply with – unplanned outage limit (UOL) of 6% and contracted average availability target (CAAT) ranging between 91.4% and 92.9% within a contract year block of five contract years – were deemed as fair by Pöyry. The allowance for outages under the PPA is also fairly in line with other similar coal-fired power plant projects rated by MARC although the rating agency notes that the CAATs for JEP are marginally higher.

Variable energy payments

Provisions for energy payment under the PPA are designed to cover JEP's variable operating costs. JEP's energy payment receipts are determined by the project power plant's net electrical output. The fuel payment component of the energy payment ensures that JEV's largest electricity generation cost item, fuel cost, is entirely passed-through to TNB so long as it meets the PPA efficiency standards as measured by the project power plant's heat rate. In the event that the heat rate exceeds the PPA threshold, JEP would have to absorb the additional fuel cost.

MARC notes that JEP's heat rate requirement is fairly consistent with other coal-fired power plant projects it has rated. In addition, the base case financial projections have assumed a lifetime heat rate degradation profile of 2% which MARC deems as prudent.

Post-construction risk

Post-construction risk is mainly mitigated through warranties provided by the EPC consortium for the generating units, interconnection facilities, transmission lines (if the TL option is exercised) and metering equipment. The warranty period will extend for 24 months from the COD of the relevant unit. In the event of a warranty claim during this period, the warranty period will be extended for a further 24 months. In addition, a latent defects warranty for the boiler and steam turbine generator would also be provided by the EPC consortium from the relevant COD for a period of five years. The warranty provisions are further strengthened by the warranty bond equivalent to 5% of the EPC contract price to be provided and maintained during the 24-month warranty period.

Operations and maintenance risk

Unlike other IPPs which would typically enter into an O&M agreement with a third party or related entity, the project power plant would be owner-operated. As the operator, JEP would be responsible for all obligations and liabilities relating to operations, maintenance and repair of the project power plant, including management of the coal jetty and stockyard.

JEP is expected to have 178 employees; the majority of whom will be recruited in stages during the construction period. At least 30% of its workforce is expected to consist of experienced managers, engineers and technicians, including its project management team which would be retained to operate and maintain the project power plant post-COD. MARC observes that the project managers of Project 3B are qualified mechanical engineers with at least 18 years of experience in the power industry.

Among the key concerns of JEP's owner-operated strategy are: (1) that there is no O&M risk-sharing agreement with a third party; (2) a lack of performance-linked incentive typically provided under an O&M agreement to encourage high operator competency; and (3) the O&M team's limited experience in USC power plant operations. These notwithstanding, some mitigating factors to O&M risks are: (1) that technical assistance will provided by IHI, Toshiba and an external O&M advisory consultant during Project 3B's commissioning phase and operational phase up to three years post-COD; (2) planned comprehensive training for the O&M team during the construction period through collaborations with Mitsui, the EPC consortium and the external O&M advisory consultant; and (3) the availability of technical service agreements with IHI and Toshiba for planned outage services throughout the PPA tenure. MARC understands that JEP will be appointing Fichtner, an engineering consultancy company based in the UK, for the external O&M advisory consultant's role.

Fuel supply risk

Under the long-term CSTA, JEP will purchase coal exclusively from TNBFS. Should TNBFS fail to supply coal, JEP has the right to source coal from alternative suppliers. The risk of coal supply disruption is mostly mitigated by (1) TNBFS' sound operating track record as the nominated coal supplier for all the coal-fired power plants in Malaysia; (2) the coal stock pile to be maintained by JEP which would be sufficient for at least 30 days of continuous plant operation; and (3) JEP's ability to leverage on Mitsui's strength in commodity trading. TNBFS' procurement strategy of sourcing from a diverse range of coal mines in several countries (Indonesia, Australia, Russia and South Africa) through a combination of mid- and long-term contracts as well as spot tenders would help ensure reliable and continuous supply of coal.

The coal specifications provided under the CSTA match those specified in the EPC contract. The EPC consortium is required to deliver a power plant designed to burn the full range of 36 sub-bituminous and bituminous coals listed in the PPA. JEP is entitled to reject coal shipments from TNBFS if they fail to meet the coal quality rejection limit or are not free from impurities. Nevertheless, MARC understands that should the quality of coal supplies are near the rejection limit over a period of time, the long-term plant performance may be affected, as experienced by several coal-fired plants in Malaysia in 2013.

Insurance coverage

JEP is expected to maintain and/or procure a comprehensive range of insurance policies during the operational phase to mitigate risks arising from unexpected events (Exhibit 10). The insured sums for the industrial all risks and machinery breakdown insurances are estimated at RM7.6 billion and RM6.0 billion respectively. In addition, the industrial all risks and machinery breakdown insurances would also cover revenue loss for up to 36 months (estimated at RM1.5 billion per generating unit). Similar to the construction phase, credit strength of the insurers/reinsurers would also be at least A- rated by Standard & Poor's or A.M. Best, subject to compliance with Bank Negara Malaysia guidelines.

Exhibit 10: PPA – Insurance requirement during operational phase

Type of policy	Minimum coverage
Industrial all risks	All fixed assets on a full replacement value basis subject to deductibles of not more than RM4.5 million for each and every loss. *Time excess for business interruption is 60 days.*
Machinery breakdown	All machinery, plant, steam generator and ancillary equipment on a full replacement value basis subject to deductibles of not more than RM7.5 million for each and every loss. *Time excess for business interruption is 60 days.*
Public liability	RM25.0 million per occurrence.
Automobile/motor vehicle liability	RM3.0 million per occurrence and in aggregate.
Workmen's and/or compensation	In accordance with the laws of Malaysia.

Offtaker risk

In the event of a default by TNB, JEP will have the option but not the obligation to sell the project power plant to TNB for an amount in excess of JEP's outstanding indebtedness. Nevertheless, the occurrence of such an event is deemed as highly unlikely given the strong credit profile of TNB which carries MARC rating of AAA/Stable.

Post-commissioning force majeure risk

As with other standalone power plant projects, a force majeure event affecting JEP or fuel supplier, TNBFS, may significantly impact JEP's earnings. During such an event, JEP would only receive capacity payments to the extent of the generating capacity made available to TNB. JEP's financiers are however insulated by a force majeure event affecting TNB as JEP would be entitled to recover the debt servicing costs (after the date of such force majeure event) and unavoidable costs that are not covered by insurance during the period from the offtaker.

ISSUE STRUCTURE RISK ANALYSIS

Refinancing risk

Refinancing risk is moderated through the amortising structure of sukuk (see Exhibit 14 of Appendix 2 for the sukuk amortisation profile). Over 90% of the outstanding sukuk would be redeemed during the period corresponding to a higher capacity rate financial (CRF) of between RM36.67 per kilowatt per month (kW/month) and RM52.43kW/month; the CRF steps down significantly to RM18.18 kW/month from 2037 onwards. The CRF is a component of the capacity charge rate used to calculate JEP's available capacity payments under the PPA. The remaining life of the PPA after 2037 of about six years should also provide some buffer for JEP to extend its debt maturity profile, if necessary.

Liquidity risk

Short-term liquidity risk is addressed by the requirements on JEP to maintain an amount in the finance service reserve account (FSRA) equivalent to the aggregate of all amounts payable under the sukuk on the next payment date and to progressively build up the required funds in the finance service account (FSA) in six equal instalments commencing six months prior to each profit and principal payment dates. Sukukholders can also derive some comfort from the minimum post-distribution finance service cover ratio (FSCR) covenant of 1.50x which helps prevent cash leakages when JEP's cash flow protection metrics fall below expectations.

Investment risk

The investment of funds in the designated accounts are restricted to liquid investment, government-issued instruments or capital market instruments that are denominated in Ringgit and have a minimum rating of MARC-1/AA- or its equivalent.

FINANCIAL RISK ANALYSIS

The following are the key assumptions of the base case financial projections:

- COD on November 15, 2018 (first generating unit) and May 15, 2019 (second generating unit);
- Hedging rates for EPC cost at RM3.392/US$1.00 and RM31.458/JPY1,000;
- Coal price at RM254.26 per metric tonne in 2018 with an indexation ranging between 2.97% and 3.70%;
- Plant net capacity of 2,000MW (1,000MW for each generating unit);
- Plant capacity factor of 85% and load factor of 100%;
- Plant availability and heat rates are within PPA-specified limits;
- Fixed and variable O&M costs are indexed at 3.0% per annum save for manpower cost (6.0% per annum) and seawater cost (2.0% per annum); and
- Days receivables and payables of 60 days and 30 days respectively.

Exhibit 11: Base case financial projections (RM million)

FYE March 31	2019	2020	2021	2022	2026	2030	2034	2038
Revenue	563.2	2,778.4	2,865.6	3,033.5	3,317.9	3,892.0	4,092.2	4,056.9
- Available capacity payment	*187.0*	*938.4*	*994.4*	*996.4*	*1,001.1*	*1,287.5*	*1,389.3*	*572.5*
- Energy payment	*372.6*	*1,821.4*	*1,850.8*	*2,015.7*	*2,291.9*	*2,575.3*	*2,668.8*	*3,444.5*
- Start-up payment	*3.6*	*18.6*	*20.5*	*21.3*	*24.9*	*29.2*	*34.1*	*39.9*
Operating expenses	(423.2)	(1,898.1)	(1,989.2)	(2,130.7)	(2,436.3)	(2,765.5)	(2,853.6)	(3,669.3)
- Fixed expenses	*(59.5)*	*(128.5)*	*(178.9)*	*(157.0)*	*(172.2)*	*(205.8)*	*(184.1)*	*(226.3)*
- Variable expenses	*(6.2)*	*(18.9)*	*(22.0)*	*(20.5)*	*(23.0)*	*(27.8)*	*(33.3)*	*(33.0)*
- Fuel expenses	*(357.7)*	*(1,752.2)*	*(1,788.7)*	*(1,953.6)*	*(2,241.4)*	*(2,532.4)*	*(2,636.9)*	*(3,408.4)*
EBITDA	140.0	880.3	876.4	902.7	881.6	1,126.5	1,238.6	387.6
Changes in working capital	(291.1)	(281.4)	(36.9)	(42.6)	(44.2)	(40.7)	55.7	45.7
Taxes	(0.0)	-	-	-	-	-	(230.0)	(74.8)
Cash flow from operations	(151.1)	598.9	839.5	860.1	837.4	1,085.8	1,064.4	358.5
Capital expenditure	(597.2)	(77.6)	-	-	-	-	(138.2)	-
Finance service (profit/interest/fee)	-	(336.7)	(507.4)	(488.9)	(429.4)	(336.3)	(187.3)	(13.4)
- Sukuk profit	*-*	*(317.9)*	*(500.8)*	*(487.6)*	*(428.6)*	*(335.3)*	*(186.0)*	*(11.6)*
- Working capital facilities interest	*-*	*(18.0)*	*(5.7)*	*(0.5)*	*-*	*(0.2)*	*(0.5)*	*(1.0)*
- Financing fees	*-*	*(0.8)*	*(0.8)*	*(0.8)*	*(0.8)*	*(0.8)*	*(0.8)*	*(0.8)*
Finance service (principal)	-	-	(210.0)	(230.0)	(300.0)	(595.0)	(610.0)	(320.0)
Net repayment - working capital facilities	168.9	169.2	(308.0)	10.9	-	-	(31.3)	26.1
Net shareholder distribution	1,085.6	180.8	(56.1)	(140.4)	(101.4)	(163.9)	(90.2)	(210.5)
Ending cash balance	-	469.7	220.1	228.4	225.4	280.8	254.5	-

EBITDA – Earnings before interest, tax, depreciation and amortisation

Under the base case scenario, the equity funding for Project 3B in the form of ordinary shares and redeemable preference shares (RPS) subscription by 1MDB Energy and Mitsui would be back-ended after the full drawdown of the sukuk. As stipulated in the equity contribution agreement (ECA), the project sponsors would undertake to fund project costs as and when required and ensure that their obligated equity contribution amounts totalling RM2.9 billion would be fully met no later than five days before the project completion date. 1MDB Energy's undertaking would be in the form of a SBLC issued by a financial institution with a minimum senior unsecured credit rating of AA- by MARC or its equivalent. Under the transaction, JEP's finance-to-equity ratio shall not exceed the covenanted level of 80:20 at all times upon the project completion date.

In addition, JEP would procure working capital facilities of up to RM350 million prior to the project completion date to be maintained throughout the sukuk tenure to address anticipated working capital requirements. These facilities are expected to be maintained throughout the sukuk tenure.

Exhibit 12: Cash flow available for finance service (CFAFS) (RM million)

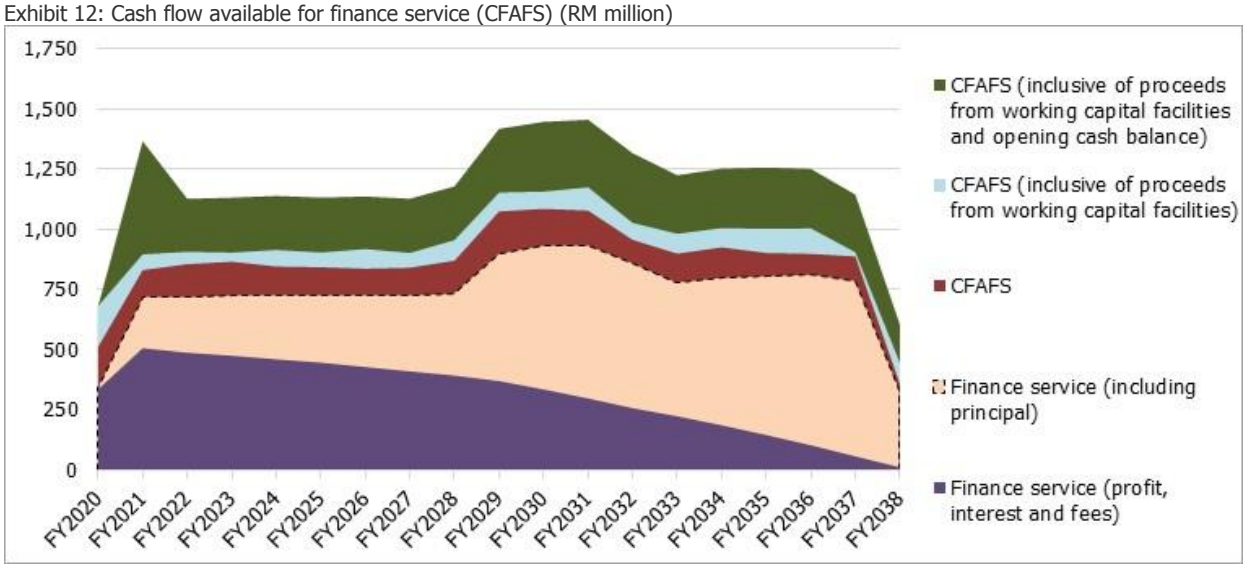


Exhibit 13: Sensitivity results (x)

Case	Scenario	FSCR (without cash balances) Minimum	FSCR (without cash balances) Average	Pre-distribution FSCR (with cash balances) Minimum	Pre-distribution FSCR (with cash balances) Average
	Base case	1.24 (FY2028)	1.26	1.72 (FY2029)	1.83
1	6 months construction delay	0.93 (FY2029)	1.23	1.55 (FY2032)	1.83
2	Output degradation of 3%	1.20 (FY2037)	1.23	1.68 (FY2029)	1.80
3	Heat rate degradation of 4%	1.21 (FY2038)	1.25	1.72 (FY2029)	1.82
4	Fixed operating costs +15%	1.19 (FY2027)	1.23	1.68 (FY2029)	1.81
5	Case 3 and fuel cost inflation +3.0% per annum	1.17 (FY2037)	1.26	1.71 (FY2029)	1.83
6	UOR of 10% (one generating unit)	1.09 (FY2023)	1.14	1.61 (FY2029)	1.72
7	Output degradation of 2%; Fixed operating costs +10%; Case 5; and UOR of 8% (both generating units)	0.40 (FY2038)	1.12	1.56 (FY2029)	1.70

Note: 1. The calculation of the FSCRs without and with cash balances is based on a retrospective 6-month and 12-month period respectively.
2. The FSCR calculations do not include interest servicing and repayments on the working capital facilities.

In the base case, JEP is expected to generate relatively stable FSCRs given the structure of the PPA revenues and the availability of the working capital facilities to fund any short-term liquidity requirements. MARC's sensitivity analysis on JEP's financial projections concluded that Project 3B's cash flows are able to withstand mild stresses.

Under more severe stress scenarios (Case 6 and 7), JEP's reliance on the availability of the working capital facilities to provide continuous funds to address tighter project cash flows would increase, particularly during scheduled major overhauls. During these periods, JEP's failure to make drawdowns on the unutilised credit and/or rollover outstanding debt under the working capital facilities would significantly affect JEP's ability to meet its sukuk obligations. A substantial delay in the project completion date is also expected to impact JEP's cash flows significantly due to the mismatch between PPA revenues and finance service amounts. However, the rating agency believes that the timely receipt of liquidated damages from the EPC consortium would help offset revenue shortfalls during the initial operating period. While the sukuk distribution test would help minimise project cash leakages, it is also imperative for JEP to give priority to maintaining its cash reserves over making shareholder distribution if external events exert significant and/or persistent stress on its project cash flows.

CORPORATE INFORMATION

BOARD OF DIRECTORS
Azmi bin Tahir
Vincent Beng Huat Koh
Dr. Ong Peng Su
Badrul Hisham bin Abdul Karim
Kenichiro Kawamoto
Yosuke Matsumoto

COMPANY SECRETARY
Goh Gaik Kim

MAJOR SHAREHOLDERS

Pelita Merpati Sdn Bhd	70%
3B Power Sdn Bhd	30%

SENIOR MANAGEMENT

Ir. Mohd Shamsul Bahrin Hussain	Project Director
Adrian Wong Fuk Aen	Project Manager
Ir. Hussien Juhari	Project Manager (Regulatory & Environmental Compliance)
Ir. Wan Hazri Wan Mustafa	Project Manager (Transmission Line & TWA Olak Lempit Sub-station Works)
Mohd Mazli Ismail Jamail	Project Manager (Technical & Construction Main Plant)
Tan Ou Boon	Head of Finance & Administration

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CONTACT

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AUDITOR
Deloitte

INDUSTRY RISKS

The power industry in Malaysia is dominated by three utility companies, namely TNB, Sabah Electricity Sdn Bhd[2] and Syarikat Sesco Berhad[3], which supply electricity to Peninsular Malaysia, Sabah and Sarawak respectively. These entities are largely complemented by various IPPs on the generation side of the electricity supply chain. The power industry in Peninsular Malaysia and Sabah is regulated by the EC while the power industry in Sarawak falls under the jurisdiction of the Sarawak state government.

In Peninsular Malaysia, the total installed generation capacity has remained at 21,749MW since the commencement of commercial operations at the 1,400MW Jimah coal-fired power plant in 2009. Gas-fired power plants make up the majority of the installed capacity at 58% followed by coal-fired power plants at 33%. Over the recent years, there have been progressive developments in the power industry to improve the security, reliability and efficiency of energy supply amid rapidly growing electricity demand, such as the acceleration of power plant projects, shifts in fuel mix for power generation and increasing emphasis on market-based energy pricing.

Declining reserve margin driving growth of new power plant projects

Electricity demand in Peninsular Malaysia peaked at 16,562MW in May 2013, resulting in the reserve margin deteriorating to 31% from 37% in 2012. Faced with a declining reserve margin, the EC stepped up its efforts to increase generation capacity in Peninsular Malaysia and awarded three concessions with a combined new capacity of 4,071MW over the past two years. Based on the proposed power plant projects by the EC as well as current ongoing and expiring power plant projects, total installed capacity in Peninsular Malaysia is expected to grow to 25,535MW by 2020. This is expected to sufficiently support the EC's forecast peak demand of 20,847MW in 2020 with a reserve margin of 23%.

Coal emerging as main fuel source for power generation

Malaysia's new power plant projects have been more inclined towards coal-fired power plants since the gas curtailment in 2011 due to coal being cheaper and its supply more reliable. Based on the EC's recommended plant-up, the percentage of capacity generation by coal of Peninsular Malaysia's total installed capacity is expected to increase from 33% in 2013 to approximately 48% in 2020. As coal supply is being procured at prevailing market prices, long-term reliable coal supply agreements at competitive prices are vital in ensuring stable generation costs. In addition, recent coal suitability issues faced by coal-fired power plants have underlined the importance of an adequate supply of high quality bituminous coal.

Move towards market-based energy pricing

The nationwide electricity tariff hike implemented on January 1, 2014 was in accordance with the imbalance cost pass-through (ICPT) mechanism, a component of the incentive-based regulation (IBR) framework. The tariff hike was in line with the increase in the selling price of regulated piped-gas to the power sector from RM13.70 per million metric British thermal unit (mmBtu) to RM15.20/mmBtu. The ICPT will be assessed every six months in tandem with the six-monthly revision of fuel prices, suggesting a gradual increase in subsidised gas prices to reach market parity within the next five years. The ICPT also incorporates the cost of imported liquefied natural gas (LNG) which is currently priced at a 15% and 10% discount from market price for the power sector and industrial users respectively.

The IBR framework was designed to implement a market-based energy pricing mechanism aimed at achieving visibility on pricing and cost recovery prospects. However, the rating agency believes that some challenges remain on the path towards a more predictable and favourable tariff regime, in particular the implementation of the automatic adjustment of electricity tariffs every six months.

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[2] Sabah Electricity Sdn Bhd is 83%-owned by TNB and 17%-owned by the Sabah state government.
[3] Syarikat Sesco Berhad has an exclusive concession to supply electricity to Sarawak until 2042.

ISSUE STRUCTURE AND TERMS

Facility
Sukuk Murabahah Programme with issuances in series of up to an aggregate of RM8.4 billion in nominal value.

Issue tenure
Up to 23 years from the first issue date

Exhibit 14: Sukuk amortisation profile

FYE March 31	Amount (RM million)
2021	210
2022	230
2023	250
2024	265
2025	280
2026	300
2027	315
2028	340
2029	530
2030	595
2031	635
2032	600
2033	555
2034	610
2035	660
2036	705
2037	730
2038	320
Total	**8,130**

Note: The principal reductions are paid on a semi-annual basis.

Utilisation of proceeds
a. Pay and/or reimburse the project sponsors/shareholders all costs associated with the project including but not limited to site acquisition, development, design, engineering, procurement, construction, installation, testing, commissioning, ownership, start-up and initial operations costs;
b. Pay and/or reimburse the project sponsors/shareholders all financing costs in relation to Project 3B (including fees and expenses incurred for the establishment of the Sukuk Murabahah Programme and the issuance thereunder);
c. Pay and/or reimburse to the project sponsors/shareholders any other project related costs, including but not limited to consultant fees, takaful/insurance contribution and contingencies;
d. Meet the working capital requirements of JEP in relation to Project 3B; and
e. Pay and/or reimburse 1MDB and Mitsui development costs incurred in developing Project 3B.

Security/Collateral
a. A first ranking charge over the sub-lease of the project site;
b. A first ranking charge over the project site;
c. A first ranking charge over the lease of the jetty lands;
d. A first ranking debenture comprising fixed and floating charges over all present and future assets of JEP;
e. A first ranking legal and absolute assignment of all JEP's rights, titles, interests and benefits under the project documents (which include those under the applicable insurance and reinsurance policies/takaful contracts and all performance and/or maintenance bonds in respect of Project 3B and all other guarantees, advance payment bonds and other forms of payment or performance security issued in favour of JEP pursuant to any project document) and the proceeds therefrom but excluding the generation licence, offset agreement and offset management services agreement;
f. A first ranking charge and assignment over the designed accounts other than the Distribution Account and all the credit balances therein;

g. A first ranking legal and absolute assignment of all JEP's rights, titles, interests and benefits under the generation license;
h. A first ranking memorandum of charge over all shares (including RPS) in JEP by Pelita Merpati Sdn Bhd and 3B Power Sdn Bhd;
i. A first ranking assignment and charge over JEP's rights, titles, interests and benefits in the ECA.

Designated accounts

Exhibit 17: Designated accounts to be opened and maintained by JEP

Name of account	Purpose
Disbursement accounts (DA): - Ringgit DA - Dollar DA - Yen DA	1. Deposit and/or remit transfers of proceeds from the issuance of the Sukuk Murabahah; 2. Deposit and/or remit transfers from the EGRA; 3. Deposit and/or remit transfers from the SBLC Proceeds Account; 4. Deposit and/or remit equity injection (other than payments resulting from a drawing under the SBLC); and 5. Payments for development and project costs payable in Ringgit, USD and/or JPY. 6. Upon the project completion date, any balance in the DAs shall be transferred to the RA.
Early Generation Revenues Account (EGRA)	1. Deposit all revenues, income and receivables from Project 3B and all project documents by JEP during the period prior to SCOD2; 2. For transfer to the OA for payment of required operation costs; and 3. Payment to the Ringgit DA.
Revenues Account (RA)	1. Deposit all revenues, income and receivables from Project 3B and project documents, excluding those to be deposited into the EGRA; 2. Deposit any excess amounts from the MRA, FSA, FSRA and Compensation Accounts; 3. Deposit any credit balance remaining from the DAs; and 4. Balances to be applied in accordance with the RA Priority Cashflows.
FSA	Deposit amounts from the relevant accounts for the payment of items (b) to (f) and (i) to (k) of the RA Priority Cashflows and the periodic profit payments and principal amounts under the Sukuk Murabahah Programme when due.
Operating Account (OA)	Deposit amounts transferred from the EGRA and RA for the payment in accordance with item (a) of the RA Priority Cashflows.
FSRA	To be funded by JEP in accordance with (g) of the RA Priority Cashflows to an amount equal to the aggregate of all amounts payable in respect of the Sukuk Murabahah falling due and payable on the immediately following payment date.
Maintenance Reserve Account (MRA)	1. Maintain a minimum amount of RM24 million which shall be built up over a three-year period commencing from the SCOD1, as required under the PPA; and 2. Any withdrawal from the MRA to pay major maintenance costs shall be reinstated within three months.
Insurance Proceeds Account	1. Deposit all applicable insurance/takaful proceeds provided no total loss has occurred; and 2. Credit balances to be applied in accordance with the deed of covenants.
Compensation Account	1. Deposit all proceeds from liquidated damages, termination payments and/or compensation; 2. Proceeds from delay liquidated damages shall be applied first in payment to TNB of any damages payable under the PPA and second by transferring any balance to the EGRA (prior to SCOD2) and RA (on or after SCOD2); 3. Proceeds from performance liquidated damages shall be applied first in payment to TNB of any damages payable under the PPA and second by applying the balance in mandatory early redemption of the Sukuk Murabahah; 4. Termination payments shall be applied on the next applicable profit payment date in mandatory early redemption of the Sukuk Murabahah; and 5. Compensation shall be applied first in payment to TNB of any damages payable under the PPA and second by transferring any balance to the RA.
SBLC Proceeds Account & SBLC Proceeds Suspense Account	1. Deposit all monies paid under an SBLC; and 2. For transfer to the Ringgit DA subject to no default in existence.
Distribution Account	For withdrawal or distribution by JEP.

Note: The DAs, EGRA and RA shall be jointly operated by the security agent and JEP; OA, MRA and Distribution Account solely by JEP; and the remaining designated accounts solely by the security agent.

RA Priority Cashflows

Funds in the RA may only be used in the following order of priority:

a. Transfers to the OA for the payments of (1) required operating costs; (2) approved capital costs; and (3) agreed major maintenance costs;

b. Payment into the FSA of fees, costs and expenses, related to the facility agent, security agent and sukuk trustee;
c. Periodic transfers into the FSA to meet periodic profit payments;
d. Payment into the FSA of any fees, costs, expenses, commissions, taxes and other financing costs payable, excluding those covered in (b), in connection with the Sukuk Murabahah Programme;
e. Periodic transfers to the FSA to meet principal payments under the Sukuk Murabahah Programme;
f. Payment into the FSA of all amounts required to be applied in or towards satisfaction of any mandatory redemption required to be paid;
g. Transfers to the FSRA to meet the finance service reserve requirement;
h. Transfers to the MRA to meet the maintenance reserve requirement;
i. Transfers to the FSA to pay any amounts which have fallen due under the finance documents and which are not covered under the sub-paragraphs above;
j. Transfers to the FSA to pay any amounts in relation to any other permitted indebtedness (other than RPS and working capital facilities if such working capital facilities are subordinated);
k. Transfers to the FSA for making voluntary prepayments under the Sukuk Murabahah Programme; and
l. On any restricted payment date, for transfers to the Distribution Account and payment of any amounts in relation to indebtedness which is subordinated to the Sukuk Murabahah Programme subject to the distribution covenants; and

Financial covenants

Finance to equity ratio (FER)
JEP shall maintain a FER of not more than 80:20 at all times from the project completion date.

Finance service cover ratio (FSCR)
JEP shall maintain a FSCR of at least 1.25x as at each determination date.

Distribution covenants
JEP shall not make any dividend payment, payments under indebtedness which is subordinated, payment of dividend/interest on the RPS, payment of shareholders' advances/grants, repayment of preference shares, purchase or redeem any of its issued shares or reduce its share capital or make a distribution of assets or other capital distribution to shareholders or any payment to an affiliate other than pursuant to a project document or from the Distribution Account unless each of the following conditions is satisfied:

a. The project completion date has been achieved;
b. The first scheduled principal repayment under the Sukuk Murabahah has been redeemed in full;
c. No default has occurred or is continuing;
d. The balance of the OA on the immediately preceding profit payment date was at least equal to the payments projected to be required to be made from those designated accounts prior to the next monthly transfer date;
e. The balance of the FSA on the immediately preceding payment date was at least equal to the sum of the then required principal accrual requirement and the profit accrual requirement;
f. The MRA is funded accordingly and there is no outstanding funding shortfall;
g. The balance of the FSRA on the immediately preceding payment date was at least equal to the then finance service reserve requirement;
h. The FSCR would be at least 1.50x if recomputed immediately after deducting such distribution amount from net available cash.

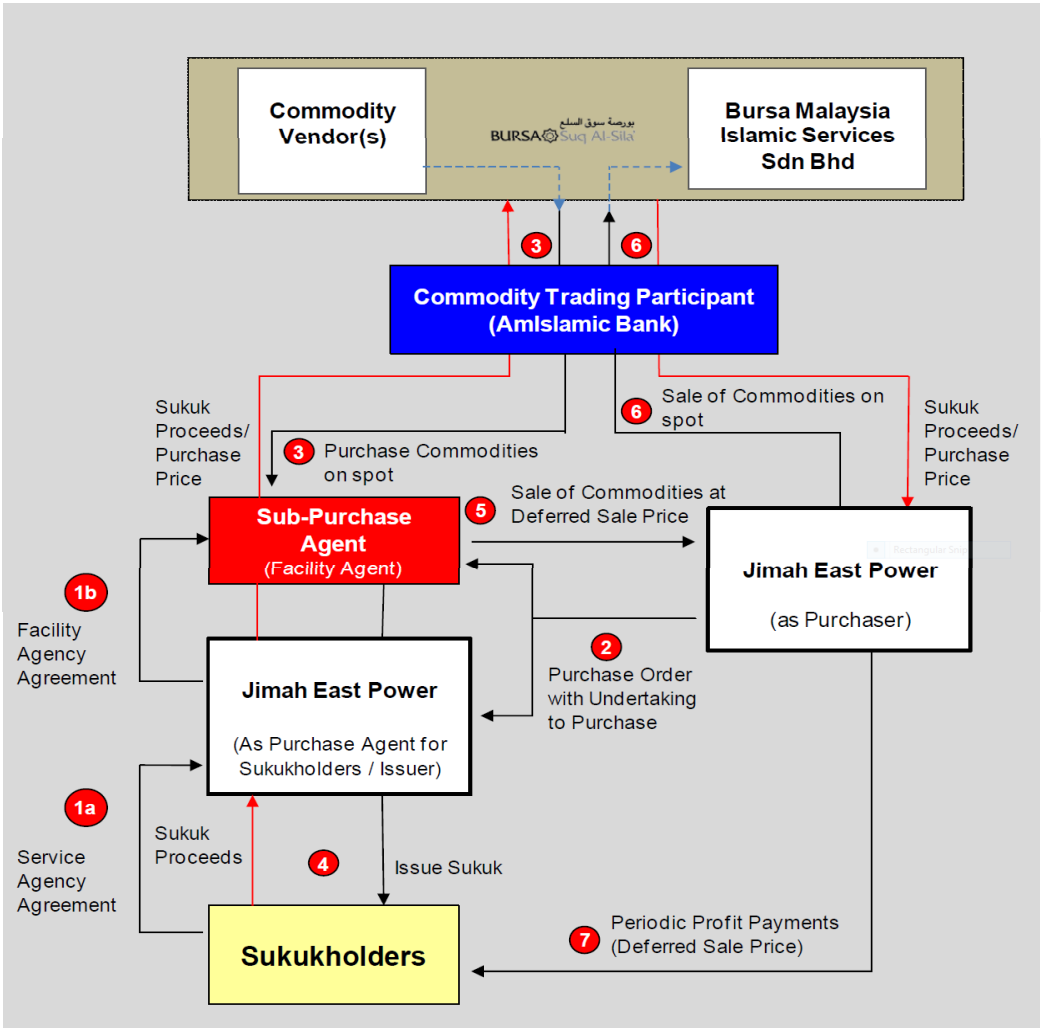
Permitted indebtedness
a. Financial indebtedness of JEP secured by permitted security interest;
b. Financial indebtedness under the project and finance documents;
c. RPS;
d. Lease or hire-purchase of automobiles or office equipment made in the ordinary course of business by JEP not exceeding RM5.0 million (or its equivalent) in aggregate;

e. Other financial indebtedness which does not exceed, when aggregated with any amounts of financial indebtedness under agreements relating to the issuance of performance bonds, letters of credit or acceptance financing where, in each case, such obligations are for a term of less than 180 days and are entered into in the normal course of business, RM150.0 million (or its equivalent) in aggregate; and

f. Working capital facilities of up to RM350 million provided on a subordinated basis and if such working capital facilities are not provided on a subordinated basis, a written confirmation is procured from the rating agency to confirm that such unsubordinated working capital facilities would not result in a downgrade in the rating assigned to the Sukuk Murabahah Programme or a negative outlook.

Murabahah financing principal

Exhibit 18: Sukuk Murabahah transaction structure



Pursuant to a service agency agreement entered into between JEP and the sukuk trustee (on behalf of the sukukholders), JEP shall be appointed as the agent of the sukukholders for the purchase and sale of commodities under the Sukuk Murabahah. JEP as the agent will then enter into a sub-agency agreement to appoint the facility agent as the sub-agent for the purchase and sale of commodities. Pursuant to a commodities Murabahah master agreement to be entered into between JEP (in such capacity, the purchaser) and the agent, the purchaser issues a purchase order to the agent and subsequently, the agent issues the purchase order to the sub-agent. In the purchase order, JEP acting as the purchaser for itself will request the agent, and subsequently, the agent will request the sub-agent to purchase the commodities. The purchaser will irrevocably undertake to purchase the commodities from the sukukholders via the sub-agent at a deferred sale price which shall be the purchase price plus the profit margin.

Pursuant to the purchase order, the sub-agent via the commodity trading participant (CTP) (pursuant to the CTP purchase agreement entered into between the sub-agent and the CTP) will purchase on a spot basis the commodities from commodity vendor(s) in the Bursa Suq Al-Sila' commodity market (commodity seller) at a purchase price, which shall be an amount equivalent to the Sukuk Murabahah proceeds. JEP shall issue Sukuk Murabahah to the sukukholders and the proceeds received from such issuance shall be used to pay the purchase price of the commodities. The Sukuk Murabahah shall evidence, amongst others, the sukukholders' ownership of the commodities and the entitlement to receive the deferred sale price once the commodities are sold to JEP.

Pursuant to the undertaking under the purchase order, the sub-agent acting on behalf of the agent shall sell the commodities to JEP (acting as purchaser for itself) at the deferred sale price under the sale and purchase agreement. Subsequently thereafter, JEP (pursuant to the CTP sale agreement entered into between JEP, as purchaser for itself and the CTP) shall appoint the CTP to sell the commodities to Bursa Malaysia Islamic Services Sdn Bhd (commodity buyer) on a spot basis for an amount equal to the purchase price. The CTP sale agreement will provide for the CTP to directly sell the commodities to the commodity buyer upon notice by JEP that the sale and purchase agreement has been duly executed and upon receipt of the sale instruction by JEP. During the Sukuk Murabahah tenure, JEP (in its capacity as the purchaser) shall make periodic profit payments to the sukukholders as part of its obligation to pay the deferred sale price. Upon maturity dates of the Sukuk Murabahah or declaration of an event of default, JEP (in its capacity as the purchaser) shall pay all amounts outstanding in respect of the deferred sale price of the relevant Sukuk Murabahah subject to rebate (Ibra'), where applicable, upon which the relevant Sukuk Murabahah will be cancelled.

RATING SYMBOLS & DEFINITIONS
ISLAMIC CAPITAL MARKET INSTRUMENT RATINGS - ISLAMIC SUKUK (ASSET-BASED INSTRUMENTS)

LONG-TERM RATINGS

MARC's Long-term Ratings are assigned to sukuk issuances with maturities of more than one year. These ratings specifically assess the likelihood of timely payment of the instrument issued under the various Islamic asset-based financing contract(s).

Investment Grade

AAA$_{IS}$ Extremely strong ability to make payment on the instrument issued under the Islamic asset-based financing contract(s).

AA$_{IS}$ Very strong ability to make payment on the instrument issued under the Islamic asset-based financing contract(s). Risk is slight with degree of certainty for timely payment marginally lower than for instruments accorded the highest rating.

A$_{IS}$ Strong ability to make payment on the instrument issued under the Islamic asset-based financing contract(s). However, risks are greater in periods of business and economic stress than for instruments with higher ratings.

BBB$_{IS}$ Adequate ability to make payment on the instrument issued under the Islamic asset-based financing contract(s). Vulnerable to moderately adverse developments, both internal and external.

Non-Investment Grade

BB$_{IS}$ Uncertainties exist that could affect the ability to make timely payment on the instrument issued under the Islamic asset-based financing contract(s).

B$_{IS}$ Significant uncertainty exists as to timely payment on the instrument issued under the Islamic asset-based financing contract(s). Slight adverse developments could impair ability to make timely payment.

C$_{IS}$ Possesses a substantial risk of default, with little capacity to address further negative changes in financial circumstances.

D$_{IS}$ Failed to make scheduled payment on the instrument issued under the Islamic asset-based financing contract(s).

Note: Long-term Ratings from AA to B may be modified by a plus (+) or minus (-) suffix to show its relative standing within the major rating categories. Bank-guaranteed issues will carry a suffix (bg), corporate-guaranteed issues (cg), issues guaranteed by a financial guarantee insurer (FGI) (fg), and all other support (s) when such guarantees or support give favourable effect to the assigned rating.

SHORT-TERM RATINGS

MARC's Short-term Ratings are assigned to non-ringgit denominated Sukuk issuances with original maturities of one year or less, and are intended to assess the likelihood of timely payment of the instrument issued under the various Islamic asset-based financing contract(s).

Investment Grade

MARC-1$_{IS}$ Extremely strong capacity to make timely payment on the instrument issued under the Islamic asset-based financing contract(s).

MARC-2$_{IS}$ Strong capacity to make timely payment on the instrument issued under the Islamic asset-based financing contract(s). Timeliness of payment is slightly susceptible to adverse changes in operating circumstances and economic conditions.

MARC-3$_{IS}$ Adequate capacity to make timely payment on the instrument issued under the Islamic asset-based financing contract(s). Moderately adverse changes in operating environment and economic conditions may weaken financial capacity to make timely payment.

Non-Investment Grade

MARC-4$_{IS}$ Vulnerable to non-payment of instrument issued under the Islamic asset-based financing contract(s). Capacity to make payment on the instrument is dependent on favourable business, financial and economic conditions.

D$_{IS}$ Failed to make scheduled payment on the instrument issued under the Islamic asset-based financing contract(s).

Note: Short-term Ratings will also carry a suffix (bg) for bank-guaranteed issues, (cg) for corporate-guaranteed issues, (fg) for FGI-guaranteed issues, and (s) for all other support when such guarantees or support give favourable effect to the assigned rating.

*Subscript '**IS**' for Long-term and Short-term Ratings denotes an Islamic Sukuk (Asset-based Instruments).*
The rating symbols and definitions above have been approved by the Shariah Panel of MARC.

RATING OUTLOOK

MARC's Rating Outlook assesses the potential direction of the rating on the sukuk over the intermediate term (typically over a one- to two-year period). The Rating Outlook may either be:

POSITIVE which indicates that a rating may be raised;
NEGATIVE which indicates that a rating may be lowered;
STABLE which indicates that a rating is likely to remain unchanged; or
DEVELOPING which indicates that a rating may be raised, lowered or remain unchanged.

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Disclaimer

Statement of Conflict of Interest

MARC, its rating committee members and analysts involved in the aforementioned rating have not encountered and/or are not aware of any conflict of interest situation.

Published and Printed by:

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