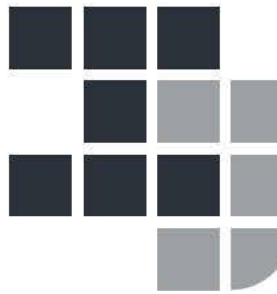


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November/December 2016

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Project Finance & Infrastructure Journal



NORTH AMERICA
The Alberta opportunity

LATIN AMERICA
Trump and the plummeting peso

ASIA-PACIFIC
Connecting Asia by rail

EUROPE
The rise of corporate PPAs

MIDDLE EAST & AFRICA
UAE solar sails ahead



Safe at sea

How offshore wind has gone from risky business to a safe bet

The 8th Annual Canadian Power Finance Conference

January 19th & 20th, 2017
The Ritz-Carlton, Toronto, Canada

Keynote Session: The Climate Leadership
Plan: Achieving renewables targets in Alberta's
wholesale power market



Michael Law,
Vice President, Renewables
Development &
Sustainability, **AESO**

Other key speakers include:



Bryan DeNeve
CFO & Senior Vice President,
Finance
Capital Power



Kevin Kelly
CFO & Executive Vice
President, Finance and
Commercial Services
Bruce Power



Kipp Horton
President & CEO
WindRiver Power



Daniel Elkort
Executive Vice President
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Pattern Energy



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Safe at Sea

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Cuba is keen to build power projects with the private sector. But the US government could still scupper its plans.

Hope in Havana

Havana is a city in mid-metamorphosis. It is capital city of a country walled-off from the world for more than 60 years. To walk through its historic centre is to see the outer layer of a cocoon start to peel away.

The Cuba experience has become commodified and is sold on every corner of Old Havana to tourists, the numbers of which rise every week. These visitors thirstily lap up Cuba Libre, crumbling colonial-era architecture and Che Guevara t-shirts. But behind these dilapidated buildings and away from the city's centre, it is possible to get a sense of the everyday Cuba.

Much as it is impossible for the ignorant to guess the end-state of a caterpillar before it has grown wings, so it is hard to imagine what Cuba will look like once it has broken free from its economic prison.

Cuba has been irrevocably shaped by the economic blockade enforced by the US since 1960, turning it into a pariah state to most of the international community. In 2015, according to the Brookings Institute, the take home salary for most Cubans was around \$20 a month and less than 5% of the population had access to the internet. While Venezuela's socialist government has supported Cuba through cheap oil over the last decade or so, that country's current economic crisis has now made it an unreliable crutch for the Cubans.

Diplomatic relations finally resumed between the US and Cuba in December 2014 and tentative steps were made to dismantle the blockade. Though progress remains slow, the appearance of US tourists stepping foot again on their forbidden island shows that Obama's initiative has had some success.

If the blockade is finally lifted, and international investors become active in Cuba, improving the country's infrastructure should be a top priority. A taxi journey to José Martí International Airport in torrential rain should be enough to convince any visitor of that: small lakes form quickly across large intersections while major roads are absent of street lighting.

The Cuban government deserves credit for its willingness to engage with the private sector. *IJGlobal* and New Energy Events held a conference in Havana in September in partnership with the Cuban government, and it was clear it was keen to build relationships with investors. This however will not be a quick process.

The various representatives from the Ministry of Energy and Mining, Cuba-Petroleo Company, the National Electricity Engineering and Projects Company and Unión Eléctrica, among other state-run institutions, found themselves in uncharted territory at the event. Talking to international bankers, developers and advisers cannot have come naturally to those who have spent their whole adulthood living under a planned economy.

But the overwhelming message of the conference was that Cuba wants international investment. The immediate focus is renewable energy, with the government aiming for renewables to account for 24% of all electricity production on the island by 2030 (it represents 4.3% today). It announced plans for 13 new wind farms last year with a total capacity of 2,000MW. European, Chinese and Canadian developers are all understood to have expressed an interest in these projects.

UK-based Havana Energy has proved what can be done. After many years of setbacks, which included a major European bank joining and then dropping out of its lender group, it became the first private developer to sign on a power project in the country: a 30MW biomass plant. Havana Energy is developing the project via a joint venture with the Cuban sugar ministry, and is understood to have funded the project with debt from Chinese lenders.

For the next renewables projects, it is hoped that a wider group of lenders can be tapped. European DFIs have been in active discussions with the Cuban government in recent months and it has been rumoured that Spanish commercial banks may be willing to participate. These first deals should act as a catalyst to and create foundations for other projects.

The gas exporters in attendance at the conference may see their hopeful plans for an LNG import terminal in Cuba unfulfilled, but there is endless scope for social infrastructure and transport projects on what is by far the largest island in the Caribbean.

All of these plans however hinge on the new President-elect of the US, Donald Trump. During campaigning he promised to take a hard line on Cuba and possibly reverse the concessions granted by the Obama administration. If the end of the blockade is postponed, international investor interest will likely evaporate.

That would be a massive opportunity missed for investors, and a tragedy for an island desperate for infrastructure improvements. Cuba is ready to emerge from its chrysalis. ■

Jon Whiteaker
Editor

Briefings

STRUCTURED TRADE FINANCE

Fangyuan Group raises \$385m pre-payment facility

Chinese copper producer, Fangyuan Group has closed a \$385 million 12-month structured pre-payment facility. Proceeds will be used by two of the group's core operating entities as additional working capital.

Deutsche Bank and ING Bank acted as joint lead arrangers and joint bookrunners. Nine other banks joined the deal – Societe Generale, ABN Amro, China CITIC Bank, First Gulf Bank, Korea Development Bank, Nanyang Commercial Bank, SMBC, ICICI and Banca Monte dei Paschi di Siena – with arranger status.

Given Chinese non-foreign invested enterprises like Fangyuan are generally restricted from borrowing external funding, the banks had to leverage the external debt quota approved by the State Administration of Foreign Exchange under a cross-border cash pooling scheme.

Kaz Minerals gets covenant waiver on PXF

Lenders on a \$260 million pre-export facility (PXF) to Kaz Minerals have agreed to waive the net debt to EBITDA covenant on the deal until July 2017. The waiver gives the borrower a little breathing space to restructure its balance sheet after years of low copper prices.

Kaz operates four mines and three concentrators in the East Region of Kazakhstan, the Bozymchak copper-gold mine in Kyrgyzstan, the Bozshakol open pit copper mine in the Pavlodar region of Kazakhstan and the SX/EW plant at Aktogay.

Kaz has suffered since the copper slump from a four year high of \$8,740 per

tonne in February 2012 to a low of \$4,331 per tonne in January 2016. Pricing has risen by around \$500 per tonne this year and looks set to continue in the short term.

The deal – originally totalling \$1 billion and signed in 2012, and then replaced with a \$334 million four-year facility in 2014 with the same waiver extension to July 2016 – has been partially repaid in instalments and reduced to \$260 million since its last refinancing.

The newly amended facility – agreed with existing lenders Bank of China, Citi, Crédit Agricole, Deutsche Bank, ING, JP Morgan and Société Générale – retains the same pricing as the 2014 refinancing: 300bp to 450bp over dollar Libor, dependent on the ratio of net debt to EBITDA (the current ratio prices the debt at 450bp).

The borrower has also requested the same waiver for a \$50 million three-year revolving credit signed with Caterpillar Financial Services (UK) Ltd in 2015.

Despite the amendment, Kaz still has \$3.5 billion of bilateral loans with China Development Bank (CDB). These were fully drawn at the end of June. Details of the covenants of the bilateral loans are not known.

SAF closes €25m PXF with BACB

British Arab Commercial Bank (BACB) has closed a €25 million (\$27 million) pre-export finance (PXF) deal with Ivory Coast cocoa exporter, Société Amer et Frères (SAF).

The 18-month deal is secured on stocks of cocoa and funds will be used by SAF Cacao to purchase cocoa from growers and local cooperatives throughout the Ivory Coast during the 2015/16 and 2016/17 harvests.

SAF is the largest domestic trader and exporter of cocoa in the Ivory Coast. The country produces an estimated 30% of the world's cocoa supply.

Myronivsky Hliboproduct refinances PXF facility

Ukrainian agri-industrial Myronivsky Hliboproduct Group (MHP) has raised a

\$100 million pre-export financing from ING Bank and Crédit Agricole. The deal funds the purchase of sunflower seeds in the Ukrainian market for processing into sunflower meal for production of fodder and oil for export.

Legal counsel for the lenders was Avellum on Ukrainian law, Norton Rose Fulbright on English law, Arendt & Medernach on Luxembourg law, Montanios & Montanios on Cyprus law, and Harneys on BVI law.

The deal – comprising a 36 month tranche and a one-year tranche with a one-year extension option – is effectively a refinancing of a pre-export deal of the same size closed in 2014.

EuroChem signs new \$800m PXF

Agrochemical producer and exporter EuroChem signed a new \$800 million pre-export financing (PXF) with a syndicate of 12 international banks in late September.

The five-year facility comes with a two-year grace period. It will be used to refinance part of Eurochem's debt, including the full repayment of its \$750 million PXF, signed in 2015.

Despite EU and US sanctions putting pressure on Russian borrowers, EuroChem has revealed that the new facility was "well oversubscribed".

The mandated lead arrangers on the deal are: Bank of China, Citi, Commerzbank, Crédit Agricole, Industrial and Commercial Bank of China (Luxembourg branch), ING Bank, Mizuho Bank, Natixis, Nordea Bank, Raiffeisenbank, Société Générale and Rosbank. UniCredit Bank Austria and the London branch of Citibank Europe acted as facility agent and the London branch of Citibank NA as security agent. ING Bank acted as sole coordinator and documentation agent. ■

More structured trade finance news at tradefinanceanalytics.com

Briefings

FUNDS

Macquarie to launch fourth North America fund

Macquarie Infrastructure and Real Assets (MIRA) is due to start fundraising for Macquarie Infrastructure Partners IV (MIP IV) by the end of 2016. The fund is MIRA's fourth vehicle for North American assets and is understood to be targeting between \$3.5 billion and \$4 billion in commitments. Like its predecessors, MIP IV will be a 10-year closed-ended, unlisted fund investing predominantly in core and core-plus infrastructure in the telecoms, utilities, transport, power and waste management sectors in the US and Canada. MIP IV will seek commitments from global institutional investors, particularly pension funds, but the majority of capital is expected to come from US-based investors.

InfraVia reaches final close on third fund

French manager InfraVia Capital Partners has announced the final close of InfraVia European Fund III with total commitments of €1 billion (\$1.12 billion). The fund has attracted commitments from some 40 institutional investors across Europe (85%), North America, Asia and the Middle East (the remaining 15%). More than 50% of commitments were re-ups from existing investors. 40% of investors are insurance companies, 30% pension funds, 10% sovereign wealth and the rest are fund of funds. The fund targets core-plus, mid-market infrastructure with value add capabilities across a broad spectrum of infrastructure opportunities including the transport, energy, utilities and telecom sectors. It seeks 10-12% internal rate of return (IRR) and around 5-6% yield.

GIP final close imminent

US-based Global Infrastructure Partners (GIP)'s third infrastructure equity fund, GIP III, is on track to reach final close in November 2016. The fund is likely to close with total commitments of between \$15 billion and \$16 billion, it is understood. Like its two predecessors, GIP III seeks investments in the transport, energy and waste management sectors globally. So far, it has announced one investment to acquire a 20% stake in Spanish gas and electricity distribution company Gas Natural SDG for approximately €3.8 billion (\$4.22 billion). Reports emerged in the media in May 2016 that the fund was close to reaching its original \$12.5 billion target and had already attracted \$10.8 billion in capital commitments after four months of fundraising.

SUSI Partners closes renewables fund

Zurich-based SUSI Renewable Energy Fund II (SUSI RE II) has reached final close at €380 million (\$426 million). Known commitments to the fund include a €100 million ticket by an unspecified Dutch pension fund and a €62 million ticket by the European Investment Bank (EIB). The Swiss manager's Energy Storage Fund I has closed its first investment, participating in the financing of a portfolio of two energy storage projects in Ontario, Canada. The projects are developed by US Convergent Energy and Power and consist of a 5MW flywheel and a 7MW lithium-ion battery unit. The fund has been open for commitments since September 2016 and will have a life of 10 years. It has a target size of between €200 million and €250 million.

Allianz GI plans second UK infrastructure debt fund

Allianz Global Investors (AllianzGI) has started planning its second UK-focused infrastructure debt fund. Sources have said that the fund will target up to £500 million (\$550.6 million) in commitments. It will be closed-ended and unlisted and will target senior debt deals in the UK, sources added. Like its predecessor, it will seek assets in transport, utilities and social infrastructure

but it will also include renewables.

AllianzGI's first UK Infrastructure Debt Fund launched in June 2014 and reached a £265 million final close at the end of 2015. There are roughly 18 months remaining for its investment period.

Hastings shuts European fund

Australia-based Hastings is pausing equity fundraising for its European Core Infrastructure Income Fund (CIIF), an investor note from the company has said. CIIF recently closed with approximately A\$365 million (\$280 million) commitments from a spread of global investors. As part of this move, Hastings has allowed investors to cancel their current subscriptions. The fund's portfolio manager Heiko Schupp and senior associate Cassandra Stevenson have left Hastings as a result. Sources told IJGlobal that the company had come under pressure in Europe due to owner Westpac Bank's plans to sell it. Such plans were halted by Westpac in March 2016, when the Australian bank told media outlets that they had decided "to cease strategic conversations and due diligence with respect to a possible purchase of Hastings."

Palisade kicks off renewables fundraising

Australian fund manager Palisade Investment has announced the launch of its Palisade Renewable Energy Fund (PREF) targeting A\$500 million (\$381.8 million) in commitments. PREF has a mandate to invest in Australian-based renewable energy assets, focused on both greenfield and brownfield opportunities. It targets the acquisition and development of over 500MW of renewable projects (equivalent to around A\$1 billion of enterprise value) over the investment period to 2020. Targeting double-digit equity internal rate of returns backed by long-term PPAs with the ability to invest in and receive higher returns from late-stage greenfield projects. ■

More funds news at
ijglobal.com

Briefings

ECA & DFI

Enercon closes ECA-backed Niagara wind loan

Enercon Canada has closed a C\$825.5 million (\$616.5 million) partially ECA-covered non-recourse facility for its 230MW Niagara wind project.

Lead arranged by KfW IPEX-Bank, MUFG, CaixaBank, Landesbank Baden-Württemberg, ABN Amro Capital USA and DZ Bank, the financing comprises a C\$789.5 million construction loan, which converts into an 18-year amortising facility after start of commercial operations, and a C\$39 million letter of credit.

Euler Hermes is providing C\$252.4 million of debt cover linked to German manufactured content on the 77 Enercon E-101 3MW wind turbines for the scheme. Lenders also have the comfort of a 20-year feed-in tariff with the Independent Electricity System Operator of the Province of Ontario.

The 230MW project is owned by Enercon and Six Nations of the Grand River Development Corporation, although Boralex will acquire 25% of Enercon's interest by 31 December 2016.

Bahrain LNG ECA-backed debt pricing looking competitive

Pricing on the K-Sure covered tranche of the \$655 million Bahrain LNG financing – which along with Kexim support will cover around 80% of the fundraising – is coming in at around 150bp over Libor according to bankers.

Bids for the 20-year debt financing were submitted in September. In addition to a K-Sure/Kexim tranche, a syndicate of local banks led by Apicorp are providing

an uncovered tranche.

Société Générale is financial adviser to the sponsors – Nogaholding (30%), Teekay (30%), Samsung (20%) and Gulf Investment Corporation (20%) – and Shearman and Sterling are providing lender legal counsel.

The project is a 20-year build, own, operate and transfer concession for an 800 million standard cubic-feet-per-day LNG terminal in the Hidd industrial area of Bahrain. The scheme comprises a floating storage unit; an offshore LNG receiving jetty and breakwater; an adjacent regasification platform; subsea gas pipelines from the platform to shore; an onshore gas receiving facility; and an onshore nitrogen production facility.

Afreximbank trade fundraising to syndication

Afreximbank has launched a \$750 million new money loan into general syndication. Proceeds will be used for trade finance and general corporate purposes. The deal is due to be signed in late November.

The three-tranche facility comprises one two-year euro tranche, and two- and three-year dollar tranches. The two-year debt has a margin of 130bp and the three-year is 150bp. There are 12 initial mandated lead arrangers and bookrunners for the transaction.

Earlier this month, Fitch removed Afreximbank from rating watch negative and affirmed its BBB- rating, citing the bank's "overall excellent quality of risk mitigants" as reason for the move.

Kexim back for more dollars

Kexim recently closed another major dollar fundraising with its first four-tranche deal – a \$2.5 billion offering similar to the three-tranche deal it closed in May.

ANZ, Bank of America Merrill Lynch, Crédit Agricole, Morgan Stanley, Mizuho, Société Générale and UBS were joint bookrunners, and also joint lead managers along with Samsung Securities. Kexim UK acted as co-manager.

The final deal comprised a \$750 million three-year floating rate note, a \$750

million three-year fixed rate note, a \$300 million five-year fixed rate tranche and a \$700 million 10.5-year fixed rate tranche.

Kexim sold the \$750 million floater at three-month Libor plus 46bp and at par, and the \$750 million 1.5% 2019s at 60bp over US Treasuries, offering a yield of 1.615%.

The \$300 million 1.875% 2021s were sold at 70bp over and a yield of 1.977%. And the \$700 million 2.375% April 2027s were priced at 70bp over yielding 2.46%.

In all, the book size was in excess of \$5.5 billion at the final pricing. Strong demand for the 10.5-year helped Kexim price it at the same level as the five-year. All tranches except the 10.5-year priced inside the existing curve, with the 10.5-year flat to an interpolated curve.

JBIC signs loan agreement for Jawa-2 power plant

PLN has raised a dual currency JBIC-backed facility for its 800MW Jawa 2 CCGT project in Java. JBIC is providing ¥19 billion (\$183 million) and \$27 million tranches as direct loans. The remainder of the debt, which is covered by NEXI, is coming from Bank of Tokyo-Mitsubishi UFJ (also facility agent), Mizuho Bank and ANZ, bringing the total financing to ¥31.7 billion and \$45 million.

The Jawa-2 combined cycle power plant is part of the Indonesian government's power development plan, which aims to deliver 35GW of power plants for the five years between 2015 and 2019. Equipment, including a gas turbine, steam turbine and a waste heat recovery boiler, will be supplied by Japanese companies, hence the JBIC contribution and NEXI backing.

In August the Indonesian government launched the tenders of the most recent projects in its power plant programme: the 450MW Peaker Jawa-Nali 4 gas-fired and the 200MW Kalbar-2 coal-fired. The first will be located on Java island, with the latter in Borneo. ■

More ECA & DFI news
at ijglobal.com

Briefings

M&A

Aussies' unsolicited Ausgrid bid successful

An all-Australian consortium has acquired 50.5% of the Ausgrid transmission network in New South Wales (NSW), after an earlier auction process ended abruptly.

Australia's federal treasury blocked the final offers of Chinese state-owned utility State Grid Corporation of China and Hong Kong-based Cheung Kong Infrastructure in August 2016 on grounds of national interest, forfeiting the Chinese State Grid's offer at 1.6x Ausgrid's regulated asset base (RAB).

The Australian consortium subsequently tabled a A\$16.2 billion offer, representing around 1.4x Ausgrid's RAB. The consortium of AustralianSuper and IFM Investors signed the deal with the NSW government in October and are readying to achieve financial close this year.

Attention now turns to the next privatisation in NSW's 'poles and wires' programme: Endeavour Energy.

EDP launches Portuguese grid sale

Energias de Portugal (EDP) has issued teasers for the sale of Portuguese gas transmission business EDP Gás Distribuição.

EDP has mandated BBVA as its financial adviser on the sale and expects indicative bids to be submitted toward the end of 2016. Last year EDP paid €42 million cash plus a €13 million reimbursement of loans to buy 25.3% of EDP Gas Distribuição from Engie. EDP now owns 97.3% of the business.

The Portuguese utility has been busy making divestments in 2016, with €687 million raised in the first half to boost its

balance sheet. Axiom acquired its minority shareholding of a US wind assets portfolio, while EFG Hermes' Vortex platform took a stake in its European wind portfolio.

DONG may sell oil & gas unit

Danish utility DONG Energy has announced plans to exit the oil and gas sector to focus solely on offshore wind. DONG had previously appointed JPMorgan to conduct a strategic review of its oil and gas business.

After listing 17.4% of its share capital in June this year in Copenhagen, DONG stated its intention to focus on offshore wind, bioenergy and green distribution. The utility is 75% devoted to offshore wind, and 9% to the non-core oil and gas market.

It produced on average 115,000 barrels per day in 2015, of which 90% came from Norwegian fields and 10% Danish. The unit's largest development projects are the UK's Laggan-Tormore field and Denmark's Hejre field.

DONG follows fellow European utilities E.ON and RWE which have already divested their respective oil and gas businesses.

Canadian airport privatisations under review

A Canadian government review into potential airport privatisations has drawn protest from Vancouver and Ottawa's airport authority chiefs.

Credit Suisse is reviewing recommendations related to airports made in a report by David Emerson carried out for the Canada Transportation Act.

His report, published in February 2016, pointed to the examples of the UK, US and Australia in generating capital for fresh investment in legacy assets through privatisations. Emerson suggests a three-year timeline to introduce private sector equity to the country's largest airports, and divestments for smaller airports.

Vancouver and Ottawa airport bosses have argued that customer experience, local community board representation and flight prices would worsen, while factoring in

the airports' collective C\$13.3 billion (\$8.4 billion) debt would reduce sale revenues.

European wins US' Pocahontas Parkway

Spanish toll road and rail concessions company Globalvia has won the competition to acquire the Pocahontas Parkway toll road in Virginia. The deal will mark Globalvia's first North American investment.

Macquarie, TPG Capital and Citigroup are the existing owners of Pocahontas Parkway. Globalvia, which already has investments in Europe and central and South America, will acquire the asset's 99-year concession, originally granted in 2006 by Virginia's Department of Transportation to Australia's Transurban.

Recent toll road sales in the US market include Portugal's Brisa offloading Northwest Parkway and Macquarie disposing of its 50% stake in Dulles Greenway.

Duke Energy exits Latin America

North Carolina-based electric utility Duke Energy has agreed two sales to complete its withdrawal from Latin America.

In one transaction agreed in October, New York-based private equity firm I Squared Capital valued its hydroelectric and natural gas plants, transmission infrastructure and natural gas processing facilities in Peru, Chile, Ecuador, Guatemala, El Salvador and Argentina at \$1.2 billion.

Likewise for \$1.2 billion, state-owned power company China Three Gorges Corporation has agreed to acquire Duke Energy's Brazilian assets, comprising 2.09GW of hydroelectric generation facilities.

Duke Energy began to divest its international energy businesses in February this year. The company seeks to focus on its core US regulated business, boosted recently by a \$6.7 billion acquisition of Piedmont Natural Gas. ■

More M&A news at
ijglobal.com

Briefings

COMMODITIES

Gunvor out with annual European RCF refi

Gunvor is out to syndication with a refinancing of the \$1.36 billion revolving credit it signed in November 2015.

The loan, effectively a repeat annual borrowing by Gunvor to finance its European commodity trading operations, is expected to be finalised by the end of November. Active bookrunners for the new facility are ABN Amro, Crédit Agricole, ING, Natixis, Rabobank, Société Générale and UniCredit.

Appetite for the deal is likely to be strong given Gunvor's recent performance. Despite a slump in oil prices and consequent 27% drop in Gunvor revenues in 2015, the trader still managed to report a net profit after tax of \$1.25 billion – an increase of 10% compared to 2015 (although partly a function of the sale of Gunvor's majority stake in its Russian oil terminal, Ust-Luga). And results for 2016 are likely to be even stronger given predicted record trading results in the oil market this year.

The nearest pricing comparison for the latest deal is Gunvor Singapore's \$955 million one-year revolver (part of a \$1.041 billion deal that included an \$86 million three-year tranche) signed in May. The deal closed with a 15bp decrease in margin on the previous year's facility.

Ecom Agro refi proves popular with lenders

Ecom Agroindustrial has closed the refinancing of its 2015 \$634 million 364-day revolver, which matured on 13 October.

The new \$650 million deal has proven popular, with six new banks –

Bred Banque Populaire, Commerzbank, Habib Bank, Nedbank, Raiffeisen Bank International and UniCredit – joining the 2015 lender line-up.

The refinancing, signed on 11 October, has ABN Amro (also documentation and facility agent) and BNP Paribas as bookrunners and mandated lead arrangers, with Commerzbank, Rabobank, DBS Bank, Deutsche Bank, HSBC Trinkaus & Burkhardt, ING Bank, Raiffeisen Bank International, UBS and Zurcher Kantonalbank joining as mandated lead arrangers.

Banco de Brasil, Barclays, Crédit Agricole, Garanti Bank International, KBC, KfW IPEX-Bank, Natixis, Nedbank, Oversea-Chinese Banking Corporation and UniCredit came in as lead arrangers; and Banque Cantonale de Geneve, Bred Banque Populaire, Habib Bank, MUFG and Wells Fargo joined as arrangers.

Like its previous facility, the one-year loan comes with a 364-day extension option subject to the approval of each lender. The loan, launched in August as a \$500 million fundraising, is rumoured to be priced a little lower than the 135bp over Libor margin the borrower paid in 2015.

In terms of margin precedents, Ecom's most recent deal was a refinancing of its Asian 364-day syndicated loan in April. The borrower raised \$470 million with a margin of 145bp over Libor – 5bp less than the same facility a year prior.

Olam completes \$2 billion debt refinancing

Singapore-based agribusiness and softs trader Olam International closed a \$2 billion revolving credit in mid-October. The facility consists of three revolving tranches: a 364-day \$400 million portion, a two-year \$800 million tranche and a three-year \$800 million piece.

The senior mandated lead arrangers are: ANZ, BTMU, Barclays, BNP Paribas, Commerzbank, DBS Bank, HSBC, ING Bank, JP Morgan Chase, Korea Development Bank, Mizuho Bank, Natixis, National Australia Bank, Rabobank, Standard Chartered, SMBC and Westpac.

Joining as mandated lead arrangers are: BBVA, BNS Asia, Commonwealth Bank of Australia and Credit Suisse.

Pricing details have yet to emerge, but on Olam's last similar financing in November 2014 – a \$2.475 billion revolver, split between one, two and three-year tranches, signed with many of the same relationship banks – the debt priced at all-ins of 115bp on the one-year, 130bp on the two-year and 145bp on the three-year.

Alba closes record corporate loan for Line 6

Aluminium Bahrain (Alba) has closed a \$1.5 billion seven-year syndicated loan to part fund its Line 6 expansion project. Alba's original target was to raise between \$500 million to \$700 million, but due to heavy over-subscription the borrower upsize the loan to \$1.5 billion – the largest corporate loan by a Bahraini borrower to date.

The debt is priced at a margin of 325bp over Libor. Principal will be repaid in eight semi-annual instalments after a three-year grace period.

Expected to start production in early 2019, the Line 6 expansion project will boost Alba per-annum production by 540,000 metric tonnes upon full ramp-up, bringing total aluminium production capacity to 1.5 million metric tonnes per annum.

Gulf International Bank, JP Morgan and National Bank of Bahrain acted as global coordinators. National Bank of Abu Dhabi acted as the global and conventional agent, while Riyadh Bank acted as the Islamic agent.

The mandated lead arrangers (MLAs) and bookrunners are Standard Chartered, Arab Banking Corporation, ABC Islamic Bank, Gulf International Bank, Ahli United Bank, National Bank of Bahrain, BBK and Crédit Agricole. Fourteen gulf-based regional banks also joined with lead arranger and arranger status. ■

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CAPITAL MARKETS

Extraction Oil & Gas IPO closes above target

Denver-based Extraction Oil & Gas closed its initial public offering (IPO) in October, after shares priced at \$19 raising at least \$594.1 million.

The IPO is the first debut listing for a US oil and gas exploration and production company in over two years. The shares priced above the expected range of \$15-\$18 per share.

Extraction plans to use \$90 million of the net proceeds of the IPO to redeem certain of its convertible preferred securities and to use \$291.6 million of the proceeds to repay borrowings under its revolving credit facility. The remaining \$212.5 million will be used for general corporate purposes.

Extraction Oil & Gas' reserves are primarily in the Wattenburg Field of the Denver-Julesburg Basin of Colorado.

Innogy IPO prices at top end

The initial public offering (IPO) of RWE's renewables business Innogy priced at the top end of its guidance in October, generating proceeds of €5 billion (\$5.6 billion) including existing and new shares.

The German utility RWE fixed the pricing per share of its spin-off renewables company Innogy at €36 per share. The pricing range was €32-€36.

RWE received €3 billion of proceeds from the sale of existing Innogy shares, including €500 million from the greenshoe option. The new shares issued raised €2 billion for Innogy, meaning this was the largest German IPO since 2000. Earlier larger IPOs in Germany were Deutsche Telekom's, Deutsche Post's and Infineon's RWE states.

GACM places Mexico City airport green bonds

State-owned Grupo Aeroportuario de la Ciudad de Mexico sold \$2 billion in US dollar green bonds on 22 September 2016 to partially fund the construction and operation of the new Mexico City international airport, NAICM.

The dual-tranche deal featured a \$1 billion tranche in 10-year notes at a coupon of 4.25% and a \$1 billion tranche in 30-year bonds at a coupon of 5.5%.

Commitments from the orderbook came in at around \$12.5 billion, a source working on the deal told *IJGlobal*.

Investors from Asia, the US and Mexico purchased the paper.

Citigroup, HSBC and JP Morgan were global coordinators. Santander and BBVA were joint bookrunners. The deal was rated Baa1 Moody's, BBB+ by Standard & Poor's and BBB+ by Fitch.

Details emerge on Plenary's VCCC long-term bond

Plenary has closed a long-term bond issue to partially fund the Victorian Comprehensive Cancer Centre (VCCC) PPP project in Australia.

The debt package comprises a \$450 million 24-year domestic and offshore bond issuance (of which more than half was offshore), an 11.5-year bank debt tranche for \$330 million, backed by TMU, Siemens, Credit Agricole and Natixis, and a five-year bank facility of \$200 million.

The deal marks the first long-term bond backing a PPP in Australia since the global financial crisis hit in 2008.

The long-term PPP bond market has lain dormant in Australia for the past nine years leaving little competition for banks in Australian PPP financing, and it has been difficult to raise debt with tenors longer than seven years.

FC for Alberta's southwest Calgary ring road

A Meridiam-led consortium reached financial close on the C\$1.42 billion (\$1.08 billion) Southwest Calgary ring road

project in Alberta, Canada in September.

The 35-year design, build, finance, operate concession was financed using a combination of equity, long-term senior bonds, short-term bank debt, provincial funds and federal government grants.

The financing package consists of C\$380.84 million series A bonds, due 31 March 2051, a C\$208.3 million five-year credit facility, a C\$96.04 million medium-term bank facility with a tenor of 15 years and C\$51.55 million in sponsor equity.

The series A bonds are being issued by Mountain View Partners, the special-purpose entity created for the project, and are being underwritten by TD Securities and Scotia. The bonds carry a coupon of 3.974% and priced at a spread of 215.10bp over the corresponding Canadian treasuries benchmark.

Appalachian Power plans unsecured note offering

Ohio-based American Electric Power subsidiary, Appalachian Power Company, is plotting a \$750 million dual-tranche bond issuance in part to fund its construction programme.

The proposed note offering consists of \$300 million in Series V notes bearing 3.4% interest due 2025 and \$350 million Series W notes bearing 4.45% interest due 2045. The remaining \$100 million is expected to remain unsold.

New York-based Depository Trust Company (DTC) will act as security depository for the notes, which will be issued as fully-registered in the name of DTC's partnership nominee Cede & Company.

Appalachian Power generates, sells, transmits and distributes electric power for approximately one million retail customers in southwestern Virginia and southern West Virginia. The company estimates that its construction costs in 2017 at \$780 million, and as of 31 October 2016, it had approximately \$72 million in advances from affiliates outstanding. ■

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Briefings

POLICY & REGULATION

New energy policy for France

The French government has unveiled a new energy policy up to the year 2023. This follows the passing of an act last year which set out the country's carbon reduction and renewables targets.

The government plans to more than double France's installed renewable power capacity to 71-78GW by 2023.

Under the plans, onshore wind, solar and hydro power will be preferred technologies. The government plans to double onshore wind capacity to 21.8GW by 2023 and increase solar capacity to at least 21.8GW from just 6.5GW at the end of 2015. France also intends to increase its hydro capacity from 25.3GW to 25.8GW via a single 500MW tender.

UK's National Infrastructure Commission issues call for evidence

The UK's National Infrastructure Commission has launched a call for evidence for its National Infrastructure Assessment (NIA) and published its consultation response.

The NIA is intended to assess the UK's infrastructure needs for the next 30 years. It will address sectors including transport, energy, water supply, sewerage, flood defences, and waste.

The NIC was created last year to advise government on infrastructure policy. The government unexpectedly announced in September that the NIC would not be a statutory body, and later confirmed that it would instead become an executive agency of HM Treasury. Industry participants have expressed concern

that without statutory independence the commission's ability to act without political support may be undermined.

Interested parties can submit evidence and ideas to the NIC for the NIA until February 2017.

Government approves Heathrow third runway

Following years of delays, the UK government has announced its approval for a new £10 billion (\$12.5 billion) to £20 billion runway to be built at London's Heathrow Airport.

The decision, which has faced environmental opposition, follows last year's airports commission report, which concluded that expanding Heathrow is the best option for increasing airport capacity in the southeast of England.

This means Heathrow has beaten rival Gatwick Airport, located to the south of London, which also pitched for a new runway.

The new airstrip would be the first full-length runway to be built in the southeast of England since the 1940s.

The project will proceed to further consultation in the form of a draft national policy statement to be published next year before the government gives its final approval.

Spain announces 3GW renewables auctions

The Spanish government has announced that it will launch, before the end of 2016, renewable energy auctions for an extra 3GW-4GW of generating capacity. The tenders will be technology-neutral, with 1GW awarded in December 2016 and the remainder in 2017.

This will be the second auction for renewables capacity in the country this year: Spain's industry ministry handed out contracts for 700MW of renewable capacity in wind and biomass in January, in its first clean power auction since it froze its subsidy support for renewables in 2012.

Spain announced a subsidy moratorium after racking up billion of Euros of debt through subsidising energy prices. The government allocated

\$9.5 billion in subsidies for electricity production in 2012 alone, with 71% of this cash earmarked for renewables.

Invenergy proposes Long Island wind and solar

Chicago-based sponsor Invenergy has proposed a multi-state project comprising four wind farms and two solar power plants to supply more than 700MW of renewable generation to Long Island in New York.

The project is being offered in response to Governor Andrew Cuomo's 50 by 30 goal, which aims for 50% renewable supply to the state by 2030.

The Clean Energy Link project would be located within the 12-state PJM regional power market, with the combined capacity of the six individual facilities joined into a single portfolio and delivered from PJM via a new buried HVDC transmission line ending at a net-zero converter station on Long Island.

China issues PPP rules

China's finance ministry has issued clearer rules for the management of government funds used in PPP projects, as the country seeks to spur private investment into its infrastructure sector.

The rules for projects in the public service sector aim to protect investors' rights, and prohibit participants from raising government debt in the guise of PPP projects.

The state government wants to lure private capital to government-led projects to alleviate the debt burdens of local governments, and has promised policies to support PPPs, though concern about fair access and low returns have deterred non-state players.

China's central government has been encouraging the model over the past two years to boost investment and shore up slowing economic growth with private capital. ■

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INFRASTRUCTURE PEOPLE

Banks

Société Générale has appointed Stephen Swift as head of global finance for the Asia Pacific region. Swift will be based in Hong Kong and begin in the new role on 1 January 2017. Swift will replace Sadia Rieke, who has been named chief country officer for the UK. Swift joined the bank in 1987 and was previously deputy head of global syndicate.

Deutsche Bank has appointed David Rhydderch as global head of its alternative fund services business. Rhydderch has been with Deutsche Bank for eight years and has previously held senior positions within the bank's markets franchise, as chief operating officer for the global prime finance business within the equities division based in London and New York.

Crédit Agricole CIB has announced the hire of Paul Leece as head of asset acquisitions and disposals in its London office. Leece joins from UBS where he has worked since 2001 and was executive director for mergers and acquisitions in Europe, Middle East and Africa. Leece reports to Brian Lerner, head of structured finance advisory.

Advisers

KPMG has appointed Regina Mayor from its Houston, Texas office as global sector head of energy and natural resources. She



succeeds Michiel Soeting, who is vacating the role after eight years to join KPMG's UK business. Mayor has worked with KPMG since 2006, and has worked in

key roles including US national sector for energy, natural resources and chemicals, and as Americas oil and gas lead.

Squire Patton Boggs has appointed King & Wood Mallesons lawyer Neil Upton and his six-strong team to its energy and natural resources practice in London. Upton joins the firm as partner from London-based King & Wood Mallesons. At his previous firm he was the UK and Europe head, and global co-head, of the energy and infrastructure and project finance practice.

Sponsors

Spanish toll roads company Cintra has appointed Belen Marcos to lead the company's US operations as president. Marcos, based at the company's US headquarters in Austin, Texas, is taking over the new role from former president Nicolas Rubio who was recently promoted to global operations director in Madrid, Spain.



Mexican infrastructure company Empresas Ingenieros Civiles Asociados (ICA) has named Guadalupe Phillips Margain as its new CEO. Margain, who was most recently ICA's chief restructuring officer, replaces Luis Fernando Zarate Rocha who passed away suddenly in October 2016. She will report directly to the board headed by its chairman, Bernardo Quintana Isaac.

Norwegian utility Statoil has named Jannicke Nilsson as executive vice-president and chief operating officer (COO). She takes over the role from Anders Opedal, who will instead lead the development of Statoil's operations in Brazil as new country manager. Nilsson will report to president and chief executive Eldar Sætre and will work out of Stavanger and be based in Rio de Janeiro.

Government/Multilaterals

Matthew Vickerstaff has been appointed

deputy CEO and head of project finance of the UK Infrastructure and Projects Authority (IPA). The IPA was created in November 2015, as a result of a merger between government agencies Infrastructure UK (IUK) and Major Projects Authority (MPA). Vickerstaff will be head of project finance across the government, filling a newly created position. Vickerstaff had worked for Société Générale for roughly 15 years until September 2015, most recently as the bank's global head of structured finance.

The Asian Infrastructure Investment Bank (AIIB) has appointed Thierry de Longuemar as vice-president and chief financial officer. A former treasurer of the Asian Development Bank and a French national, de Longuemar has also worked as vice-president finance at the African Development Bank and as global head of central banks and supra-nationals at ABN Amro.

Funds

AXA Investment Managers – Real Assets (AXA IM – Real Assets) has appointed Mark Gilligan as head of infrastructure equity. Gilligan left his role as head of infrastructure at UBS Asset Management in September 2016. He will be based in London and report to Ruulke Bagijn, global head of real assets private equity at AXA IM – Real Assets.

Laurence Monnier has been appointed to the newly-created position of head of investment strategy and research at Aviva



Investors' Alternative Income Solutions (AIS). The AIS team was established in April 2016, when head of infrastructure and structured finance David Dahan left the company and Barry Fowler was appointed managing director. ■

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TRADE FINANCE PEOPLE

Traders

Singapore-based agribusiness and softs trader Olam International has appointed Bharat Gupta as regional head of trade and structured finance for Asia, the Middle East and Africa, based in Singapore. Gupta joins from commodities trader Louis Dreyfus where he was regional head of structured trade finance for the Middle East and Africa. Prior to that, he was head of structured trade finance at Louis Dreyfus Commodities India from 2011 to 2014. He has also previously held roles at Standard Chartered Bank in the transaction banking sector, in addition to American Express Bank, Citibank and Barclays.

ECAs & DFIs

Otto Søberg is set to join Export Credit Norway as CEO. The appointment will be effective no later than 1 December 2016. He takes over from Olav Rygg, who has served as acting CEO since 1 July. When Søberg joins the company, Rygg will return to his role as EVP director of lending – shipping and offshore. Søberg is CEO of Wood Group Mustang Norway AS. Prior to that he led a division of Siemens Group and has held CEO positions at Aker Yards and Kværner Oil and Gas.



World Bank Group has appointed Kristalina Georgieva as CEO of the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). The appointment is effective 2 January 2017. Georgieva will report to World Bank Group president, Jim Yong Kim, and

re-joins the bank from the European Commission, where she is serving as vice-president for budget and human resource.

UK Export Finance (UKEF) has appointed Bhaskar Dasgupta as chief operating officer (COO). Dasgupta will lead UKEF's operations and business management, technology, operational risk, directing digital transformation and change programmes. He will also be responsible for developing and delivering the ECA's future business plans and operational strategies. Dasgupta joins from HSBC, where he was most recently global head of the transaction management group within the risk distribution unit of the bank's global trade and receivables finance division. Prior to this, he led a number of teams in HSBC's transaction banking and investment banking function, acting as a COO.

The Berne Union has announced the departure of Kai Preugschat, secretary general, who will take up a new role at the Asian Development Bank (ADB). He is set to leave the industry association in mid-November. Preugschat has been appointed head of the office of co-financing operations at ADB. He will be based in Manila. Preugschat joined the Berne Union as secretary general in August 2014. The process of recruiting his replacement is now in progress.

Insurance

Everest Specialty Underwriters has appointed Michael Gil as director for its trade credit and political risk business. Based in New York, Gil will be underwriting Everest's range of structured credit and political risk transactions for lenders, exporters and investors with projects in the emerging markets. Gil joins from Zurich North America, where he has worked for seven years, most recently as senior underwriter for credit and political risk insurance.

Banks

ING Bank's global head of structured

export finance, Eric de Jonge, stepped down from his role in October. Since his departure, de Jonge has continued to work with the bank, handing over his responsibilities to the structured export finance team. He told *Trade Finance* that after this transition period, he will take a break, adding that "it is not decided what I will do next". According to de Jonge, the process for his succession is in full swing and a new global head will be announced in due course. De Jonge joined ING 25 years ago and has been global head of structured export finance since 2005. Prior to that, he was the global head of asset-based finance at the bank. Before that, he was country manager for ING Lease in Belgium and, subsequently, Ireland.

SMBC Americas has appointed Anne Marie Thurber as executive director and head of export and agency finance



Americas, part of SMBC's global trade finance department, based in New York. She brings over 25 years' experience in facilitating international trade and investment transactions through political risk and trade credit insurance. Thurber joins from the Center for Innovation in Social Entrepreneurship, where she was a director for six years focusing on strategy and execution and providing advice on certain insurance claims matters. Thurber also spent 14 years at Zurich Insurance, based in Washington, where she served as executive vice president of Zurich's global credit and political risk business. Prior to Zurich, Thurber was regional manager for Latin America and the Caribbean at the World Bank's Multilateral Investment Guarantee Agency (MIGA) for two years. She also spent five years at OPIC as regional manager in the insurance division. ■

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Feeling safe at sea



Offshore wind in Europe has gone from risky business to a safe bet for conservative investors in just a few years.

By Olivia Gagan

DONG Energy built the world's first year offshore wind farm, the 4.95MW Vindeby off the Danish coast, in 1991 for roughly \$10 million. This year that same sponsor won a tender to develop the first two stages of the Borssele wind project off the coast of the Netherlands, which have a 700MW capacity and combined cost of over \$2 billion.

Far from its early days as a novelty in the energy sector, offshore wind is now a key element in the energy mix of a number of European countries. And its prevalence is growing at speed: an estimated 3.01GW of capacity was added to the grid in 2015, a jump of 108% on 2014, according to the European Wind Energy Association (EWEA).

Today's multi-gigawatt, multi-billion-Euro projects owe their existence to a confluence of factors. The European Union's drive to cut carbon emissions meant that by 2014, coal-fired power plants were at their lowest level of electricity production in the EU since 1990. Since 1990 EU electricity generation from renewable energy sources has almost tripled. It is also the only power source whose use continued to grow after 2008. Bank of America, Citigroup, Morgan Stanley, JPMorgan Chase, Wells Fargo, Credit Suisse and Société Générale are among those lenders which have made major changes to their coal investment policies, with most opting to stop coal-based greenfield project finance in OECD countries.

As ageing baseload plants are retired, and with almost no conventional power projects in the European pipeline, offshore wind procurement has boomed. Power-hungry countries have been drawn to the technology because it can be built at relative speed and can deliver generating capacities equivalent to the plants being decommissioned.

Investors increasingly view low-carbon renewables investments as essential to their portfolio mix. Dedicated renewables funds and institutional

investors looking for green investment opportunities have gravitated towards offshore wind, as it allows them to invest larger amounts of capital compared to onshore wind and solar power projects.

On a continent with limited space for onshore development and with increasingly tough carbon emissions reduction targets being set by governments, the conditions have been perfect for the offshore wind sector to grow. The combined value of European offshore wind projects reaching financial close in 2011 stood at \$8.27 billion, according to *IJGlobal* data. For 2015, that figure was \$14.13 billion.

Bigger, stronger, faster

The earliest offshore wind projects were funded largely on the balance sheets of the utilities who built them. By the mid-2000s, though developers still relied on corporate debt facilities and loans from development banks, commercial banks had started to lend at the project level.

Jérôme Deflesselles is managing director of advisory and project finance, energy group, EMEA at Société Générale, a bank which has been investing in the offshore wind sector since 2007. "At the time, only four commercial banks were taking offshore wind debt with

construction risk," he recalls. "RBS, Dexia, Rabobank and Société Générale." This was a situation which continued post-the 2008 financial crisis, with banks shying away from the sector.

Insurer Marsh's head of renewable energy for continental Europe Ralf Skowronnek says of commercial lenders at that time: "It was very difficult to invite them on board. The first large-scale projects were largely financed by the European Investment Bank."

But as projects began to be built largely without construction issues, commercial bank interest grew. "Lenders have been keener to project finance offshore wind in the past three years," says Skowronnek. The trigger, he says, "is investors and lenders seeking higher risk projects for higher returns."

A risky business?

How much risk remains in offshore wind is open to debate. BNP Paribas entered the market in 2009. Mark Muldowney, the head of the bank's London energy lending unit, says of that period: "Lenders were just starting to look at offshore wind as a viable sector. They were nervous. There were problems with foundations then – but there's been no major issues since, which is the single most important factor in driving it as an asset class."

A wide investor universe comfortable with the risk profile has emerged: banks, institutional investors, DFIs, corporates and state lenders all featured on 2016 deals, with capital plentiful and competition intense. Laughlan Waterston, head of energy at SMBC, notes that "the pool of funders has increased a lot compared to even two or three years ago. It's become easier to finance an offshore wind project in 2016 as there's so much more lender appetite for this asset class. If you look at the Beatrice and Dudgeon deals in the UK, there were 10-15 banks involved on each."

Waterston says these banks are making exceptions for offshore wind that they would be unlikely to make elsewhere. "There are funders on these deals that



Mark Muldowney

wouldn't touch longer-term project financing [in other sectors] but they're happy with an offshore wind project with a tenor of 17 years, partly due to the higher returns available."

Muldowney agrees. "People are prepared to go out that long as a combination of these assets' lives and support regimes being in place to match that," he says.

"There is a large pipeline in offshore wind, which is not such a given in other infrastructure sectors anymore."

Today's tougher landscape

As debt tenors swell and pricing points shrink, both Waterston and Deflesselles suggest the market will be much leaner, on both the equity and debt side of transactions. Upcoming projects will not enjoy the fixed feed-in tariffs awarded to earlier deals. Instead, they are competing in a new, EU-enforced development landscape, one in which the cheapest bid wins.

"Dudgeon and Beatrice were fundraising 18 months, two years ago – the tenors and the pricing reflect market conditions at the time," Waterston says. "Then you get more recent deals which have been fundraising under more competitive market conditions."

The Borssele tender set a record low for tariff pricing for the offshore wind sector. DONG Energy's strike price bid of €72.70 per MWh saw off 37 other bidders for the projects, in a competition in which the lowest price won. The €72.70

figure was well below the €100 per MWh cost of construction which the offshore wind industry hoped to achieve by 2020, and pushed it under the assumed cost of building nuclear in Europe, which stands at around €100 per MWh.

Waterston says the low price achieved by DONG will have an inevitable knock-on effect on future deals in the offshore wind sector.

Waterston posits that in 2012, market pricing trends for senior debt stood at "around 300-400bp [above Libor]. By 2014, it was at 250-350bp. In 2015 and 2016, it has stood at 200-300bp. It will be interesting to see if 2017 is the year market pricing goes below 200bp."

Muldowney thinks this downward trend will slow. "I don't see a lot of scope for margins coming down a lot more. One thing we haven't seen – not as many banks are coming to the market as we thought. They're taking bits and pieces but we're not seeing a very significant expansion in the number of bank lenders in the asset class. There are 10-15 banks, mostly European, alongside but including the three major Japanese banks. The US banks aren't that interested. Unless a lot of new banks start piling in, we're talking about a relatively modest decrease in margin."

Technology driving the competition

The scale of investment in offshore wind technology has ramped up dramatically in the past five years. Farms have grown in size



Ralf Skowronnek

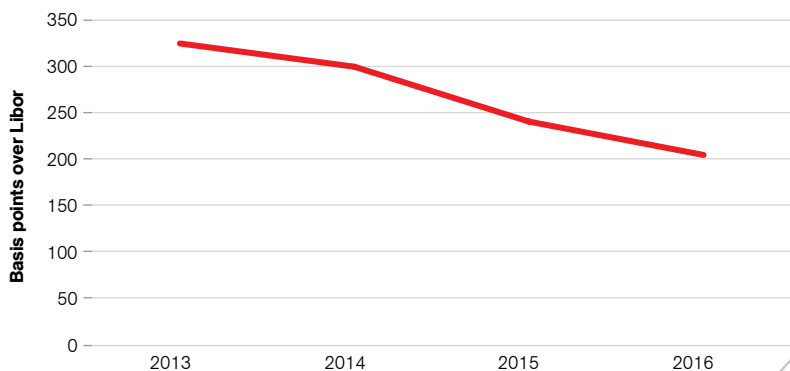
and have been built further out to sea, as developers hunt for stronger wind speeds.

Developers are now looking at 10MW turbines becoming the norm. This suggests projects will continue to scale up, with all the capex this requires, potentially squeezing out less experienced or smaller developers.

The profile of sponsors and lenders is changing, too. Perhaps unsurprisingly in a market still producing new products, technology companies and manufacturers are playing a pivotal role in financings. Contractors have recognised the opportunity posed by owning the proprietary technology and equipment. Dutch marine contractor Van Oord, for example, has teamed up with investor Highland Group to develop, finance and build the upcoming 252MW Deutsche Bucht offshore wind farm in Germany.

And banks are likely to want to

Debt pricing for European offshore transactions, 2013-2016



Source: IJGlobal

support them, says Muldowney, even if the technology does not have a long track record. “It’s one of the paradoxes of the sector,” he says. “Banks are prepared to finance new turbine models with suitable warranties at an earlier stage than they normally would for other technologies.”

This is because the introduction of former suppliers as sponsors will likely help lower costs and risk, Skowronnek says. “The contractors doing this are experienced, and they have their own technical capabilities. They can bid a low price in tenders as a result.”

Van Oord will carry out the balance of plant (all costs excluding those for turbines and their elements) for Deutsche Bucht, which consists of the engineering, procurement and construction of the foundations, inter array cables and the offshore substation. This approach reduces the number of counterparties involved in the project.

But as Skowronnek points out, a contractor – or a huge utility – may be able to bid low due to economies of resources and proprietary technology, but they may end up “spending more money within their own company, just not on third party contracts.”

Which could almost see the industry come full circle. Just like the early days, sponsors are now taking projects through to construction on balance sheet. The difference now is that new investors are willing to come on board as or just after construction begins to help lighten the risk load.



Jérôme Deflesselles

Muldowney says “in terms of the overall economy, interest rates have kept falling to extraordinary levels. In this climate, net margin becomes important. Lots of investors who can no longer rely on government bonds have started looking to real assets, which is driving more and more financial investors to the sector.”

For German utility EnBW’s €1.4 billion (\$1.49 billion), 288MW Baltic 2, for example, Macquarie Capital joined as co-equity investor in January 2015. It bought a 49.9% stake for €720 million, recovering a substantial amount of the construction costs for EnBW, who had already begun to build the project.

Next steps

The next evolution will be for such investors to come in even earlier. EnBW director of capital markets Peter Berlin told *IJGlobal* that its next German offshore

wind project, the €1.5 billion, 500MW Hohe See, will closely replicate the Baltic 2 offshore wind financing, but with equity investors coming on board at the final investment decision stage. That way, construction risk will be fully shared.

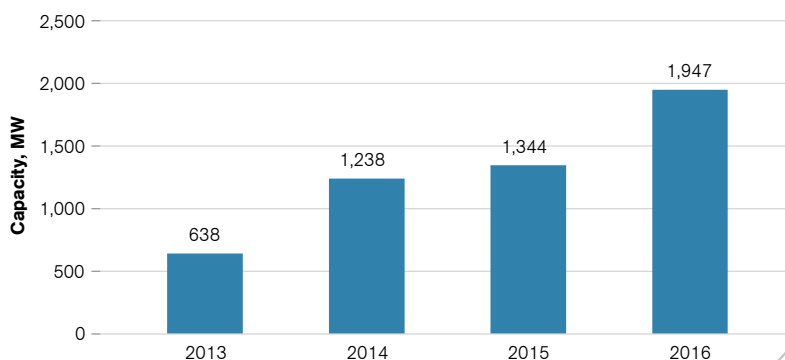
Rumours abound that Hohe See, due to close in early 2017, will be the first large scale offshore wind project to be closed using just corporate finance and pension fund debt, perhaps a marker of how far the industry has come: it no longer needs commercial banks at all, and can instead court big-ticket investments from lower-risk, lower-return investors like pension funds.

Muldowney suggests the offshore wind industry will need to deliver a continued string of low incident, successful operational projects for the current rate of investor interest to continue. A slowdown in appetite “would be caused by any major issue with a project,” he says. Skowronnek adds sponsors must be mindful of “today’s technical risks, which include turbines, but also substation components, and the use of 60Kv technology. Turbines are actually talked about too often – they are now relatively mature. However, foundation installation costs are very expensive, which is an issue.”

Skowronnek says lower costs and lower risks in the sector will depend on how technology develops. “The technical advisers and the engineers are, and will continue to be, very relevant. They will influence the lowering of the piece per MWh now and in the future,” he says. “We all have to trust in the capabilities of the engineers and designers in this business.”

He remains confident that the sector, for all its rapid evolutions, or perhaps because of them, will continue to dominate large-scale energy financings in Europe. “In the past we were building conventional power projects with a levelised cost of €40 per MWh. I think that will eventually happen with this industry...everyone’s focus now is preparing themselves to help projects get to the lowest achievable price. I’m no longer surprised about what can happen.” ■

European offshore wind capacity reaching financial close, 2013-2016



Source: IJGlobal

“Talking about an evolution...”

By Dean Kennedy, vice-president, product management, corporate trust, EMEA at Deutsche Bank

While regulatory requirements cause many banks to retrench from lending to the infrastructure and energy sectors, Deutsche Bank continues to support the market in multiple ways. In supporting the financing and refinancing of projects, acquisitions and corporates, the bank has seen a shift in the requirements of the infrastructure investor community in Europe.

A changing landscape

With the changing landscape of infrastructure finance, institutional investors are eager to deploy capital, leading to a diversification away from the traditional bank lending pool. Debt funds, insurance companies and pension funds are investing in long-dated debt to match their long-term liabilities.

The impact of the credit crisis saw project bonds in the European market all but disappear with most of the monoline insurers no longer able to insurance wrap deals and act as controlling creditor. The Corporate Trustee community was repeatedly asked, what can be done to bridge the gap and bring confidence back?

In 2012 the European Investment Bank's Project Bond Credit Enhancement (PBCE) kick-started the market once again. With both a funded and unfunded letter of credit instrument, the enhancement aimed to boost credit ratings of deals and encourage institutional investment once again.

With certain larger insurance companies bolstering their infrastructure investment teams in parallel, the first project bond financing of Greenfield road projects in Belgium and Germany respectively took shape. Both transactions benefitted from the unfunded PBCE and both brought in an independent project agent to look after the interests of the creditors and close the gap left by the monolines.

Since then, there has been a significant shift in the number of financing solutions available for Greenfield projects and the refinancing of operational assets. There are now numerous multi-sourced transactions using both banks and institutions with institutions taking greenfield/construction risk. Whatever the form of debt financing, a tailored agency solution was key for investors

to have comfort that a partner would be there to support them in the long term.

Latest initiatives

The recent roll out of the Loan Market Association (LMA) template private placement documentation and support from the International Capital Market Association, along with the UK government abolishing withholding tax, clearly helps to get private deals done. Could we be taking steps to a pan-European private placement market?

Although the new LMA template agreements appear to be focused on bilateral lending to the mid-market, we swiftly saw them adapted for much more complex project financings privately placed

with investors – including the investment arms of the insurance companies – and directly with smaller pension funds.

Other factors encouraging private infrastructure debt include the Juncker plan to unlock €315 billion of investment, the publication of the ICMA European Corporate Debt Private Placement Market Guide and the proposed stability of the member states through the Capital Markets Union. This should lead to an expanded institutional debt investor base within a wider private debt space.

What's next?

With 10 project bonds under its belt, the EIB's Project Bond Initiative has been

hailed a success with over €5 billion of private sector financing secured across Europe. The pilot phase of the initiative closed with a project carrying traffic risk for an Italian toll road refinancing. Capital markets' support for this project highlighted the benefits it could bring in attracting institutional capital away from availability-based revenue streams.

The EIB has now introduced a new senior debt credit enhancement facility (SDCE) to the market. This funded subordinated loan facility has been structured to support bank debt, institutional tranches and bonds, and builds upon the PBCE. It was recently utilized in the refinancing of a German toll road, boosting the deal's credit rating and protecting investors



from traffic risk. In contrast to the unfunded PBCE, the SDCE is a flexible funded loan drawn at the outset and geared towards supporting multi-sourced financing with operational and traffic risk. The question being raised is what will replace the PBCE to assist in covering construction risk?

With no bank involvement in some deals, and diversification of institutional investment to less sophisticated creditors, there is typically no natural option in supporting the debt service and administrative requirements around the project financing. An experienced independent party is often required to assist both borrower and creditors for the life of the deal, and this has taken the form of a project agent, facility agent, administrative agent, or noteholder agent, depending on the form of debt.

Late 2015 saw a shift in investor appetite to wind energy with the acquisition financing and refinancing of two offshore wind farms in Germany. The size of the debt for the refinancing led to a multi-sourced funding solution in both Europe and the US. The complexity of multiple tranches of debt with a large number of investors in multiple jurisdictions, called for a focus on intercreditor provisions, management of any waiver and amendments and timely distribution of key data in the long-term.

This also represented a move by investors into the renewable energy space, away from less risky availability-based road, bridges and social infrastructure projects which dominated the capital markets up to that point.

Banks continue to be vital in financing certain projects globally, as an arranger, advisor and/or hedge provider, with some banks still able to deploy balance sheet for the long-term. Banks still make up the largest proportion of investors in unlisted infrastructure debt at around 19% (source: Preqin).

Across the Pond

The US project bond market, by contrast, has benefited from the sophistication of institutional investors, robust documentation and therefore has no need for a controlling creditor. Its focus has moved towards more complex multi-sourced financings, including export credit agency support.

Pension funds and other asset owners are also increasingly investing in US infrastructure, often buying the assets from infrastructure money managers. The growing interest in direct investment could see more core infrastructure transactions brought to market in the chase for yield.

In North America there has been increased activity in brownfield P3 deals, with US states inviting private sector involvement in the monetizing or optimising of assets.

We see the Americas pipeline consisting mainly of solar and

wind opportunities along with developments in advanced storage solutions. This should play an important part in the renewable energy grid integration.

Interest in corporate power purchase agreements (PPA) has also increased, with corporate and industrial buyers entering into long-term contracts to buy renewable energy.

With the multi-year extension of the US renewable tax credits, many noted a slower renewable greenfield market at the beginning of 2016. The market is still expected to grow significantly over the next few years with solar and wind equipment prices continuing to fall.

Like Europe, the US has seen significant levels of financing and refinancing of multiple renewable assets in 2016, particularly solar or mixed portfolios of solar and wind. We expect this to continue as owners look to refinance existing senior debt more cheaply.



Infrastructure Funds

An increasing number of funds turned to core infrastructure assets in Europe, America and Australia in recent years. Since the first quarter of 2016, infrastructure funds with a dedicated infrastructure debt fund stood at over 45% as per Deloitte's European Infrastructure Survey.

Preqin also reported that a record 43 debt funds are now in the market with a US\$25 billion capital requirement, representing a 10% increase from last year.

Infrastructure funds are experiencing much more regulatory pressure than ever before. The introduction of Basel III and Solvency II, has led to significant changes in how funds need to operate.

However, the European Commission recently announced it is prepared to change withholding tax rules and insolvency regimes to encourage private placement lending. Insurance companies in the UK and wider Europe have welcomed this news.

Given reporting requirements driven by these regulations and a need for efficiencies in accessing portfolio data, online access has been a primary request

from managers. With reporting obligations ever increasing, new regulations such as Solvency II will mean continual support of funds in meeting their obligations.

And, with direct lending activity increasing, transaction banks have been requested to make available short-term liquidity solutions. As such, Deutsche Bank has expanded its support to the asset/investment management and debt fund community with a new liquidity solution through a committed repo facility.

The future of investment in this sector appears to point in the direction of more private debt and tailored solutions. ■



DATA ANALYSIS: The project finance market remains slow, but top ranked companies are still managing to exploit pockets of investment opportunity. By Jon Whiteaker.

Q3 2016 Global League Tables

The latest *IJGlobal* league tables shows a decline in global infrastructure finance transaction volumes during the third quarter of 2016, while in the year-to-date a total of \$524.59 billion worth of transactions have reached financial close. After a strong rebound in Q2, primary financing volumes fell steeply last quarter, while the number and value of acquisitions and refinancing transactions also declined.

At first glance the data seems to show sharp year-on-year declines for project finance transactions in terms of

both deal count and total value. Q3 2015 saw a total of 221 PF deals closed with a combined value of \$72.16 billion, while the Q3 2016 data shows just 98 closed deals worth a combined \$38.97 billion. However, *IJGlobal* expects these Q3 totals to rise in the coming months. For example, the Q3 2015 totals had risen 20% by value and 47% by deal count 12 months after they were originally published.

TOP MLAS

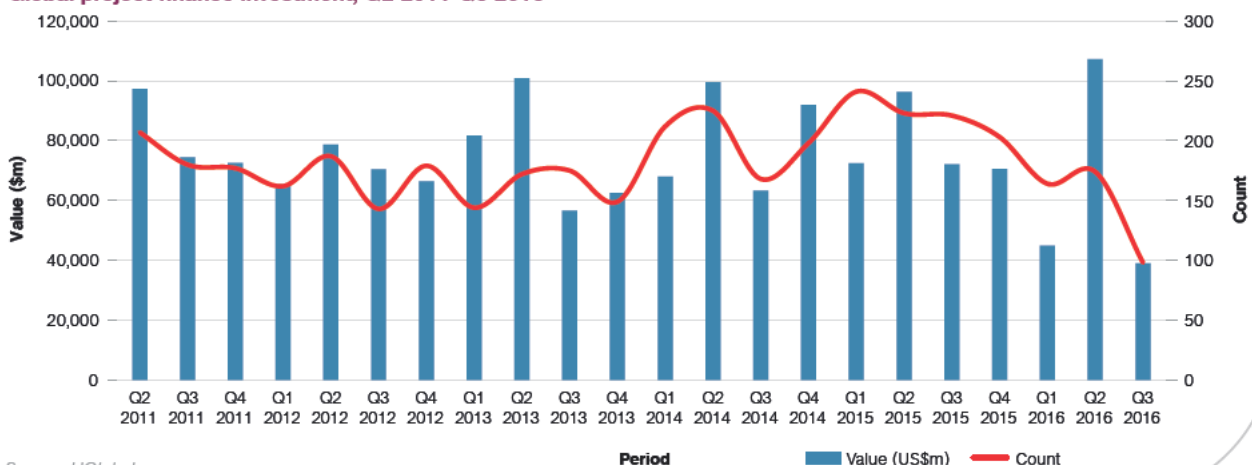
MUFG is dominating the infrastructure

finance global MLA league tables in the year-to-date, with 110 transactions closed and a market share of 6.36%. Of those transactions, 87 were project finance deals, which is more deals than its closest rival SMBC has closed of both corporate finance and project finance. SMBC is closer to its fellow Japanese bank in terms of the total value of transactions closed in 2016, with the accredited value of its loans across the whole market valued at \$9.96 billion compared to MUFG's \$11.54 billion. It was able to limit this deficit in value by taking

Largest closed project financings, Q1-Q3 2016

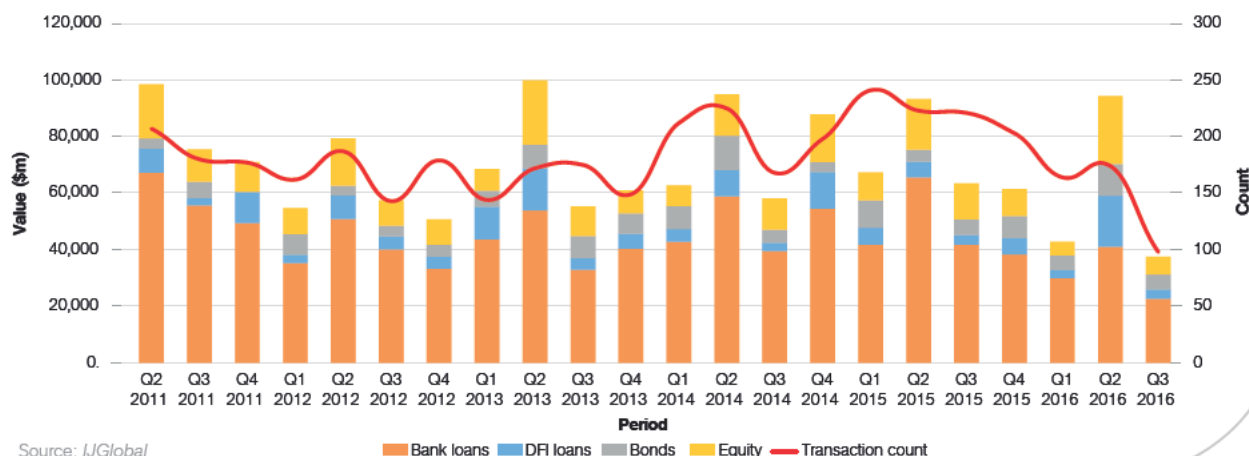
Sector	Transaction	Value \$(m)	Location	Financial Close
Oil & Gas	Dakota Access Pipeline	4,740	United States	01/08/16
Power	Hassyan Coal-Fired Power Plant Phase 1 (2,400MW)	3,150	United Arab Emirates	11/09/16
Power	Fukushima IGCC Power Plants (1,080MW)	2,755.05	Japan	21/09/16
Renewables	Merkur Offshore Wind Farm (396MW)	1,942.87	Germany	11/08/16
Power	Java-7 Coal-Fired Power Plant (2,000MW) PPP	1,800	Indonesia	29/09/16
Power	Sohar 3 (1,710MW) and Ibri (1,509MW) CCGT Plants	1,726.21	Oman	29/09/16
Oil & Gas	Sabine Pass LNG Bond Facility 2 2016	1,500	United States	19/09/16
Oil & Gas	Freeport LNG Train 2 Refinancing	1,250	United States	20/07/16
Renewables	Tees CHP Biomass Plant (299MW)	1,188.08	United Kingdom	11/08/16
Power	GNPower Dinginin Coal-Fired Power Plant (668MW)	1,115.43	Philippines	02/09/16

Global project finance investment, Q2 2011-Q3 2016



Source: *IJGlobal*

Global project finance investment by funding source, Q2 2011-Q3 2016



Source: IJGlobal

considerably larger tickets than its rival on some major deals (such the \$3 billion Facility D combined-cycle power project in Qatar, the \$2.3 billion privatisation of the Osaka & New Kansai International Airports in Japan, and the \$1.1 billion refinancing of the PP11 power project in Saudi Arabia) and participating without it on others (the \$512 million Long Beach Civic Centre PPP in the US, and the \$775 million acquisition of the Martabe gold and silver mine in Indonesia).

BUOYANT BOND ARRANGERS

The bond arranger table for infrastructure finance in the year-to-date shows both

the growing strength of that market segment and the competitiveness between arrangers. Royal Bank of Canada is out in the lead with \$7.49 billion in closed transactions just ahead of JPMorgan with \$6.56 billion, though the latter has closed one more deal (35) than the former. Just in terms of project finance transactions, the top 10 arrangers have closed on 84 bond arranging mandates between them in the first three quarters of 2016 whereas over the same period in 2015 the top 10 arrangers had managed just 57.

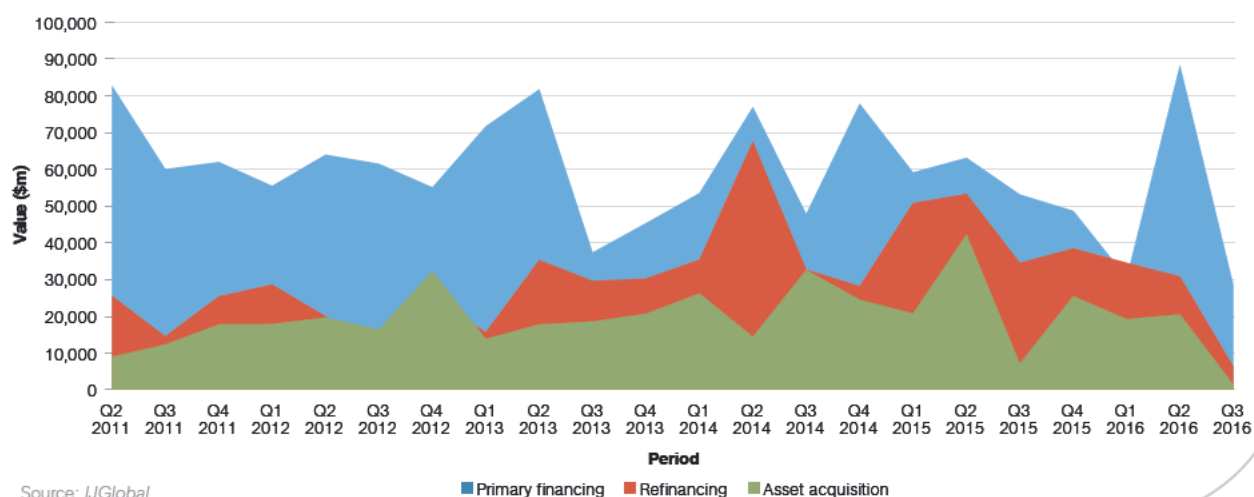
LEADING LAW FIRMS

Latham & Watkins is second in the latest

global infrastructure finance legal adviser rankings despite having worked on 25 less closed transaction than first placed Clifford Chance.

Its position has been boosted significantly by its involvement with the \$30.25 billion Yamal LNG financing in Russia. Clifford Chance worked on 64 infrastructure finance transactions which reached financial close in the Q1-Q3 2016 period, more than any other law firm. It has also risen to top of the project finance league tables from fourth in Q3 2015, despite working on just 39 closed PF deals compared to 48 the previous year. ■

Global project finance transactions by financing purpose, Q2 2011-Q3 2016



Source: IJGlobal

Sponsors, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Novatek	15,142	1
2	Total	7,435	7
3	Cheniere Energy	7,050	4
4	China National Petroleum Corporation	6,056	1
5	Rio Tinto Group	3,933	2
6	Energy Transfer Partners	3,555	1
7	China Silk Road Fund	3,228	2
8	Meridiam	3,146	3
9	Macquarie	3,122	9
10	ACWA Power	2,357	3

Legal advisers, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Clifford Chance	53,458	39
2	Latham & Watkins	50,872	28
3	Linklaters	47,506	27
4	Norton Rose Fulbright	27,916	36
5	Shearman & Sterling	27,556	15
6	Milbank, Tweed, Hadley & McCloy	25,912	25
7	Allen & Overy	22,398	34
8	White & Case	15,507	14
9	Chadbourne & Parke	12,963	20
10	McCarthy Tétrault	11,901	15

Bond arrangers, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Royal Bank of Canada	1,845	11
2	Citigroup	1,815	8
3	Barclays	1,615	10
4	Goldman Sachs	1,203	8
5	HSBC	923	7
6	Credit Agricole Group	877	11
7	Societe Generale	866	8
8	JPMorgan	862	9
9	Scotiabank	797	9
10	Deutsche Bank	681	3

Financial advisers, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	China Development Bank	30,249	1
=	Gazprombank	30,249	1
=	Portland Advisers	30,249	1
=	Sberbank	30,249	1
5	Societe Generale	11,045	5
6	Sumitomo Mitsui Financial Group	9,898	5
7	Ernst & Young	8,466	11
8	Mitsubishi UFJ Financial Group	8,010	6
9	Citigroup	7,374	3
10	Morgan Stanley	6,913	4

MLAs, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Mitsubishi UFJ Financial Group	8,151	87
2	Sumitomo Mitsui Financial Group	7,186	67
3	Mizuho Financial Group	3,602	36
4	Sberbank	3,069	1
5	Societe Generale	2,644	32
6	Credit Agricole Group	2,630	37
7	ING Group	2,192	29
8	Natixis	2,148	24
9	ICBC	2,048	17
10	Santander	2,043	27

Technical advisers, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Poten & Partners	30,249	1
2	Mott MacDonald	15,993	18
3	SgurrEnergy	8,385	6
4	Arup	7,565	13
5	BTY Group	5,151	5
6	Stantec	4,659	3
7	Power Engineers	4,300	1
8	Lummus Consultants International	4,050	2
9	AECOM	3,978	8
10	WSP Group	3,968	9

DFIs, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	China Development Bank	8,666	5
2	Japan Bank for International Cooperation	4,314	7
3	European Investment Bank	3,461	13
4	KfW	1,377	12
5	International Finance Corporation	1,187	10
6	Export Development Canada	666	4
7	EBRD	639	3
8	Inter-American Development Bank	620	7
9	Export Finance and Insurance Corp. Aus.	450	1
10	Export Import Bank of the United States	400	1

Insurance advisers, Q1-Q3 2016

Rank	Company	Total \$(m)	Transactions
1	Aon	9,444	14
2	INTECH Risk Management	6,154	7
3	Marsh Insurance	6,042	12
4	Benatar & Co	3,794	1
5	Jardine Lloyd Thompson	2,725	6
6	Willis Towers Watson	2,416	7
7	Indecs Consulting	1,726	1
8	Moore McNeil	1,274	1
9	Professional Risk Solutions	538	1
10	Crotty Group	176	2

Non-stop flight to capital

With Basel IV looming in the background, growth in capital markets financing for new aircraft deliveries is taking on new urgency. By Sean Keating.

There is no chance of anyone checking their exits in the aircraft capital markets at the moment – even with a Fed interest rate rise imminent. That said, given the low volume of export credit agency (ECA)-backed deals in the market – symptomatic of not only US Exim's inability to lend and European ECAs refusing Airbus deals until the recent fraud scandal is sorted out, but also the wealth of liquidity available for aviation – export credit arrangers might occasionally wish otherwise.

The range of aviation capital markets structures available for funding new aircraft has spiralled in recent years – from basic ABS backed by lease receivables or aircraft, to EETCs, unsecured bonds and reasonably priced private placements, even schuldscheine are being tapped. And an influx of new lenders has increased competition and driven down pricing, especially for loans to leasing companies and tier 1 airline borrowers.

In short, there is no lender market lack of appetite for financing new aircraft orders – which is good news given the order backlogs of Airbus and Boeing.

ABS still growing

Of all the structures, aircraft ABS experienced resounding growth in 2015, with issuance increasing 50% from 2014 financing more than 200 aircraft.

The market also welcomed first-time offerings sponsored by DVB/Deucalion, Element, AWAS and BOC Aviation – Asia's first aircraft leasing ABS – and a second offering by Castlake, which had the distinction of being the first combined aircraft and engine ABS offering.

This year has been little different, with a number of debut or follow-up deals including a first time \$324.7 million

deal by Harbour Aircraft Investments Limited (HAIL) in June, and more recently an \$800 million debut issue by aircraft lease investment fund Blackbird Capital I LLC – a joint venture between Air Lease Corporation and Napier Park Global Capital.

Both deals demonstrate the different poles in the securitised asset spectrum. Blackbird Capital Aircraft Lease Securitization 2016-1 is backed by 49.3% narrowbody aircraft, 48.8% widebody aircraft and 2% regional jet aircraft. The weighted average age of the collateral is 3.3 years, with a weighted average lease term of 7.3 years, considerably younger than most recent transactions.

Conversely, the HAIL portfolio had an average weighted aircraft age of 12.7 years – more in keeping with recent trends.

The difference in weighted average age is linked to low oil prices and a supply constraint on new aircraft models – for example Airbus has a 10-year backlog on orders for the A320. Those elements have increased the value of mid to older aircraft, despite being less fuel efficient, and the ABS market has been dominated since 2015 by older aircraft portfolios.

That trend looks unlikely to change given oil prices do not look set to climb and a number of Tier 1 carriers have recently announced cuts in new orders, instead opting to eke out more life from existing aircraft whilst low oil prices continue to make that economically viable.

But it is not just the asset profile that has changed in recent deals, the buyer base has also begun to shift from hedge funds to real money players over the last 18 months. Aircraft ABS, with its growing liquidity, is seen as an attractive buy for yield-seekers and there has been a good amount of insurance money and money

managers getting comfortable over the last year or so with aircraft bonds, particularly for the senior notes.

The recent \$649 million issue by Apollo Aviation Group is one such deal. Sole lead arranger Goldman Sachs priced the \$515 million A notes to yield 4.25%, while the \$85 million B notes yielded 6% and the \$40 million C notes 8%. The hunt for yield across fixed income, familiarity with the borrower and a lack of supply from the first half of the year, pulled in a variety of real money investors.

EETCs slow

Unlike ABS, the EETC market has slowed this year, despite 2015 dollar issuance volume being more than double that of 2014. By the end of the year more than \$7 billion of EETCs had been issued by eight airlines, financing 123 aircraft.

While this year there have been fewer deals, both United and American Airlines have been multiple issuers. On the downside, one non-US borrower – Norwegian Air Shuttle via a \$274 million 12-year issue closed in May – has tapped the market, compared with four in 2015.

The slight downturn is surprising given an important structural innovation was made to EETCs in 2015. A new super-senior class of certificates – Class AA – with underlying equipment notes – Series AA – was introduced as an innovation created on Delta's EETC issuance of August 2015, on which Morgan Stanley was the sole structuring agent.

The Class AA certificates are characterized by a senior-most position in the payments waterfall as compared to the other classes of certificates (with the customary exception prioritizing adjusted interest on junior classes ahead of principal distributions on the more senior class) and



The Airbus A380

a comparatively lower initial loan-to-value (LTV) ratio than the range customarily used for structuring Class A certificates.

Class AA certificates to date were generally structured to have LTVs just under 40%. These characteristics, along with the other structural enhancements typical to EETCs, allowed Class AA Certificates to obtain AA credit ratings. The Class AA offerings were structured with weighted-average lives of around nine years and achieved coupons ranging from 3.45% to 3.75%.

Private placements

As investors gain confidence in the aviation sector, more entrants have become involved in private placements, giving borrowers access to reasonably priced debt that might not otherwise be available to them.

2015 saw a number of significant deals: Falko Regional Aircraft raised a \$415 million fund in November, having targeting around \$300 million; Alitalia raised €375 million in July to fund aircraft deliveries; and Delta announced a \$647 million refinancing, arranged by Burnham Sterling.

This year kicked off with Oman Brunei Asset Management launching a \$208 million aviation leasing fund, tapping local financial institutions and high net worth individuals (HNWIs). Avianca followed with a private EETC via Burnham Sterling. And in June, Delta Air Lines raised \$450 million of debt in a

private placement with new investors, also via sole bookrunner Burnham Sterling.

Most surprisingly, in October, Irish aircraft lessor Goshawk launched a rare \$75 million *Schuldscheine* (in effect a private placement unique to the German market that sits somewhere between a bond and a loan). Commerzbank, Helaba and NordLB were the lead arrangers on the deal which featured the tranches at fixed and floating rates, with a spread of 190bp-210bp for the three year and 240bp-260bp for the five year.

It is impossible to verify, but according to two air financiers contacted, the private placement market has also had a good year and is expected to continue to grow. Given the appearance of *schuldscheine* in the market, and its relative rarity, the evidence would seem to bear that out.

Secure enough for unsecured

With the airline and leasing industries still in an upcycle, and a growing number of borrowers with upgraded credit ratings, unsecured financings are becoming a staple open to a much wider spectrum of borrowers.

That is good news for borrowers, because unlike secured financings, fundraisings are not limited by the amount of debt the collateral or asset base can maintain. The unsecured lending market also has considerably deeper pockets. For example, in May Air Lease Corporation

raised a \$3.1 billion unsecured five-year revolver priced at 125bp over Libor.

That unsecured borrowing is opening up to a wider aviation customer base was demonstrated in August when Goshawk, which only set up shop in 2013, issued its other debut financing of 2016 – \$231 million of unsecured notes issued to institutional investors in the US. The bond had five- and seven-year tenors, and proceeds from the notes will be used for aircraft acquisitions and general corporate purposes. Joint lead agents were Citi, HSBC and Natixis. Crédit Agricole was co-lead agent.

In June, another unexpected borrower, Canadian low cost carrier WestJet Airlines, also priced an offering of \$400 million aggregate principal amount of 3.5% senior unsecured notes due 16 June 2021. The deal closed on the back of an investment grade rating from Moody's for the airline the previous month.

With oil prices looking set to remain low for the foreseeable future, and Basel IV on the horizon, the flight to the capital markets is only going to continue to speed up in the aviation market – the only question is can it pick up enough velocity in time to offset Basel IV crashing the aircraft loan market.

According to Fitch, proposed Basel IV reforms could increase the amount of cash banks would have to provide against the risk of an airline defaulting on its payments to aircraft lessors. Such a move would make borrowing from banks to buy aircraft destined to be leased more expensive, and potentially reduce the number of institutions willing to lend. That change would mean borrowers seeking funds from the capital markets – insurers, life companies and investment firms – rather than banks.

But while the investor base for aviation capital markets is diversifying, a bank withdrawal from the loan market would leave a significant funding gap: Banks are expected to provide about \$34 billion of the \$127 billion that buyers are set to spend on new aircraft in the coming year. ■

Voice of the market – WIES

Attendees to the 7th annual World Infrastructure & Energy Summit in Madrid on 26-28 September 2016 deliberated the global infrastructure gap, the changing role of banks and the changing definition of infrastructure, among other issues.

“The lack of a consistent project pipeline in the greenfield space was one of the main themes at WIES. In Europe, I believe this might be a signal for managers to start looking in those areas where they haven’t been very active so far. CEE, LatAm and the US might offer the right scope of opportunity”

Gwenola Chambord, head of infrastructure funds, Mirova

“It is interesting to see how banks continue to dominate the energy and infrastructure markets globally. It is also interesting to see how they have never really gone away despite having been hit quite hard by the financial crisis. Now even more, thanks also to a fairly loose monetary policy, banks are very active in the project financing space. On the other hand, we are also seeing institutional investors continue to expand into the market. With strong levels of liquidity, we expect some more competition but banks are still very much in the game.”

Michael Wilkins, managing director, head of global environmental & climate risk research, S&P Global Ratings

“Immediately after Brexit, we saw increased appetite for UK infrastructure assets by institutional investors looking to take advantage of the movements in sterling following the referendum.”

Michael Pearson, partner, Clifford Chance

“We have found that managing infrastructure debt via separately managed accounts (SMAs) rather than a fund in Europe offers several benefits; it offers every investor a tailor-made mandate structured to meet their needs and match their liabilities as well as avoiding the complications inherent in setting up, and deploying, a fund in a fragmented political and regulatory environment.”

Lucy Dale, associate director, debt investments, Europe, IFM Investors

“While [the infrastructure debt market] has traditionally been dominated by banks, institutional investors have proved to be able to provide long-term lending too. Banks still have a role to play too and the key conclusion seems to be that there is a way for them to work together with institutional investors.”

Nicolas Lucas, vice-president, infrastructure debt, Allianz Global Investors

“We are witnessing a lack of pipeline at a global level. Current infrastructure global spending is around \$2 trillion per annum, while research has suggested that at least \$3 trillion is required to be invested to address infrastructure around the world. 75% of the infrastructure that will exist in 2050 has yet to be built.”

Nick Merritt, global head of infrastructure, mining and commodities, Norton Rose Fulbright

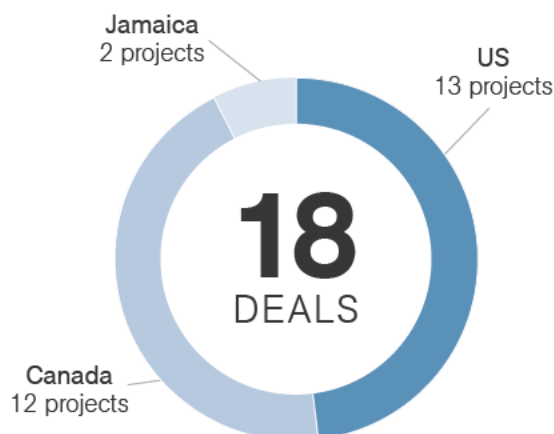


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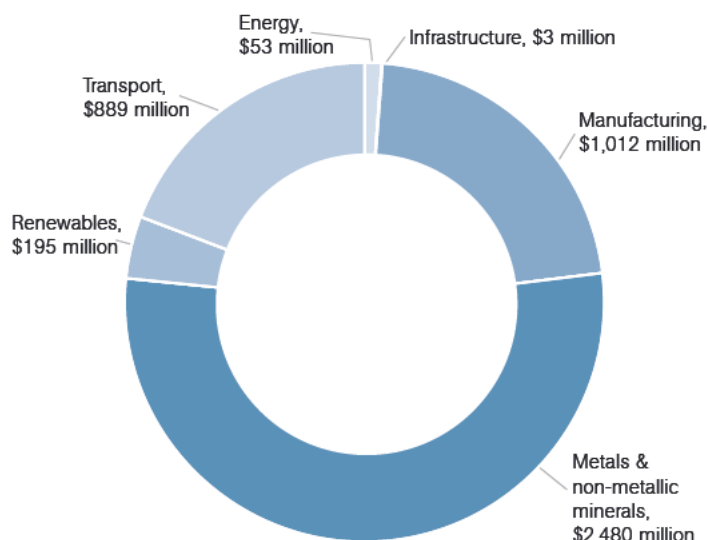
Projects with recent tender updates

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- Chicago Union Station Redevelopment
- Texas Woman's University Student Housing
- Norman Manley Airport Expansion
- Cooksville GO Rail Transit Station PPP
- Highway 401 Rail Tunnel PPP
- Acquisition of Trans Energy

Closed deal values by sector

- Oil & gas:** \$5.31 billion
- Renewables:** \$3.18 billion
- Power:** \$994 million
- Transport:** \$689 million
- Social & defence:** \$523 million

Closed trade finance deals



Closed infrastructure deals



Source: IJGlobal, from 1 September to 31 October 2016.

The Alberta Opportunity

The entire value chain of Alberta's energy and power marketplace is in the midst of a major upheaval, giving rise to challenges and opportunities. By Chase Collum.

Alberta plans to transition its coal-heavy power sector to a renewables and gas-only mix by 2030. The province has however an overabundance of capacity with nearly one-third of its existing generation in reserve at highest peak loads. Also, power prices have been falling to between \$15 and \$25 per MWh from its previous average nearer \$80 per MWh – which despite new government initiatives is a serious detractor to new development.

Acting Out

Despite renewables comprising about 19% of Alberta's 16,500MW capacity mix today, they account for only around 10% of actual generation. Alberta is the top carbon polluting province in Canada.

On 3 November, Alberta's Minister of Environment and Parks, and the Minister Responsible for the Climate Change Office Shannon Phillips introduced the Renewable Electricity Act.

The law mandates a target of 30% renewable electricity by 2030 and authorises the Alberta Independent System Operator to develop and implement programmes that will incentivise renewable projects. The legislation also adds a new carbon tax

and puts a cap on oil sands and methane emissions from the oil and gas sector.

Phillips said while announcing the new law: "By directly reinvesting costs from carbon pollution into renewables we expect to keep consumer prices low as we create the largest renewable energy market in Canada."

Alberta will hold its first competitive renewables auction for 400MW of generation through 20-year contracts in early 2017, with an aim to bring those projects online in the second quarter of 2019.

According to a recent report by Calgary-based EDC Associates, the move to renewables "could be very expensive for consumers, government and generators", leading to between \$4 billion and \$8 billion in subsidies by 2030. EDC predicts that subsidies would continue to grow to between \$800 million and \$1.8 billion per year by 2049.

EDC claims another consequence of adding 5,000MW of renewables to the mix is the potential impact on overall price volatility which is already a challenge.

Capital Power Corporation estimates subsidies could cost \$10 billion over the next 30 years but has called for a

firm commitment "to aggressively reduce greenhouse gas emissions."

Price of change

"I think everyone is looking for what ultimately will be the contract price?" says David Jesty, project finance MD at Manulife.

Alberta is in the midst of a recession being driven by a sluggish oil and gas sector, and "if you wanted to achieve some boost in the power price in the foreseeable future the only way you could do that would be shutting down some of the coal plants", Jesty says.

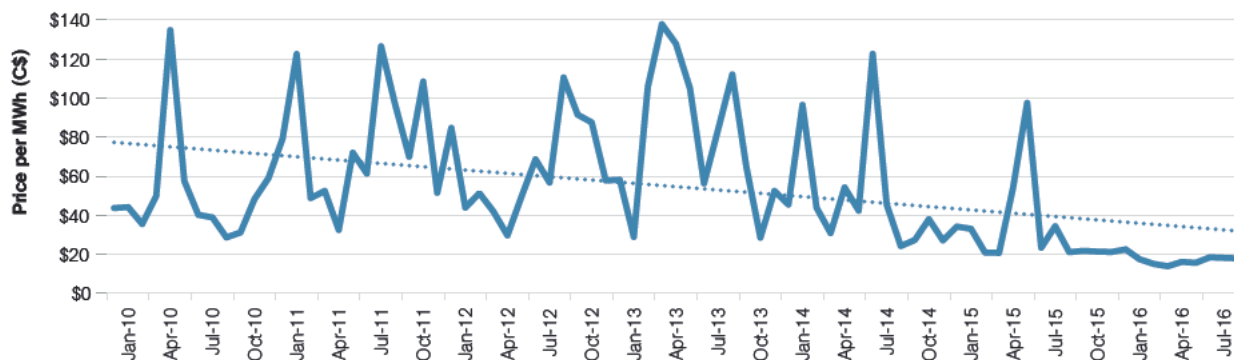
Power prices in November have been hovering around the low- to mid-twenties, according to the AESO, and for renewables developers to be willing to participate in the 2017 auction the government will need to find some way to bring 20-year contract prices between \$25 and \$35 per MWh.

That will be difficult due to oversupply. There have only been a handful of instances in which demand rose over 10GW throughout 2016.

Transmission uncertainty

Transmission is also a concern for potential developers. Given the

Alberta power pool price monthly average



Source: IJGlobal

intermittent nature of wind and solar without integrated storage components, it could be difficult to gauge how accommodating existing frameworks could be for the impending new load.

It is also unclear whether any new lines will be socialised or dedicated so that curtailment isn't an issue. Jesty asserts: "I've invested before where you have curtailment issues, and it does effect the return."

A recent report by law firm Blakes notes the challenges for developers and regulators to achieve the 2019 in-service deadline if a large number of projects are successful in the first competition. This is partly because the procurement was originally intended to be launched in late 2016 but will now start in Q1 2017.

The report argues that "it is not clear that new projects will be situated in locations that will enable their ready use

of existing infrastructure."

It also argues that with the first procurement arguably favoring projects that have already received regulatory approval and which are situated near existing transmission facilities, "the AESO's recommendations may raise fairness concerns for non-renewable procurers or non-winning bidders who had a pre-existing position in the AESO's interconnection queue."

PPA Walk-away

The impending carbon tax could see buyers step away from their existing coal-fired PPAs.

"Beginning in 2018, all coal generators will pay \$30 per tonne of CO₂ on emissions above what Alberta's cleanest plant would emit to generate the same electricity," according to a study by Borden Ladner Gervais. "This will provide

a clear economic advantage to lower emitting and more efficient generation in the power pool's 'merit order' and encourage its dispatch in the power pool."

The charge should cause power pool prices to rise, which would be a good thing from a developer perspective, but it is unclear whether that impact would be large enough to really bring prices in line with what developers of new projects will need to feel comfortable.

Given the new law, all seven buyers in long-term PPAs with coal producers have been contemplating walking away from their obligations.

The wording of the legal code is under review in Alberta courts, since it states that buyers are authorised to cancel contracts without any termination payment in instances when a change in the law causes their contracts to become "unprofitable [or more unprofitable]"

In March, Terry Boston was named as the provincial independent coal phase-out facilitator. His responsibility will be to engineer a plan for replacing two-thirds of coal generation with renewables and one-third with natural gas generation by 2030. Alberta recently announced that it is likely coal generators will receive payouts to compensate them for interruption of their expected lifetime earnings, though the size of those payouts is unclear.

Powering forward

Though long-term targets are clear, the government needs to provide greater clarity on how to proceed in the short-term.

"There has to be a staged phase-out of the coal plants. That's not an easy process, because you obviously don't want to find yourself power short here," Jesty says.

There is still no clear guidance as yet on the 2,000MW of natural gas that the province plans to add to the power mix between now and 2030, and government clearly has a lot to do.

Jesty says of the government: "To their credit, the government has been very open to feedback, and even brought in external consultants," he says. ■

History of Alberta power

Alberta's electricity sector has differed from neighboring provinces in that it has comprised independent, investor- and municipally-owned utilities, which by 1995 had conglomerated to the point that three companies stood at the top of the food chain (ATCO, EPCOR and TransAlta) providing around 90% of Alberta's total 8,600MW capacity. Of that generation, 75% came from coal.

In 1996, Alberta introduced the Power Pool with the Electric Utilities Act, creating a paradigm in which all generation would be sold through an open, competitive marketplace regardless of whether it was generated within or outside of the province. In 2000 the power purchase arrangement (not to be confused with agreement) concept infiltrated the market, and even the 'big three' were forced into the power pool through mandated auctions. The quasi-cost-of-service model allowed buyers the right to offer generation into the power pool at prices reflecting fixed and variable costs along with a reasonable return on investment.

A retail market was introduced the following year. This allowed residential customers and small businesses to buy retail from independent, non-regulated companies through a variety of contractual arrangements. At the time, retail competition was meant to become the norm, with the Alberta Utilities Commission setting standard pricing for all customers who didn't pick their own retailer, but this didn't happen.

As of June 2016, Alberta's installed capacity comprises 44% natural gas, 39% coal, 9% wind, 6% hydro, 3% biomass, and 1% from a small smattering of other sources. Despite this matrix, at the end of 2015, coal accounted for 51% of generation, natural gas for 39%, wind for 5%, biomass for 3%, hydro for 2%, and other sources for substantially less than 1%.

Under a new regime introduced this year by the liberal government led by Premier Rachel Notley, Alberta plans to phase out coal completely or transition any coal generation to carbon free by 2030.

NEWS ANALYSIS: The unexpected election of Donald Trump as US President makes future energy policy unclear. By Chase Collum & Sakshi Sharma.

Certainty trumped

The election of Donald Trump as the 45th President of the US was initially met with volatility in international markets due to his outsider status, the long odds his victory was given in most betting markets, and the unconventional policies he proposed during his campaign.

His stated positions on the energy sector seem less controversial than for other policy areas, though many industry participants in the US were still anxious to see how his presidency unfolds in the immediate aftermath of his victory.

"Trump's election introduces significant uncertainty to the outlook for government policy, economic activity and the US Federal Reserve. Market volatility has spiked in reaction to the result and we expect this to continue over the coming weeks amid speculation about his likely policy agenda," Standard Life Investments said in a statement.

Trump's victory is expected to be good news for conventional power and oil and gas, but as Eli Katz, a partner in the tax department at Latham Watkins in New York, told *IJGlobal*, it is "probably not a great thing for renewables".

RENEWABLES REVERSAL?

Trump called climate change a hoax and promised to tear up the Paris climate treaty during his divisive campaign.

"At the federal level, most of the policies that supported renewables were done by the administration and not by Congress," Katz said, which would likely mean Trump would meet little resistance in peeling back climate initiatives and clean energy support. At the same time, he said, "a lot of renewables support is at the state level so that should remain the same, and a lot of the federal tax policies are long-term measures enacted by congress,

so they should remain the same."

With the Republican Party retaining control of Congress, major structural changes to the tax code are expected.

These are likely to negatively impact the renewables sector, whose tax breaks could become less valuable.

Covington & Burling partner Andrew Jack, based in Washington, DC argues however that "there's a lot of things that are going to continue regardless of who is in government."

"Probably good news for fossil fuels, since Donald Trump is partial to oil and coal."

He says there will continue to be technological innovations and state initiatives in places like New York and California and strong support for renewables is also likely to continue in the corporate sector.

"There has been a tremendous increase in corporate PPAs... I don't foresee corporations changing their view on that," Jack said. "It's been driven by a combination of economic and business factors that aren't political."

OIL & GAS SUPPORT

Andy Lipow of Houston, Texas-based Lipow Oil Associates said that a Trump administration is "probably good news for fossil fuels, since Donald Trump is partial to oil and coal."

Though immigration flows from Mexico have often been bandied about by Trump as a grave threat to the US, Lipow does not think this attitude will endanger cross-border pipeline projects, such as the recently closed Nueva Era pipeline.

"I think those will still continue because at the end of the day they still do help US industry and create jobs here."

Houston-based partner at law firm Baker Botts Jason Bennett expects "a likely reduction of the constraints on US exports of hydrocarbons, including more permissive LNG export policies", and "over the medium term, a reduction in regulation in the energy sphere and a promotion of investment in energy infrastructure and activities."

Though Lipow warns that Trump's oppositional attitude to international trade, and his 'America first' and anti-globalisation rhetoric, could still be a negative for the domestic oil industry.

COAL COUNTRY

Trump made campaign promises to revive the declining US coal industry, and was rewarded by becoming the first Republican presidential candidate to win Pennsylvania since 1988. Pennsylvania is home to the largest known deposits of anthracite coal found anywhere in the Americas.

His promises however may turn out to be hollow. Many bankers say that regardless of any potential federal incentives, there is far too much uncertainty to warrant investment into greenfield coal.

New York-based Holland Knight partner Stephen Humes says "it was easy for him to tell coal country that he's going to fight for their jobs, sooner or later the laws of economics are going to catch up".

The abundance of natural gas and a likely expansion of fracking under a Trump administration are going to continue to put pressure on coal prices. "At the end of the day, people prefer to pay the least cost for energy possible," Humes said. ■

NEWS ANALYSIS: The Canadian province is pushing forward with various rail PPPs as part of a larger transport infrastructure investment programme. By Sakshi Sharma.

Rail PPPs on track

Ontario's provincial procurement agency Infrastructure Ontario (IO) and transportation agency Metrolinx have begun to actively seek private sector proposals for the design, build, and finance (and where required operation and maintenance) of large portions of a planned expansion of the GO Regional Express Rail (RER) and light rail transit across the Greater Toronto region.

The four recently launched tenders, among which three seek proposals for RER expansion projects while a third involves the province's third light rail transit project, are the beginning of a larger wave of future tenders to advance a planned C\$30 billion 10-year transport investment programme launched in 2014. The province hopes to speed up rail transit across the Greater Toronto and Hamilton Area and offload traffic congestion on Toronto's arterial roads.

The projects are being tendered under IO's Alternative Financing and Procurement (AFP) delivery model – or essentially as PPPs – where the province transfers certain risks to the private sector. The impending wave of rail projects will also be delivered under the AFP model.

RAIL AMBITIONS

GO Transit, an operating division of Metrolinx which merged operations with the agency in 2009, is the province's only inter-regional public transport service for the Greater Toronto and Hamilton Area (GTHA). GO Transit has historically only offered two-way, all-day services along only a few lines (Lakeshore East and Lakeshore West lines), while providing peak rush hour service on its other lines.

Through the wider RER and LRT expansion programme, the province seeks

to improve service across many lines on the existing GO Transit network including extensions to Hamilton and Bowmanville, as well as new GO Transit corridors to Bolton, Seaton and Locust Hill.

Specifically, the Regional Express Rail (RER) project will expand the GO Transit lines by adding an all-day, two-way service to the Barrie line and the inner portions of the Kitchener line and the Stouffville line, and by increasing the frequency of the train service on rest of the corridors to as often as every 15 minutes.

RER also involves full electrification of the Lakeshore East and West lines and the remaining corridors. With RER, Metrolinx expects to nearly double ridership to 127 million riders per year by about 2029 from 65.7 million in 2015.

Of the total budget for *Moving Ontario Forward* investment programme, about C\$13 billion (\$9.6 billion) and C\$16 billion comprises the RER and transit schemes across the GTHA. The RER programme is expected to provide faster, more frequent and more convenient transit service across the GTHA on the GO rail network by 2024-25.

But neither IO or Metrolinx have yet publicly stated plans to raise rail fares as a result of the planned rapid expansion. The need for the programme, the agencies said, rose from the congestion in the GTHA which the provincial government says is a more 'serious' problem as the region grows and the existing infrastructure will not be able to support the projected future growth in the region.

"Ontario is in the midst of the much larger RER programme, which is moving along very quickly," a Metrolinx spokesperson told *IJGlobal*. They added that Infrastructure Ontario has

a mandate to evaluate any project that has a capital value of over C\$50 million for delivery under the AFP model.

While the capital value of the recently launched tenders has not been disclosed at this stage, typically rail projects of this magnitude would range from C\$300 million to C\$2 billion.

TRANSIT SUCCESSES

IO issued a tender in October to solicit proposals for the Hurontario light rail transit (LRT) project. The 23.2km Hurontario LRT will be a double-track system that will run between the Port Credit GO station in the City of Mississauga to Downtown GO station in the City of Brampton.

The new modern light rail vehicles will travel in a dedicated right-of-way and serve 22 stops with connections to GO Transit's Milton and Lakeshore West rail lines, Mississauga MiWay, Brampton Züm, and the Mississauga Transitway BRT.

Hurontario LRT is the fourth rail transit PPP to be launched in the province of Ontario, according to *IJGlobal* data. The government of Ontario has committed C\$8.4 billion in support of new transit for Toronto.

The province has typically backed its transit projects with completion payments of between 80% and 85% to leverage better value for money for AFP projects, but that has resulted in shrinking equity checks.

This is not deterring sponsors however according to an equity shareholder in one of IO's recent LRT transactions, as the efficiency of procurement in the province is very attractive. The deals to date have featured both medium and long-term investors debt investors. ■

DATA ANALYSIS: Another Canadian LNG project has government approval but the country's export market still faces challenges. By Chase Collum.

Export indecision

In October Pacific NorthWest LNG became the latest in a line of Pacific coast LNG export facilities to receive approval from Canadian government bodies.

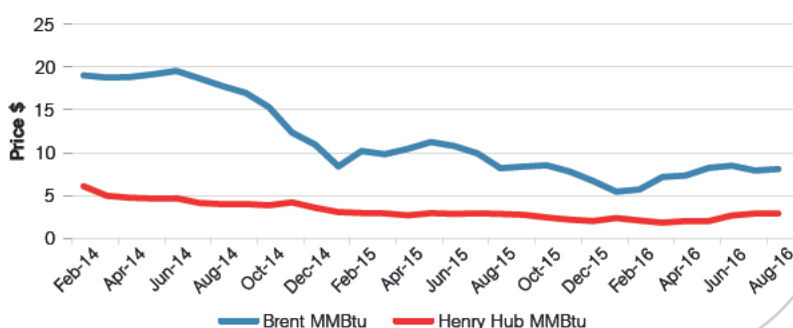
Several other approved LNG projects, including the \$3.8 billion Kitimat LNG and \$1.6 billion Woodfibre LNG, have been forced to delayed final investment decisions however, and Malaysian state-owned sponsor Petronas may yet be faltering on the \$36 billion Pacific NorthWest LNG project as well. Roughly \$11 billion has reportedly been spent on the project in pre-development.

After promising to present a final investment decision in Q4 2015 on Douglas Channel, widely expected to be the first LNG export facility on the Pacific coast, AltaGas said that its sponsor consortium was unable to agree a meaningful offtake agreement and the project was subsequently shelved in February.

That same month, Royal Dutch Shell decided to postpone a final investment decision on its \$25-40 billion LNG Canada project.

The much smaller Woodfibre LNG project, owned by Singapore-based RGE, is located near the town of Squamish, British Columbia. It received federal environmental approval in March having already been approved by The Squamish Nation. Woodfibre is considered among the most likely of the projects to move forward and the developer has committed to a Q4 2016 final investment decision.

Spread between North American Henry Hub and Asian LNG prices



Source: IJGlobal

CHALLENGING ECONOMICS

Since the most recent spike in February 2014, the Henry Hub price for LNG has fallen from \$6 per million British thermal unit (MMBtu) to \$2.82 per MMBtu, according to the US Energy Information Administration (US EIA). Meanwhile, Asian offtakers report oversupply. The spread between North American Henry Hub prices and Asian LNG prices, which are typically linked to Brent crude oil spots – though local LNG spot indexes are emerging – have collapsed from about \$16 per MMBtu in early 2014 to between \$6 and \$8 per MMBtu today.

The drop in spread amounts to a severe cut to profits for LNG exporters from western Canada, and without infrastructure in place to support project development – which exporters in the US Gulf Coast benefit from – the economics are extremely challenging.

Despite the tough environment,

Steelhead LNG reported in September that plans continue to move on its Malahat and Sarita Bay LNG export projects, and Alberta gas producer Seven Generations Energy signed a non-exclusive agreement for a small stake in the developments. The Canadian National Energy Board has approved five licenses to export up to 30 million tonnes of LNG per year for 25 years for the two projects.

Rumours, which the company has denied, abound that Petronas is considering pulling out of Pacific Northwest LNG. Petronas has stuck with its official line that along with its co-sponsors, it is considering all options before making a final investment decision.

Meanwhile on the east coast, the Pieridae Energy-sponsored Goldboro LNG project in Nova Scotia appears to be moving ahead, with Honeywell announcing in August that it had won a contract to provide full automation and safety systems to the under-construction facility.

With expectations of \$65 per barrel of oil equivalent at the end of 2017, it may be that Pacific coast LNG projects in Canada could see a renaissance but with US exports ramping up until 2020, oversupply is likely to continue. ■

Proposed pacific coast LNG projects

Name	Stage	Value (\$m)	Location
Pacific NorthWest LNG	Financing	36,000	British Columbia
Kitimat LNG	Financing	3,829	Alberta, British Columbia
Woodfibre LNG	Pre-financing	1,600	British Columbia
Goldboro LNG	Pre-financing	6,968	Nova Scotia
Dawson Creek LNG Project	Cancelled	17	British Columbia

Latin America

INSIDE

Trump and Mexico
Renewable energy boom

Pipeline & procurement deals



Projects with recent tender updates

La Lima Street Paving PPP

CELG-D Privatisation

Red Compartida Broadband PPP

Asuncion-Tape Pora Highway Ruta 2 and 7

Corozal West Terminal PPP

Bucaramanga – Barrancabermeja – Yondo

Autopista al Mar 2 (254KM) PPP

Acquisition of Duke Energy's

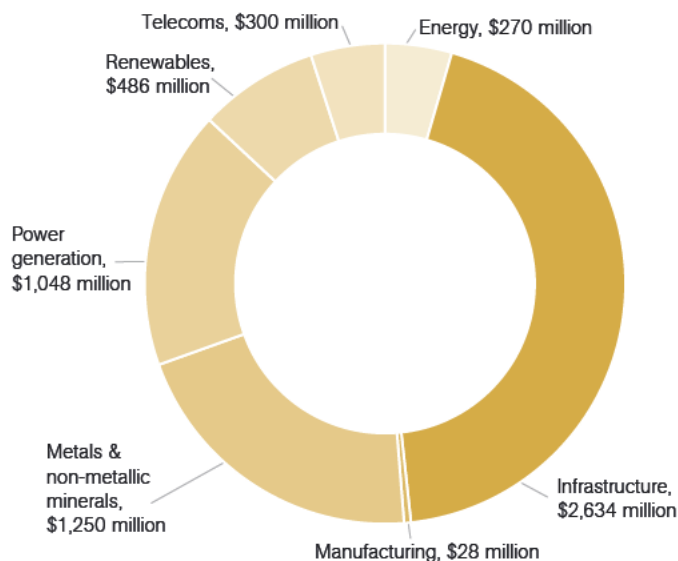
Closed deal values by sector

Transport: \$2.53 billion

Oil & gas: \$830 million

Renewables: \$62 million

Closed trade finance deals



Closed infrastructure deals



Source: IJGlobal, from 1 September to 31 October 2016.

DATA ANALYSIS: Will Mexico's infrastructure projects suffer due to a Donald Trump presidency? By Rosie Fitzmaurice & Sarah Tame.

Trump and the plummeting Peso

The aftershock of the election of Donald Trump as the 45th president of the US was felt strongly in Mexico.

The day after the election the Mexican peso suffered its biggest drop since the 1994-95 Tequila Crisis, in which the country almost declared itself bankrupt. The currency fell by more than 13% to Ps20.7 against the dollar, before closing at about 8% on 9 November 2016.

Market observers predict that currency volatility will persist for several months, as Trump's policies are revealed. But what impact will this have on the country's infrastructure and energy projects?

The majority of Mexico's infrastructure projects have revenue streams paid in pesos. These projects are also primarily financed with locally denominated debt.

What impact the devaluation of the currency will have on the highly liquid local bank market remains to be seen. According to IJGlobal data, Mexico has a pipeline of nine new hospital PPPs to be tendered in 2017 and at least three more transport projects.

Most large scale oil and gas and

power projects, by contrast, are financed in US dollars and have US dollar revenue streams.

In the renewables sector, projects have been financed with both peso and US dollar denominated debt. Some PPAs awarded under the self-supply scheme in the previous energy regime are

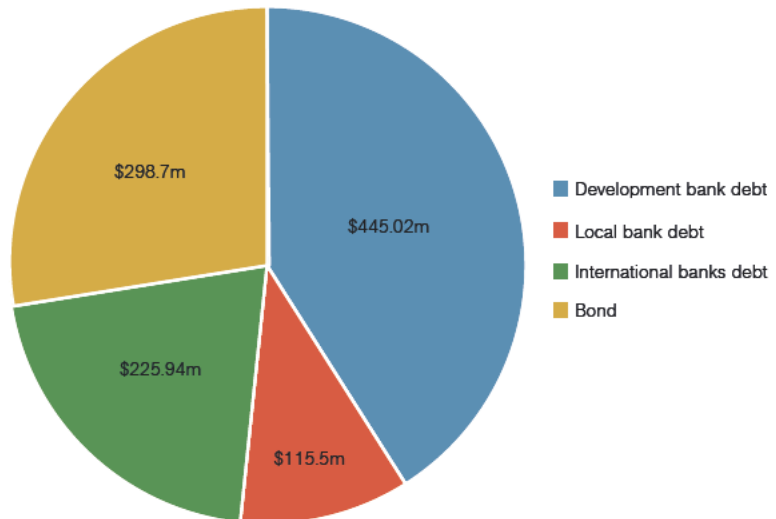
denominated in pesos. While contracts awarded by the federal electricity commission (CFE) to renewables projects – under which it acts as sole offtaker – were denominated in US dollars.

According to IJGlobal data of the 22 renewables projects closed in Mexico seven have dollar denominated lending.

Following Mexico's energy reform, Cenace has held two auctions to award long-term contracts to renewables projects. The new PPAs differ in that they are paid in pesos, but sponsors can opt to have payments indexed to US dollars.

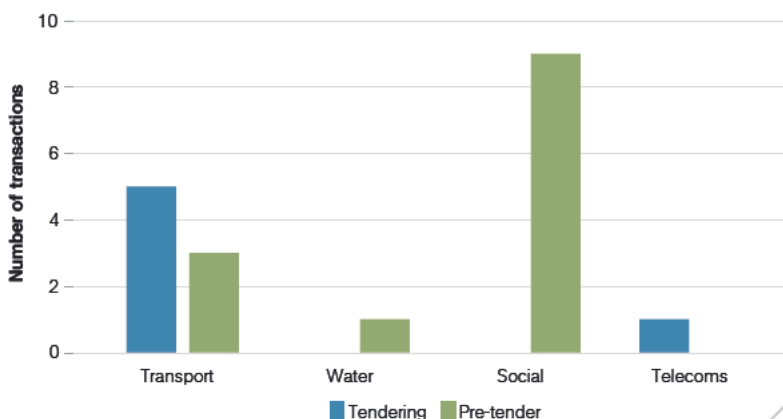
The question is whether the devaluation of the peso might lead the government to swap contract terms for new projects from dollars to pesos. But a New York-based banker active in Mexican project finance says it would be an overreaction on Mexico's part to begin acting in response to the shock election results before its effects have properly been felt. ■

Dollar financed renewables projects (2004-2016)



Source: IJGlobal

Mexico's infrastructure pipeline 2016



Source: IJGlobal

NEWS ANALYSIS: Three countries in the region have attracted significant investor interest in renewables in recent months. By Rosie Fitzmaurice.

Auctions all round

Latin America is experiencing a boom in renewables, and in particular solar. Governments have been rolling out tenders and have been rewarded with significant reductions in tariff prices. But in an environment where tenors are set to shorten and pricing rise, some question whether this trend is sustainable.

MEXICO'S SECOND WAVE

Mexico held its second long-term power auction for renewable energy in September 2016, in which 2.8GW of wind and solar projects were awarded. The first auction in March had already seen 2GW of capacity awarded.

In both processes, solar photovoltaic (PV) emerged as the dominant technology, accounting for 54% of contracts in round two and 81% in round one. Wind accounted for the second largest share (43%) in the latest process compared to just 19% in March.

PV was also the most competitive energy source in the latest round of bids. The average price of solar offers was \$31.7 per MWh, 42% below the offers received for solar in the first auction (\$44.9 per MWh), and beating even conventional power.

Across the two rounds, 34 companies have committed to investing an estimated \$6.6 billion to build close to 5GW of new capacity.

Cenace offered three different products in the auctions: clean energy certificates (CELs), capacity contracts, and generation contracts. State utility CFE will initially be the sole offtaker under these contracts, though eventually other industry players are expected to participate as purchasers of power.

Capacity is contracted under 15-year PPAs, but CELs are issued for

a period of 20 years. Some lenders have expressed concern over the merchant feature of the new PPA model. But lenders are already assembling for some projects.

CHILE SETS NEW LOW

PV also emerged as the most competitive energy source in Chile's August power auction. Spanish developer Solarpack set a new world record by offering a tariff of \$29.1 per MWh for its 120MWp Granja PV project.

Solarpack's offer was well below the average price achieved in the auction, which was \$47.6 per MWh. Inigo Malo de Molina, head of the Andes region for Solarpack, points out however that there were other low bids, including Mainstream's \$29.2 per MWh.

Several reasons, according to Malo de Molina, made it possible to offer such low prices. A key factor was the approval of the transmission law in July 2016, which establishes different mechanisms to facilitate the expansion of the transmission system, ensuring that the system is well connected and minimising the risk of system congestions.

It is particularly important for solar PV projects to be able to generate power in the Atacama Desert where the best resources are, explains Malo de Molina. "This was one of the factors which allowed us to compete with a very competitive capex".

SPONSORS BET ON ARGENTINA

Argentina announced the winning bids in the country's debut renewables auction, RenovAr, in October. It also announced it would be accepting improved economic offers from the unsuccessful bidders in a next stage of the auction, RenovAr 1.5.

President Mauricio Macri launched

the 1GW RenovAr auction soon after taking office in December 2015. The Ministry of Energy and Mines received 6GW of bids from local and international players in September 2016.

The average prices achieved for wind and PV are \$69.5 per MWh and \$76.9 per MWh respectively, while the minimum offer received for each was \$49 per MWh and \$59 per MWh. Winning bidders included Envision Energy, Sowitec, Genneia and a subsidiary of the Jujuy provincial government, Jemse.

That the auction is 6x oversubscribed is undoubtedly a vote of confidence for Macri's government, but there is scepticism over financing capacity, particularly as many of the region's active lenders to renewables have not lent in Argentina for over a decade.

A senior LatAm focused multilateral banker says that while the auction appears well oversubscribed on the equity side, this is purely a representation of sponsors taking a bet on raising the necessary funding for these projects. If it were a measurement of the debt capacity, the 1GW target might not have been met.

International, regional and European multilaterals will provide the bulk of funding for these projects. Though most international commercial banks admit they are not ready to lend to Argentine projects, they have commended the attitude of the government and its willingness to listen to the market.

The huge interest in government-led renewables auctions across Latin America is a positive sign for a region which has suffered slower growth, corruption scandals and political turbulence in recent years. It will be important however that strong competition does not push prices to unfeasible levels. ■

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Projects with recent tender updates

TBCC Thatta District Wind Complex

Chevron's Asian Geothermal Assets Sale

Acquisition of 66.4% Stake in K-Electric

Acquisition of 12% Stake in Adaro

Acquisition of Santos's Victorian Gas Assets

Eastern Dedicated Freight Corridor

Iwakuni PV Solar Plant

Acquisition of Glencore Rail (GRail)

Closed deal values by sector

Power: \$18.12 billion

Transport: \$7.70 billion

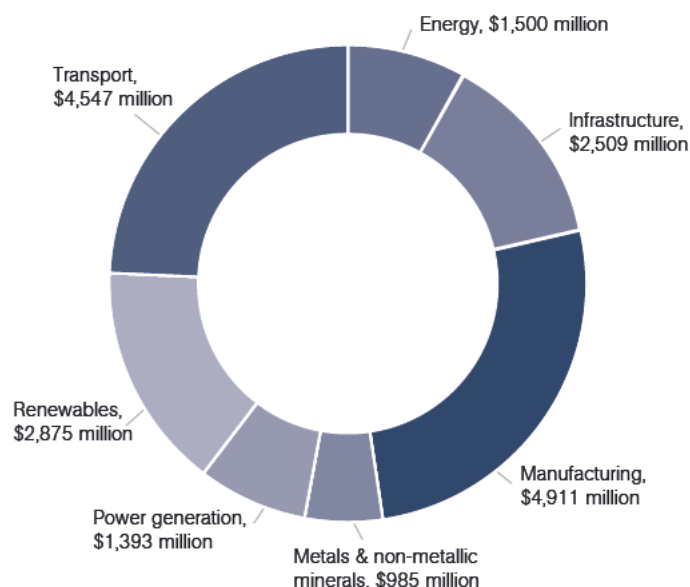
Renewables: \$1.75 billion

Social & Defence: \$1.03 billion

Telecoms: \$325 million

Oil & Gas: \$195 million

Closed trade finance deals



Closed infrastructure deals



Source: IJGlobal, from 1 September to 31 October 2016.

The long, unconnected track

In the absence of a unified blueprint, plans to create a rail route connecting China with Southeast Asia and onto India have proceeded in fits and starts.

By Mia Tahara-Stubbs.

A vast rail network connecting Southeast and South Asia's ports with inland cities has been talked about for over a century. China's "One Belt, One Road" (OBOR) policy has put the grand scheme back in the spotlight – but just as past colonial powers built the region's original railway in disjointed unconnected pieces, today's governments have so far failed to come up with a seamless blueprint to connect the region.

A plan to link Kunming in the south-western province of China bordering Vietnam, Laos and Myanmar to Singapore was originally dreamt up in the early 20th century by the British and French governments.

The only portion of this ambitious plan to ever be completed was the British-built west coast line running through what is now Singapore and Malaysia. The route was connected to Thailand's independently built southern line from Bangkok in 1918.

Reviving the dream

In the early 1990s, China and the Association of South East Asian Nations (ASEAN) revived the idea of a Kunming-Singapore rail link. The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) has, in the meantime, been promoting an even more extensive Trans-Asia Railway that will run from Hanoi to Calcutta and eventually all the way to the European continent. The scheme's promoters hope that connecting the region by rail will in turn drive economic growth in each country.

"We need to build ahead of demand – rail connectivity will have a multiplier effect on the region's economies," Surbana Jurong chief executive Wong Heang Fine says.



Ganeshan Wignaraja

With the supply chain gradually shifting out of China and into South and Southeast Asia, "the region will benefit from a bulk cargo freight rail network to support value and production," says Ganeshan Wignaraja, adviser to the Economic Research and Regional Cooperation department of the Asian Development Bank (ADB). The region is growing economically at an average annual rate of 6%, according to the ADB, but from a low income base.

That leaves the bigger question of who provides the bulk of funding for projects intended to boost economic growth. Inter-connecting the whole region by rail will "require a big push and financing from the big economies in the region: China, Japan, India and Singapore," says the ADB's Wignaraja.

But so far, none of the four countries have shown signs of cooperating to coordinate how to connect the varying track gauges in different countries.

"Gaps in rail connectivity and incompatibility of track and rolling stock issues are challenging and present a critical bottleneck for regional integration," says the ADB's Wignaraja.

Only three countries – Cambodia, Thailand and Vietnam – share the same track gauges. Further west, Myanmar's track gauge is 1.067m and India's is 1.676m, according to Wu Shang-Su, Research Fellow at Nanyang Technological University's Institute of Defence and Strategic Studies. "Due to the distance and connection with South Asia, 1.676m gauge may be most likely, but this gauge can't connect with China and the 1.435m standard gauge for high speed rail (HSR)," he says.

While China does have a clear plan for rail development, Beijing has so far failed to form a consensus with regional governments in order to realise its ambitions.

Japan for its part has shown no inclination to come up with its own plan. Instead, Tokyo has chosen to back, for example, the Bangkok to Chiang Mai HSR, which will terminate in the northern city, and the Yangon to Mandalay medium speed rail line.

"Both China and Japan are pursuing their geo-strategic interests but the nature of their interests are different. China is focusing on connecting other countries to its domestic rail network, while Japan is concentrating on export capacity and bilateral economic ties," says Nanyang Technological University's Wu.

One piece at a time

The proposed 350km HSR line between Singapore and Kuala Lumpur, the capital of neighbouring Malaysia, is the most advanced of the region's proposed HSR projects but also faces significant challenges.

Singapore and Malaysia have signed the memorandum of understanding and even called a joint tender for advisers on project management support, technical advice and procurement.

The government of Singapore, ASEAN's only rich developed economy, is understood to be keen to accelerate the \$12 billion project and can afford to (and is prepared to) offer availability payments to make the railway happen.

However, so far no agreement has been reached with the Malaysian government on how to share, if at all, the financial burden of the HSR line, most of which will run through Malaysia.

"Governments first need to agree on the funding split between themselves. It can be difficult allocating the costs and benefits between the countries who most likely will have different objectives for the project and different fiscal capacity," says Oliver Redrup, director of Transport at PwC Singapore.

Another major issue is the two governments' views on how the tender process should be run.

Singapore has a long record of running open and transparent tenders for infrastructure projects and is said to be determined that the KL-Singapore HSR will be procured in the same manner.

Having failed so far to agree with the Malaysian government on anything but going ahead with the HSR line, Singapore is now preparing to tender out just the 15km portion of the line that runs within its own borders. The Singapore government is expected to appoint the joint development adviser to draft the tender documents by the end of this year.

Neighbour Malaysia's record on transparency is patchier. For example, Malaysia awarded in early November the \$13.1 billion East Coast Rail Line to state-owned China Communications Construction Company. The deal, which will be funded by a soft loan from China, has drawn criticism from opposition politicians for being too opaque.

"Malaysians are stunned that such a mega-project is being awarded without any form of transparency and competitive tender to ensure that we receive the best value for money," said Tony Pua, a leading member of the opposition DAP in a statement obtained by *IJGlobal*.



Source: ADB

Ambitions and reality

The various new railway lines "are very ambitious projects and financing will be difficult," says Deutsche Bank senior economist Syetarn Hansakul.

"Many countries in the ASEAN region run chronic budget deficits and governments will only be able to partially finance the projects – foreign governments or multilateral banks will need to step in."

The lack of funding has forced China to scale back its ambitions to connect the region to its domestic rail network from the very first portion, which will run through Laos. According to International Monetary Fund's 2015 figures, Laos is ranked 121st in the world in terms of GDP.

The two governments have long disagreed about how to fund the medium speed, single track line promoted by Beijing. After years of negotiations, China agreed this year to fund 70% of the \$5.6 billion total cost. Laos will take on a soft loan from China to pay for the remaining 30%.

The next portion of the link has also been slowed by disputes over cost and funding allocation. In March, the Thai government turned down Beijing's

2% soft loan offer to build a 250km HSR line between Bangkok and Nakhon Ratchasima in the north-east, insisting it would pay for the railway itself.

Bangkok and Beijing did agree again in September to move ahead with the rail line, although it remains to be seen how Thailand will fund the project in its entirety.

"It's probable the Thai government will try to find other partners, because building an HSR line on its own will be very expensive," says Deutsche Bank's Hansakul. "In the meantime, it's foreseeable the project will get delayed because it's not a high priority for Bangkok to build a high speed railway to the Laos border."

The determining factor on whether these costly projects are progressing or not does indeed appear be the government's ability and resolve to pay for them.

India, for example, has rolled out a \$137 billion budget to upgrade its extensive but aging railway network over the next five years and is also preparing to build its maiden \$15 billion HSR line from Mumbai to Ahmedabad in the state of Gujarat that will be 80% funded by a soft loan from Japan.

"The public sector will play a critical role," says the ADB's Wignaraja. ■

DEAL ANALYSIS: IFM and AustralianSuper took advantage of the unexpected disqualification of two Chinese bidders. By Mia Tahara-Stubbs.

Ausgrid Acquisition, Australia

IFM, among various other major investors, was rumoured to have entered an indicative bid for a majority stake in Ausgrid in January 2016. But by the time the deal had got to binding bid stage, IFM and the others had fallen away, unable to match the offers made by two Chinese bidders.

State Grid Corporation of China and Hong Kong-based investment firm Cheung Kong Infrastructure (CKI) were the only two contenders to progress to final bid stage but were both subsequently disqualified from the process by Australia's federal government in August, to the shock of observers.

IFM moved fast in response: forming a joint venture with AustralianSuper and submitting an unsolicited proposal for Ausgrid in late September. It took the state government of New South Wales less than a month to accept the bid.

HOME ADVANTAGE

"We are familiar with the process and policy framework of unsolicited proposals and began developing our strategy for Ausgrid within days of the federal government's announcement," Michael Hanna, IFM's head of infrastructure, Australia told *IJGlobal*.

IFM has submitted unsolicited proposals for the M5 Interlink Roads, Brisbane International Cruise Terminal and, in early October, a proposal to upgrade and expand the capacity of Southern Cross Station in Melbourne that it originally acquired in 2003.

Another advantage was IFM's involvement in the bidding for the previous A\$10.3 billion (\$7.79 billion) "poles and wires" privatisation of TransGrid last year. IFM, with partner QIC, proceeded to the final bid stage before losing out to a consortium led by Hastings in November.

IFM says that the New South Wales government's desire to keep to its original timeline for disposal was a major motivation for putting a bid together quickly.

"We wanted to help address a problem the state government wanted resolved sooner rather than later with an innovative solution," Hanna said.

The A\$16.2 billion transaction, with a debt-to-equity ratio of around 60:40, is scheduled to close in early December. The debt financing package is expected to be a mix of three, five and seven-year tranches, with a syndicate including the Australian banks ANZ, CBA, NAB and Westpac, as well as various Asian and European lenders.

IFM Investors is understood to have paid 1.4x Ausgrid's regulated asset base (RAB) of A\$14.75 billion, compared to the 1.3x offered by CKI and the 1.6x tabled by State Grid.

AustralianSuper and IFM will own a 50.4% stake in a 99-year concession. Ausgrid is Australia's largest electrical distribution network, serving 1.6 million customers in New South Wales.

HEAD SCRATCHING ALL ROUND

The exact reason for the rejection of State

Grid and CKI's bids is still not clear. The federal government has yet to elaborate on why the two consortia's offers were deemed, as federal state treasurer Scott Morrison asserted at the time, to be "contrary to the national interest."

This ambiguity raises concerns over the long-term attitude towards foreign bidders for other assets in Australia's extensive privatisation pipeline.

David Ryan, partner at Herbert Smith Freehills dismisses concerns about the impact on foreign investors however.

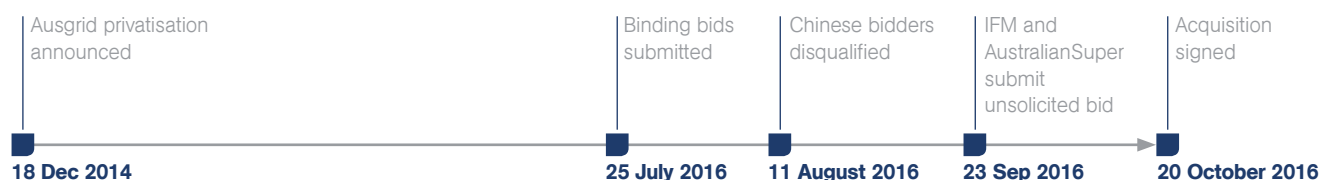
"While there is no clarity on why the Chinese bids were blocked, the issue appears to have been specific to the asset – electricity transmission networks – rather than the investor," said Ryan.

"The Foreign Investment Review Board (FIRB) should not have allowed bidding to proceed to the final bid stage. FIRB needs to be clearer and provide more transparency about the criteria and limitations for foreign ownership at the outset of the process," he added.

In the wake of the Ausgrid controversy, the New South Wales government may be considering different routes for the next "poles and wires" privatisation, the just over 50% sale of Endeavour Energy, valued at around A\$3 billion.

One more politically palatable option may be an initial public offering rather than a trade sale, although Ryan cautions that a stock exchange listing typically raises less money for the state. ■

Timeline



Europe

INSIDE

German ECA-backed shipping
Corporate PPAs
Izmir Bayrakli hospital
Russian commodities-linked borrowing
Sirius Minerals

Pipeline & procurement deals



Projects with recent tender updates

Odessa Portside Plant Privatisation

Kastelli International Airport PPP

Acquisition of Infinis' Landfill Gas Assets

Elazig Integrated Health Campus PPP

A6 Wiesloch/Rauenberg-Weinsberg Road

Privatisation of Green Investment Bank

Acquisition of a 24% stake in ADMIE

Treviso Hospital Redevelopment PPP

Closed deal values by sector

Power: \$4.05 billion

Renewables: \$3.71 billion

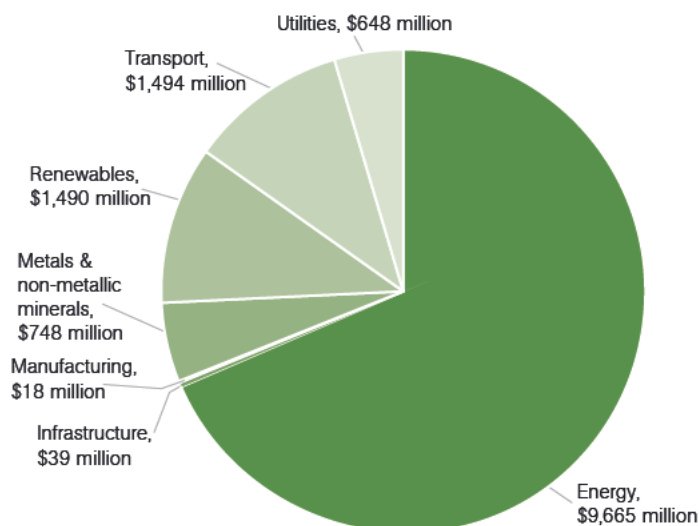
Transport: \$3.68 billion

Oil & gas: \$2.45 billion

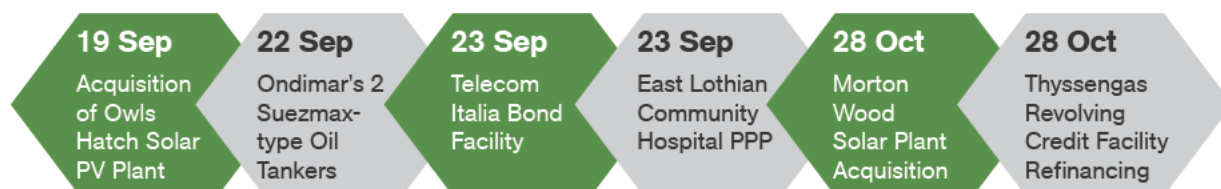
Social & defence: \$1.59 billion

Telecoms: \$1.21 billion

Closed trade finance deals



Closed infrastructure deals



Source: IJGlobal, from 1 September to 31 October 2016.

Sink funds – German-style

Why was the conservative German bank market so blind to the growing risks of shipping loans? Because no-one wanted to see it. By Sean Keating.

German shipping lenders went blind and deaf in 2008. Despite major insolvencies in the tax-incentivised KG market (then the backbone of the ship finance market) when the financial crisis hit; and an oversupply of existing vessels that should have set alarms ringing, shipowners ordered 445 new container vessels in the period 2008 to 2012. These vessels had an overall capacity of approximately three million twenty-foot equivalent units (teu) corresponding to 18.4% of the existing container fleet. Amazingly, German banks went on financing them during this period.

In 2012 some banks regained their senses. That year, former Commerzbank CEO Martin Blessing announced the bank was exiting shipping finance – the decision was sound, albeit a little late: Commerzbank still had €8.4 billion of shipping loans for sale in mid-2016, which led to higher loan-loss provisions contributing to an overall third-quarter loss for the bank this year.

Commerzbank was not alone in cutting back. In the same 2012-2016 period UniCredit/HVB, DekaBank and Landesbank Hessen-Thüringen also slashed their combined shipping exposure by around 45%, to less than their Tier 1 capital.

Through either foresight or good fortune, according to Swen Metzler, senior analyst at Moody's, none of these lenders face the same potential levels of toxicity from the \$100 billion (equivalent to 25% of the global ship finance market) of shipping loans on German bank books as Bremer Landesbank, DVB Bank, HSH Nordbank, KfW IPEX-Bank, and Norddeutsche Landesbank. KfW exposure is however subjective given 51% of its €16 billion loan book is for ECA-backed cruise

ship deals and the cruise ship sector is both profitable and growing.

The problem shows no signs of abating or being resolved, and the bankruptcy of Hanjin Shipping, a record in terms of scale in the shipping market and a major headache for Korea Development Bank, has also added to German bank woes, many of which have Hanjin vessels on their books.

All these problems are finally coming to a head – not because German banks have suddenly seen the light, but because profitability and asset values in the global shipping market have sunk even further over the past two years, and because the European Central Bank (ECB) is insisting banks deal with their non-performing shipping loans.

Landesbanks hit hardest

Of all the German banks, the worst hit are NordLB and HSH Nordbank. NordLB moved to take full ownership this year of what was previously an independent 55%-owned subsidiary, Bremer Landesbank (BLB), when the latter's losses in shipping demanded a recapitalization.

NordLB itself is far from healthy. It recently reported a first-half loss of €406 million due to further loss provisions on shipping loans and is setting up a business unit specifically to handle the sale of ships and shipping loans. The bank plans to cut its shipping loan exposure from €18 billion to below €14 billion and recently agreed to sell \$1.5 billion of loans to KKR and a sovereign-wealth fund.

HSH Nordbank faces even bigger problems. Citi is advising on the sale of the bank, ahead of a 2018 deadline for its privatization required by the EU's conditions for permitting aid from the governments of Hamburg and Schleswig-

Holstein (Lander). The bank will struggle to find a buyer with €24 billion of shipping loans (almost four times its capital at the end of 2015) – if it doesn't, it gets wound up.

In June, HSH offloaded €5 billion-equivalent of shipping loans for €2.4 billion into HSH Portfoliomanagement AöR, a wind down vehicle owned by the bank's Lander which have guaranteed to cover up to €10 billion of the bank's losses in a bid to get it privatised. HSH AöR has mandated Citi, HSBC and JP Morgan to roadshow a potential bond issue for the fourth quarter of 2016. But it may all be too little to late – loans for vessels that could have been sold have been sold, and the remainder have little more than scrap value in the current market.

Reality checkpoint

All banks are struggling to offload shipping loans, due to the difference between their book value and the extremely low price that shipping assets fetch in the secondary market. Banks are putting off taking the hit and have been trying to avoid major write-downs by taking a long-term approach to valuations, using generous discounted cash flow models that assume the market recovers in a couple of years, rather than marking to market.

Furthermore, German bankruptcy triggers have been bypassed by shifting repayment schedules to pay-as-you-earn models. In short, German lenders are going out of their way to avoid taking the hit.

Those most exposed – HSH Nordbank, NordLB and BLB – have all cut their non-performing portfolios much less rapidly than, for example, Commerzbank or UniCredit/HVB. That indecision has been another mistake – the older the ship, whether in operation or not, the weaker the

residual value. Furthermore, ships ordered and funded in the boom years before the financial crisis have fallen behind typical size requirements, environmental standards and are technically obsolete. In short, the longer the banks have waited, the less likely they have been to get their money back.

Why did Germans banks become so exposed?

With a tangible threat to their balance sheets, why the biggest loss-makers continue with the same lending policy is hard to fathom. In part, it is because margins in the domestic German market have been so low. Arguably, Germany is overbanked, and competition between banks on pricing still remains stiff. Consequently, some of the larger Landesbanks pursued higher yields from more volatile markets, ones in which their experience was limited, when EU competition rules put an end to their state guaranteed pricing advantages in 2005.

But that does not explain why German lenders did not pull back after the first clear sign that all was not well in the shipping market – ergo when the KG funds started causing losses from 2008 onwards.

Tax-driven KG shipping funds boomed between 1990s and 2008. Banks generated strong returns from fees and loans to the funds, and competition to lend became so rabid that it was normal for lenders to accept placement guarantees from the KG sponsor as security for the pre-delivery phase of the financing – the KG would order ships financed with around 80% of debt, whether or not the equity financing from the retail investors was actually secured.

When the 2008 crisis hit and retail investors started to steer clear of shipping KGs, some banks then financed the equity portion as well, rather than write off the loan. That meant they had shipping in their portfolio that was 100% debt financed, just as the market started to collapse – arguably, secured lending at its most bizarre.

Unravelling the KG mess is proving difficult – even eight years on. The



An LNG carrier

structure of the KGs and the difficulty of harnessing the many individual investors behind them, has made it harder for banks to take actions like selling or refinancing ships. Shipping finance experts estimate hundreds of KGs have filed for insolvency and that any shipping KG set up between 2004 and 2008 is unlikely to be financially healthy.

The recent Hanjin Shipping bankruptcy is unlikely to be the last. An earnings index compiled by research company Clarksons, that covers the main vessel types – container ships, bulk carriers, tankers and gas transporters – reached a 25-year low in mid-August. And the average for the first half of 2016 was 30% down year-on-year, and 80% below the peak of December 2007.

Asia still opening for newbuild funding

With more potential hits in the pipeline, the German marine lending market for anything other than ECA-backed deals is going to largely be a non-starter. But that is unlikely to be an issue for the shipping borrowers still afloat. New orders are at their lowest for 30 years and although German banks, the biggest single shipping market for lending for the past decade, are drowning in defaults, Asian lenders, primarily Chexim and JBIC, are still open

for business.

Chexim actually appears to be taking advantage of the debt problems plaguing Korean ship operators and shipyards, and driving a bid for greater Chinese share of the Asian shipbuilding market.

The Chinese ECA recently signed Rmb24 billion (\$3.5 billion) of shipping loans with 10 international and domestic shipbuilders and owners to fund construction of 58 new vessels. The borrowers include China State Shipbuilding Corp (CSSC), China Shipbuilding Industry Corp (CSIC), Maersk Line and Petrobras.

The financing is clearly export-driven. The total Rmb24 billion debt is roughly split between \$2 billion for international borrowers and just Rmb10.17 billion for domestic firms. And the assets are surprisingly diverse – VLOCs, dive support vessels, 174,000 cubic metre LNG carriers, 14,500 teu and 20,000 teu containerships, 1,600 car capacity ro-ro vessels, 180,000 dwt bulk carriers and other high-value shipping.

JBIC has been similarly pro-active over the past year, although the vast majority of financings have been for oil tankers and gas transporters, where income streams are more predictable and asset values more stable – unlike the majority of container cargo, no-one will be able to 3D print oil and gas in the future. ■

DATA ANALYSIS: The number of corporate PPAs signed in Europe has soared over the last year as major corporate look to cut power costs. By Olivia Gagan.

Cut out the middleman

There is a long history of large factories and other industrial companies drawing power directly from on-site power plants, but the last five years has seen businesses increasingly enter into offtaker contracts with independent power producers.

Utilities have traditionally been the major offtakers in any market, signing power purchase agreements (PPAs) with developers and then selling electricity into local and national grids. But a growing array of companies seem keen to cut out the middleman and take power directly from power plant operators rather than via the grid.

IJGlobal data shows major growth in European corporate PPA activity this year – from 27.8MW of capacity signed in 2015 to 1.32GW in 2016 (as of October). 2014 saw 6.1MW of capacity contracted, while 12.3MW was recorded by IJGlobal in 2012. All of the power represented in IJGlobal's data is from renewable sources, primarily wind and solar.

It should be noted that the figures represent only publically disclosed capacity. Many more PPAs are likely to have been carried out over this time period on a private basis. McDonald's,

for example, is known to have signed corporate PPA deals across Europe, but details remain undisclosed.

RENEWABLES REVOLUTION

The smaller scale of renewables projects fits the power requirements of individual businesses, the vast majority of contracted projects being sub-100MW, compared to the gigawatt-scale conventional power PPAs utilities typically sign.

Companies are also under increasing pressure to reduce their carbon footprint, and sourcing power directly from renewables projects makes this easier.

Falling returns for renewables have fed into the growing suitability of corporate PPAs. Subsidies have shrunk, and in some countries disappeared altogether, as technologies move towards grid parity. Most EU countries are moving towards competitive auctions for procuring renewables, as the UK, Netherlands and Germany have. This, together with depressed electricity prices, has created uncertainty over sponsor returns.

Corporate PPAs offer a fixed rate of return, protecting sponsors from wholesale market volatility.

WHO IS BUYING?

Some of the world's largest corporates, such as Google and Facebook, are keen signers of corporate PPAs. Due to their size, these companies are heavy consumers of power.

Baker & McKenzie's Marc Fevre warns that banks are still adjusting to this trend. "Banks are used to financing projects backed by utilities," he says. "But they now have to take a view on the long-term credit worthiness of counterparties in different, more volatile sectors. Take a corporate PPA signed for a data centre, for example. Will data centres still be required in 15 years' time? It's a different sort of credit analysis."

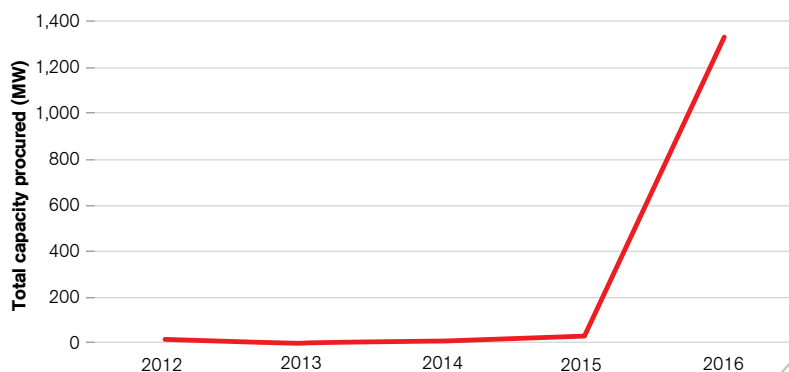
LOOKING AHEAD

Market observers expect the increasing use of corporate PPAs to continue. Fevre says: "This trend is reflective of changes in the power sector as a result of increased renewables capacity in general. I think it will be at least as active in 2017 as this year."

Consented-but-unfunded renewables projects may be strong candidates for corporate PPAs, according to Natasha Luther-Jones, DLA Piper's head of renewable energy for EMEA.

In Scotland, for example, there are a number of shovel-ready wind projects which failed to meet the deadline for the UK's outgoing ROC accreditation. She predicts that even mid-tier businesses will start engaging with developers. Power producers could also club together to offer larger capacities, with businesses in turn banding together to cut their power prices. But, she says, that could add complexities. "What sort of credit support would you have to have in place if you aggregate mid-tier off-takers? What happens if one project fails?" ■

European corporate PPAs, 2012-2016



Source: IJGlobal

DEAL ANALYSIS: Debt pricing for Turkey's hospital PPPs has rebounded, but the attempted coup has not stopped projects being financed. By Beatrice Mavroleon.

Izmir Bayrakli Hospital, Turkey

In September Moody's followed S&P's lead and downgraded Turkey's credit rating to junk. The news was accompanied by predictions that Turkish GDP will grow at an average of 2.7% over the 2016-19 period, compared to average growth of 5.5% between 2010 and 2014. The ratings agency also pointed to the "risk of a sudden, disruptive reversal in foreign capital flows" and in the worst-case scenario, a balance of payments crisis.

Data from Turkey's Ministry of Tourism shows that the number of foreign tourists visiting Turkey fell 37.96% year-on-year to 3.2 million in August, and 32.84% to 2.8 million in September.

Debt pricing for Turkey's healthcare PPP programme also seems to have been negatively impacted, at least from a sponsor perspective, by the attempted coup against the country's government in July.

Türkerler Construction, Gama Holding and GE Healthcare, sponsors of the €769.6 million (\$839 million) Izmir Bayrakli Hospital PPP project, signed financing documents in October.

According to sources, pricing on the hospital's debt of €590 million is a flat 390bp over Euribor, which is similar to the programme's first projects, but 50bp higher than more recent ones.

GROUNDWORK FOR OPTIMISM

The financing for the Izmir Bayrakli Hospital demonstrates however that banks are still willing to lend to at long tenors.

Debt for the programme's

initial projects – typically provided by multilateral banks – was offered with an 18-year tenor, while commercial banks were unwilling to go further than 15 years.

Transactions closed over recent months – starting with the Ankara Etlik Hospital PPP project in mid-2015 – saw commercial bank tenors stretching a further three years, a development that has not been lost since July's attempted coup.

Izmir Bayrakli is receiving €250 million (\$271 million) from the Overseas Private Investment Corporation (OPIC), €65 million from Export Development Canada, and €85 million in A-loans from the European Bank of Reconstruction and Development (EBRD). The EBRD also syndicated €213.6 million to UniCredit, Industrial and Commercial Bank of China (ICBC) and Intesa Sanpaolo. The debt-to-equity ratio is 80:20, and the concession length is 28 years.

"It's a good development because it shows that these projects, which require very long maturities, remain financeable at acceptable interest rate levels and the programme can continue," the EBRD's director for Turkey Jean-Patrick Marquet told *IJGlobal*.

Türkerler and Gama each own 45% each of the project, while General Electric's subsidiary GE Healthcare owns the remaining 10%.

Türkerler and Gama won the concession to design, build, finance, maintain and provide non-medical services for the hospital in 2013, with GE joining

two years later.

The hospital, which is expected to start operating in 2019, will have capacity for 2,060 beds. The project will include a main hospital, a maternity hospital, a cardiology and heart surgery hospital, an oncology hospital, a physical therapy and rehabilitation hospital, a psychiatric hospital, a high security psychiatric hospital, over 50 surgery rooms and commercial areas.

ASIAN ENTRY

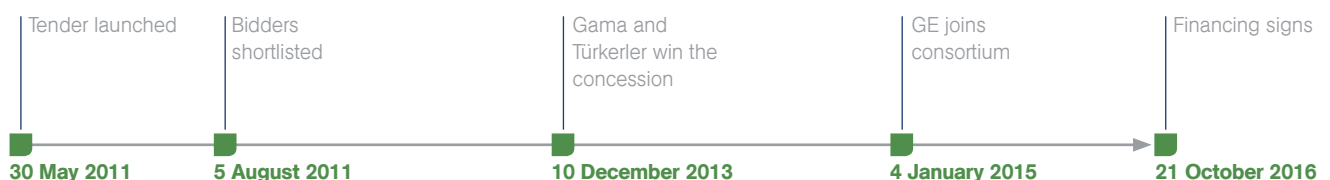
While western investors have become more cautious, Asian investors, particularly from the Middle East and the Far East, have shown increasing interest in the country.

Qatar National Bank recently took over Turkey's Finansbank, while China Merchants Holdings (International) Company (CMHI), COSCO Pacific and CIC Capital Corporation acquired a 64.5% stake in the Kumport container terminal.

A number of Korean investors are also involved in the Gaziantep integrated health campus. Korea's Samsung is one of the sponsors, while the lenders include Samsung Life, the Export-Import Bank of Korea (Kexim) and Korea Trade Insurance Corporation (K-Sure).

This influx of Asian capital may have helped emboldened the government to extend the PPP programme. At the signing for Izmir Bayrakli Hospital, Health Minister Recep Akdag announced that tenders for nine or 10 further healthcare PPPs will be tendered soon. ■

Timeline



NEWS ANALYSIS: Norilsk has pulled off two post-sanctions market firsts – international unsecured and European ECA-backed loans. By Sean Keating.

Secure enough to go unsecured

In August, Atanas Djumaliev, head of global commodities at VTB Capital, predicted more international deals from Russian commodity firms. He was right. Fuelled by bank's hunting for higher margin volume than that available in EU markets, the growing appetite for international lending to Russian commodities-linked borrowers continues to spawn the unexpected.

Recent surprises include Norilsk Nickel's \$500 million five-year unsecured revolving credit, which, despite being the first international unsecured dollar-denominated Russian borrowing since EU and US sanctions were introduced in 2014, is rumoured to have priced at under 300bp; at least one European ECA setting aside political correction and providing cover again for a loan to an unsanctioned Russian borrower; and a €400 million (\$434 million) Sace-covered deal that may close in 2017 for Yamal LNG, a project that is lead sponsored by Novatek, which, although not on the EU sanctions list, is banned by the US.

POLITICAL THAW

But the unexpected is also the political order of the day. Last week the Duma gave a standing round of applause at the election of a right-wing US president. Trump announced, during his campaign, that he would consider revoking US sanctions. Whether he does or not, the likelihood of an international bank lending to an unsanctioned Russian borrower that ends up on a US sanctions list at a later date is looking more remote.

Even without a thawing in US-Russia relations, international bank attitudes to some Russian lenders have been softening since as early as April 2015, when Uralkali signed a \$530 million four-year pre-export facility and paid considerably less than the predicted

doubling of its pre-sanction margin.

There has always been a core of international lenders – ING, UniCredit and Societe Generale for example – for Russian borrowers. But this year Chinese banks have entered the market for the first time, and Japanese and some US banks are also showing more appetite.

But of all the 2016 Russian commodities-linked financings, the Norilsk Nickel \$500 million unsecured loan, signed on 30 September, is the strongest signal yet that Russian commodities-linked deals are back, at least for investment grade-ish Russian borrowers.

UNSECURED RETURN

Lead arranged by Commerzbank, HSBC Bank, Mizuho, SMBC and UniCredit Bank (also facility agent), not only is the deal an unsecured first since 2014, it priced competitively even when compared with a secured pre-export borrowing: Norilsk's five-year unsecured loan is rumoured to have closed at just under 300bp, while Uralkali paid 325bp over Libor for a \$1.2 billion secured pre-export facility earlier in the year.

Norilsk has been clever in terms of funding diversification since 2014 and the facility is actually its second unsecured foreign bank borrowing of 2016. In January, Norilsk raised a Rmb4.8 billion (\$730 million) five-year unsecured loan (also its first yuan-denominated facility) from Industrial and Commercial Bank of China (ICBC), Bank of China and China Construction Bank.

Unlike the latest international deal, the all-Chinese bank facility had tied loan characteristics. The deal partially backs development of the \$1.7 billion Bystrinsky Copper project, in which Chinese investors have signed a binding agreement to take

an initial 13.3% stake for \$100 million, and from which production will be exported to China.

Norilsk has also recently signed a €37.8 million 13-year Euler Hermes-covered bilateral credit with Commerzbank – the first European ECA-backed deal for a Russian borrower since 2014 according to tradefinanceanalytics.com (EGAP did cover a €73.4 million 12-year non-recourse loan for PhosAgro in 2015 but it was a hangover from the pre-sanctions Phos-Agro-Cherepovets ammonia plant financing in 2014). Proceeds will finance 85% of the contract value for the construction of an electric power substation for which Thyssen Schachtbau is EPC contractor.

ECA OPPORTUNITY

Although a small volume deal, according to Sergey Malyshev, CFO at Norilsk: "The company intends to use ECA financing on a more regular basis. It is a good opportunity to raise cheap and longer-dated financing as well as to diversify funding sources."

That is good news for export credit arrangers. And with Trump and Putin having a love-in via global media, and some EU states wavering in their support for sanctions given they are not having the desired political effect in Moscow, export credit arrangers, along with their structured commodities counterparts, may also be enjoying renewed Russian business in 2017.

Despite the softening lending sentiment, a lender stampede is not imminent. Russia is still showing very low growth and all the pre-2014 problems to lending remain – notably volatility in the commodities markets. That said, another unsecured deal for an investment grade Russian commodity player is rumoured to be circulating international loan desks and, according to bankers, there is appetite. ■

NEWS ANALYSIS: After four years negotiating planning permission, financings for AIM-listed polyhalite developer Sirius Minerals are underway. By Emma Hughes.

A Sirius business

No need for Sirius Minerals CEO Chris Fraser to polish his poly-halo before his next board meeting. Not only has his UK mining start-up raised \$859 million via shares and convertibles – an enormous sum for an AIM listed company – but the scheme has been endorsed by mining royalty: a \$300 million royalty and equity financing agreement with Hancock British Holdings (an investment vehicle controlled by Australian mining billionaire Gina Rinehart).

The Hancock endorsement bodes particularly well for Sirius given the start-up is employing the same strategy Hancock used for its Roy Hill iron ore mine in Western Australia. The deal, signed in late October, involves Hancock paying \$250 million to acquire a 5% royalty on the first 13 million tonnes per year (tpy) of fertiliser produced and 1% on anything over that output figure. In addition, Hancock has agreed to acquire \$50 million-worth of Sirius shares at an undisclosed price.

SHARE OFFERING

But the Hancock deal was just the initial part of Sirius' stage one financing. Just over a week later, Sirius announced a share offering – firm placing, placing and open offer – to raise approximately £330 million (\$406 million) to £400 million and a convertible bond offering to raise between \$400 million to £450 million.

Results of the firm placing and placing came in on 3 November 2016, with the company raising gross proceeds of approximately £370 million. Results of the convertible bonds were equally successful, placing \$400 million.

Both offerings were underwritten by JP Morgan Cazenove, which also acted as sole bookrunner on the convertible bond issue. Liberum joined in underwriting

the settlement of firm placed shares, and conditionally on placed open offer shares procured through an institutional bookbuild. Shore Capital and WH Ireland came in as co-lead managers in connection with the firm placing and placing and open offer.

The stage one financing enables Sirius to begin construction on the project. But it is the stage two financing, expected to be around \$2.6 billion, which will be the focus of commodities and mining bankers' attention.

Polyhalite has now proven itself as a quality fertilizer candidate in its own right

PROJECT ECONOMICS

The economics of the project are backed by what Sirius claims to be the world's largest known high-grade polyhalite deposit. Polyhalite was originally thought to be a lower grade potash, but has since proven itself as a quality fertilizer candidate in its own right thanks to a low chloride mineral composition and the presence of nutrients sulfate, sulfate of potash, magnesium sulfate and calcium sulfate.

Between July 2011 and August 2013, over 16,000m of exploratory boreholes were drilled to test the extent and grade of the polyhalite deposit. Results confirmed that Sirius' area of interest contains a polyhalite resource of 2.66 billion metric tonnes, as defined according to the JORC code. This is just 7% of the project area of interest and provides an asset excess of 50 years. Within the resource area, there is a JORC compliant probable mineral reserve of 280 million tonnes.

Sirius plans to progress the project

in two development phases. The initial construction phase is intended to achieve first production by end of 2021 and production capacity of 10 million tpy by mid-2024. The second phase will be a mine expansion, funded from operational cash flows, to increase production capacity to 20 million tpy.

STAGE TWO FINANCING

The stage one financing, which will be used to fund the direct costs of all site preparation, is expected to be spent within the first three years after construction begins. The stage two financing will kick-in thereafter and fund the remainder of the capital funding requirement of \$2.9 billion. It will also be used to provide the company with the capacity to pay associated financing costs of up to \$800 million, resulting in a total stage two financing of up to \$2.6 billion.

Sirius has entered into a mandate letter of intent with six financial institutions – Export Development Canada, ING, JP Morgan, Lloyds Bank, Société Générale (also financial adviser) and Royal Bank of Scotland – for the stage two debt.

The sponsor is looking for an ECA/DFI-backed package and has already been pre-qualified by the UK's Infrastructure and Projects Authority for an HMT guarantee to be provided under the UK Guarantee Scheme (UKGS). Furthermore, the MLAs have pledged to provide \$700 million of the facility, although the agreement is not yet binding.

The stage two financing is expected to be committed in 2018, approximately two years after commencement of construction and prior to commencement of tunnelling works. The debt will be drawn down only after the stage one financing has been exhausted. ■

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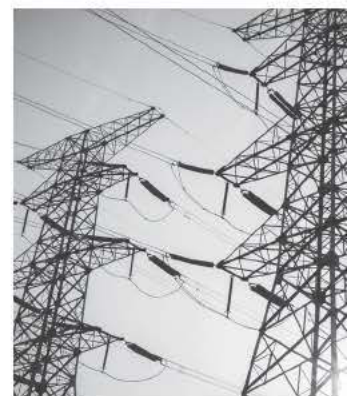
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Middle East & Africa

INSIDE

UAE solar sails ahead

GCC debt markets

South Africa's REIPPP stumbles

Pipeline & procurement deals



Projects with recent tender updates

Az Zour North IWPP Phase II

Masdar Jordan Solar PV Plant

King Abdullah Port Expansion Phase 1 2016

Al Warsan 2 Waste-to-Energy Plant PPP

Dubai Metro's Red Line Extension PPP

Ncondezi Coal-Fired Power Plant

Abu Tartour Port Expansion PPP

Central Térmica de Ressano Garcia Gas-Fired Plant Refinancing

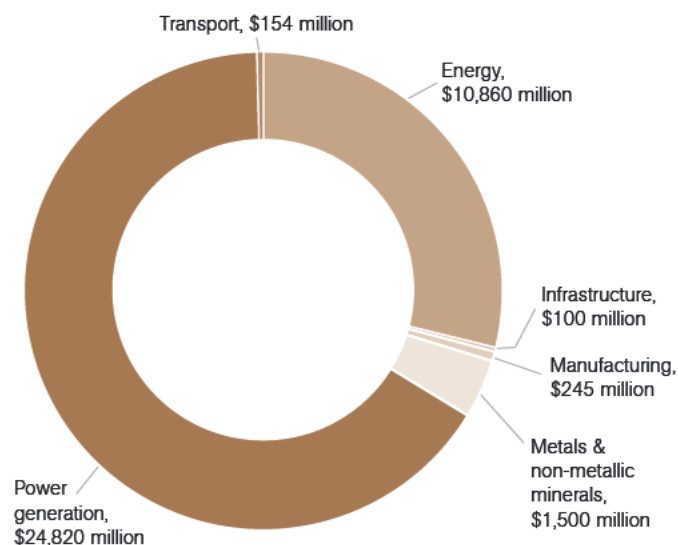
Closed deal values by sector

Power: \$29.87 billion

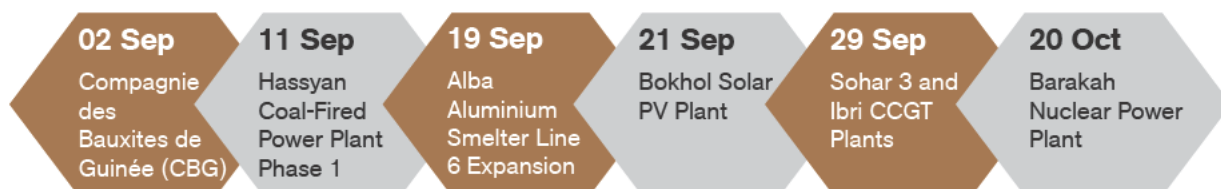
Mining: \$1.95 billion

Renewables: \$29 million

Closed trade finance deals



Closed infrastructure deals



Source: IJGlobal, from 1 September to 31 October 2016.

DATA ANALYSIS: The UAE is leading the way in the Middle East for procuring solar power projects, with Dubai taking the lead. By Jordan Bintcliffe.

UAE solar sails ahead

The Dubai Electricity and Water Authority (DEWA) recently unveiled a five-part strategy aiming to cut carbon emissions 16% by 2020. This was in addition to an existing target to make renewable energy account for 75% of all power generation in the Emirate state by 2050.

In the near-term DEWA now aims to make renewables account for 7% of its overall power mix by 2020 and 25% by 2030, a big increase on previous targets of 1% and 5% over the same period.

The utility's new targets may seem ambitious, but they have been made to look more achievable by the success of its ongoing solar power procurement programme.

ACTIVE RENEWABLE OPPORTUNITIES

IJGlobal data shows that only one project, the \$800 million third phase of the Rashid al Maktoum solar park, is in advanced procurement in the UAE as of 9 September 2016. This is the largest solar project in the UAE to date however, and a number of smaller deals have been procured in the country in recent years.

The Dubai government plans to eventually expand the Rashid al Maktoum solar complex to 5,000MW of mixed photovoltaic (PV) and concentrated solar power (CSP) generating capacity. DEWA awarded its 800MW third phase to a consortium of Fotowatio Renewable Ventures (FRV), Masdar and Abdul Latif Jameel in May 2016. A 200MW CSP stage of the park is planned for tender in 2017, with DEWA having issued a request for expressions of interest in October.

FRV's consortium bid \$0.0299 per kWh, which at the time was the lowest tariff price awarded for solar power in the world. The second phase of the project had previously set a record price of \$0.0598 per kWh. Dubai's tariff prices have since been surpassed by Solarpack's bid of \$0.0291 in August 2016 for the 120MW Granja solar project in Chile.

Not to be out-done by its neighbour, fellow UAE state Abu Dhabi launched its own tender for 350MW of solar PV earlier this year. According to sources, the Abu Dhabi Water and Electric Company

(ADWEA) set out with the explicit intention of bettering Dubai's tariff bids, and achieved this when submissions were received in September. A joint venture between Marubeni and Jinko Solar entered the lowest tariff price which was the equivalent of roughly \$0.024 per kWh. A shortlist of bidders was due to be announced as *IJGlobal* went to press.

CAN DEWA BEAT ITS 2020 TARGET?

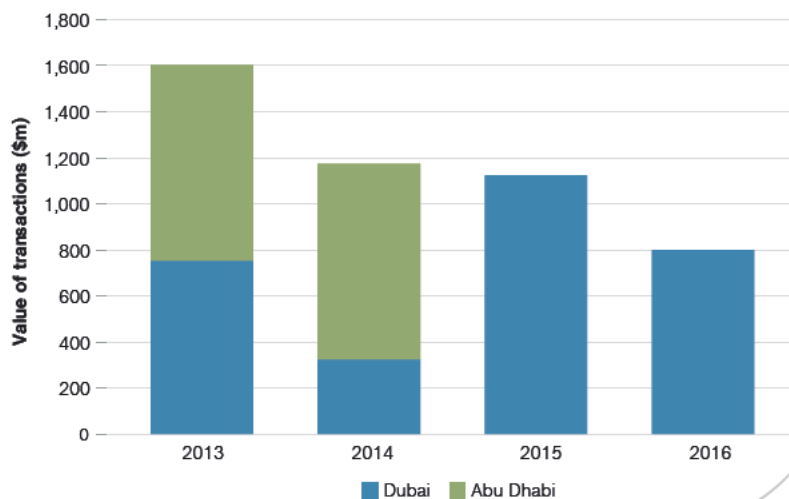
DEWA expects to reach 10,356MW of installed capacity by 2018 once a 700MW combined-cycle power plant expansion to the 2,060MW M-station independent water and power producer is brought online, according to its website. The first 600MW of the 2,400MW Hassyan coal-fired power plant is expected online by 2020, with the remaining capacity coming online through to 2023.

With the second and third phases of Rashid al Maktoum expected online by 2017 and 2020, respectively, that will mean Dubai has 1,013MW of utility scale solar capacity (including the 13MW first phase) online in 2020 as part of its 10,956MW total. A further 60MW in capacity is expected in 2020 from the Al Warsan 2 waste-to-energy plant, announced earlier this year.

If all of these projects are delivered on schedule, the utility could capably beat its 7% target by the end of the decade.

The UAE's neighbours are now looking to catch up. Saudi Arabia last month issued a request for proposals to develop 100MW of solar, and Oman is tendering for advisers for its own solar IPP tender. Saudi Arabia has long talked up the potential for large scale-renewables investment but it took the UAE to prove the viability of solar IPPs to motivate it to finally act. ■

UAE renewables transactions in advanced procurement 2012-2016



Source: *IJGlobal*

NEWS ANALYSIS: Though GCC government budgets are under pressure, borrowers are holding their own in the project market. By Sean Keating.

Credit where it's due

Never has a trade policy backfired as spectacularly as Saudi Arabia's flooding of the oil market with cheap crude in a failed attempt to kill off the nascent US shale gas industry.

For Saudi and its GCC neighbours, keeping the price of Brent down to around \$45 per barrel, compared with \$110 two years ago, is hitting government budgets hard. Across the GCC oil-related receipts are projected to fall by around \$435 billion this year compared with 2014. Consequently, the aggregate current account balance in the region is projected to turn from a surplus of 8.25% of GDP in 2014 to a deficit of 4.5% of GDP in 2016.

Saudi alone is projecting a budget deficit of \$87 billion in 2016 and has been forced to start borrowing, recently making its debut in the international capital markets with a \$17.5 billion issue, and selling off shares in state-owned entities.

For structured trade and export credit lenders, the GCC budget crunch is opening new lending opportunities – particularly in Oman, and more recently in Bahrain – albeit the volume has yet to pick up meaningfully.

In June, Petroleum Development Oman (PDO) closed its debut in the structured trade market with a \$4 billion five-year pre-export loan. And more recently Oman Oil Company Exploration & Production (OOCEP) has mandated SMBC as financial adviser on a similar pre-export facility, albeit there is no certainty the deal will go that route yet.

Aluminium Bahrain (Alba) also closed a Bahraini borrowing first this year – a record unsecured corporate facility in the form of a \$1.5 billion seven-year loan that doubled in size from the initial amount sought on the back of a vast

oversubscription. And most recently, bank bids were entered for a partially ECA-backed 20-year loan for Bahrain LNG.

Even in Dubai, which first started to implement plans for more PPP in state infrastructure projects in 2010, a new sense of urgency has kicked in: in the past two months there has been an request for proposals for a \$2.5 billion ECA-backed deal for the Dubai metro extension (the original metro build was totally state-funded), and the financial advisory for a \$3 billion airport expansion has been awarded to HSBC.

DONE DEALS

There is a degree of commonality to all these deals. All finance capital projects, or at the very least provide partial funding. And all are ultimately born of a tightening of state budgets and/or low oil prices. But there is little similarity in terms of financial engineering, with deals going from pre-export, to ECA-backed to a combination of corporate, ECA-backed and bond issues.

That diversity is good news. Recent sovereign ratings downgrades are forcing GCC borrowers to become more sophisticated and get the best pricing available, whilst also balancing project timing requirements against the long due diligence for pure ECA-backed financings.

Arguably, they are having some success. For example the five-year pre-export loan for PDO – which will be used to part fund construction of major new oil and gas facilities, including the Rabab Harweel Integrated Project – priced at a highly competitive margin of 160bp over Libor despite being the borrower's debut.

And the seven-year Alba corporate deal – split between a term loan and a shariah compliant facility, and designed to

part fund the borrower's Line 6 expansion project – came in at a 325bp margin, not bad considering Bahrain's sovereign rating is a notch below Russia's Norilsk Nickel which recently priced a similar unsecured loan at just below 300bp.

Furthermore, Alba's overall cost of borrowing for Line 6 will fall. The borrower is also planning ECA-backed loans and shariah bonds to fully fund the \$3 billion project, in effect diversifying its project borrowing base, maximising its relationship banks and reducing the average cost of debt for the scheme. But although the other debt-raising is likely to be cheaper, the corporate borrowing is much more immediate in terms of arranging timescale, and gives Alba at least half the funding required to get the project underway and greater certainty of project delivery by 2019.

The \$655 million debt for Bahrain LNG – sponsored by Nogaholding (30%), Teekay (30%), Samsung (20%) and Gulf Investment Corporation (20%) – will likely be the next major financing to close. The deal will comprise Kexim/K-Sure covered debt with a small uncovered tranche from local banks led by Apicorp. Pricing on the covered debt is cheap – 150bp over Libor, and like the Alba facility the ECA-backed loan is complemented by an earlier murabaha borrowing by Nogaholding which will also part finance the scheme.

While GCC borrowers appear to be holding their own in a tough borrower market – there is a caveat. Some banks are beginning to claim they have reached their exposure limits for certain GCC states, just as a number of new deals, OOCEP's for example, come to market. And when banks start to look for reasons, real or otherwise, not to do deals, it is usually the prelude to a margin increase. ■

NEWS ANALYSIS: Progress has slowed considerably for Africa's pioneering renewable energy procurement programme. By Jordan Bintlcliffe.

Sharp slowdown

South Africa's renewable energy independent power producer procurement (REIPPP) programme has stumbled at its fourth round, with no power purchase agreements yet signed or projects financed. Problems ranging from a weaker currency to arguments over the need to prioritise baseload capacity have slowed its progress.

The country's Department of Energy (DOE) selected 13 preferred bidders for round four in April 2015 and a further 13 in June of the same year, but so far none have reached financial close. South Africa's Department of Energy had previously planned financial close for the fourth quarter of 2015.

South Africa needs to bring new capacity online to stem serious power shortages which are hampering the country's economic growth. Power cuts have blighted the country in recent years and President Jacob Zuma said in August 2015 that they have reduced economic growth by around 1%.

State utility and procurer of the REIPPP projects, Eskom, was forced into load shedding last year in efforts to reduce power use as demand exceeded generation. But despite the pressure on the grid, the utility's group executive for generation Matshela Koko said in July that it wouldn't support new projects until it had further consultations with the government.

The utility is compelled by the government to buy electricity from the independent power producers at prices it does not negotiate, leading to concerns that its revenue streams will suffer in the long run, he said at the time. Koko wants the government to change focus and invest in nuclear power to provide baseload capacity for the country.

PAST GLORIES

Previous rounds of REIPPP had faced challenges but the programme had been steadily moving forward up until the latest batch of projects. Round one saw 28 projects awarded preferred bidder status in December 2011. All 28 went on to reach financial close on the same day in November 2012, some six months after the planned closing date.

Procuring such a high number of wind and solar projects in a short space was a noteworthy achievement for country with no track record of delivering such projects. The REIPPP programme's predecessor, the renewable energy feed-in tariff regime, failed to procure a single project over the two years it was active.

Round two saw 19 preferred bidders awarded in May 2012. They reached financial close six months later than expected, in May 2013. Round three saw something of a slow down after 17 preferred bidders were chosen in October 2013, of which 15 signed on financing agreements in December 2014 and reached financial close the following January (the original deadline was July 2014). Eskom had planned to roll out the REIPPP rounds out at a rate of one-per-year, but grid connection delays impacting round three meant the fourth round wasn't launched until mid-2014.

GRID CONNECTION ISSUES

A supplementary batch of projects – round 3.5 – aimed to procure concentrated solar power capacity. Engie (known at the time as GDF Suez) and Acwa Power were awarded a 100MW project each in late 2014.

Engie's Kathu project reached financial close in June this year but Acwa's Redstone project has stalled due to disputes regarding the project's tariff price.

The rand's weakness against the dollar has meant the proposed 20-year PPA – worth R50 billion (\$34.8 million) in June 2016 – has risen in cost to R62 billion.

As a result Eskom last month delayed signing the PPA with Acwa Power “until further notice”. The project has a signing window in place for the end of October 2016, a banking source told *IJGlobal*, although a source at Acwa commented that “nothing is clear on Redstone at this stage”.

Round four initially saw 13 projects awarded in April 2015 before the DOE announced extra allocations through an additional tender round – 4.5. A further 13 wind and solar projects were awarded under round 4.5 in June 2015 before Eskom then announced a further 1,800MW of new capacity to be made available under its ‘expedited’ renewables bidding round. The expedited bid round gives previously unsuccessful bidders the chance to win mandates for projects that can be ready “within the required time-lines, including projects which were unsuccessful in previous bid submission phases,” the DOE said.

Despite the ambitious amount of capacity under procurement, a date for signing of power purchase agreements is “to be confirmed” by the DOE, according to its website – over 18 months since the initial 13 round 4 projects were awarded. In comparison, rounds 1 to 3 had gone from awarding of preferred bidders to financial close within 13 months at most.

If the round four and expedited projects do successfully close, the REIPPP programme will have added around 7,085MW of renewables capacity to the grid. A fifth round has also been planned, although, according to government's website, a request for proposals release was originally due in the second quarter of 2016. ■

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<p>Chile</p> <p>Santiago Solar S.A.</p>  <p>US\$118mm</p> <p>Term Loan Facility, LC Facility</p> <p>Documentation Bank, Mandated Lead Arranger</p> <p>September 2016</p>	<p>Colombia</p> <p>Autopistas del Nordeste S.A.S.</p>  <p>US\$250mm COP\$520,000mm</p> <p>Senior Secured Facilities</p> <p>US: MLA and Sole Bookrunner US & COP: Structuring Bank</p> <p>July 2016</p>	<p>Chile</p> <p>Total SunPower El Pelicano SpA</p>  <p>US\$200mm</p> <p>Term Loan Facility, LC Facility</p> <p>Joint Lead Arranger, Issuing Bank</p> <p>July 2016</p>	<p>Colombia</p> <p>Pacifico 1 Toll Road</p>  <p>US\$150mm</p> <p>USD Senior Term Loan</p> <p>Mandated Lead Arranger</p> <p>May 2016</p>
<p>Chile</p> <p>Interchile S.A.</p>  <p>US\$770mm</p> <p>Senior Secured Facility</p> <p>Joint Lead Arranger, Joint Bookrunner</p> <p>February 2016</p>	<p>Mexico</p> <p>La Bufa Wind SAPI de CV</p>  <p>US\$256mm</p> <p>Senior Secured Facility, VAT Facility</p> <p>Structuring Bank and Bookrunner, Joint Mandated Lead Arranger, Hedge Coordinator, Administrative Agent</p> <p>November 2015</p>	<p>Brazil</p> <p>Tartaruga FPSO</p>  <p>US\$1,264mm</p> <p>Senior Secured Facility</p> <p>Structuring Bank, MLA, Bookrunner, Facility Agent, Commercial Facility Agent, Security Agent</p> <p>September 2015</p>	<p>Colombia</p> <p>Trafigura, Beheer B.V.</p>  <p>US\$350mm</p> <p>Senior Secured Asset-Backed Facility</p> <p>Joint Mandated Lead Arranger, Bookrunner</p> <p>September 2015</p>
<p>Chile</p> <p>Conejo Solar SpA</p>  <p>US\$192mm</p> <p>Term Loan Facility</p> <p>Mandated Lead Arranger, Offshore Collateral Agent</p> <p>July 2015</p>	<p>Brazil</p> <p>FPSO Cidade de Saquarema</p>  <p>US\$1,550mm</p> <p>Construction/Term Loan</p> <p>Initial Bookrunner, Mandated Lead Arranger, Insurance Agent</p> <p>July 2015</p>	<p>Colombia</p> <p>El Dorado Internacional Airport</p>  <p>US\$500mm</p> <p>Senior Term Loan</p> <p>Bookrunner, Joint Mandated Lead Arranger</p> <p>May 2015</p>	<p>Mexico</p> <p>TAG Pipelines Norte</p>  <p>US\$1,274mm</p> <p>Senior Secured Credit Facility</p> <p>Mandated Lead Arranger</p> <p>March 2015</p>