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# IJGlobal

Project Finance & Infrastructure Journal



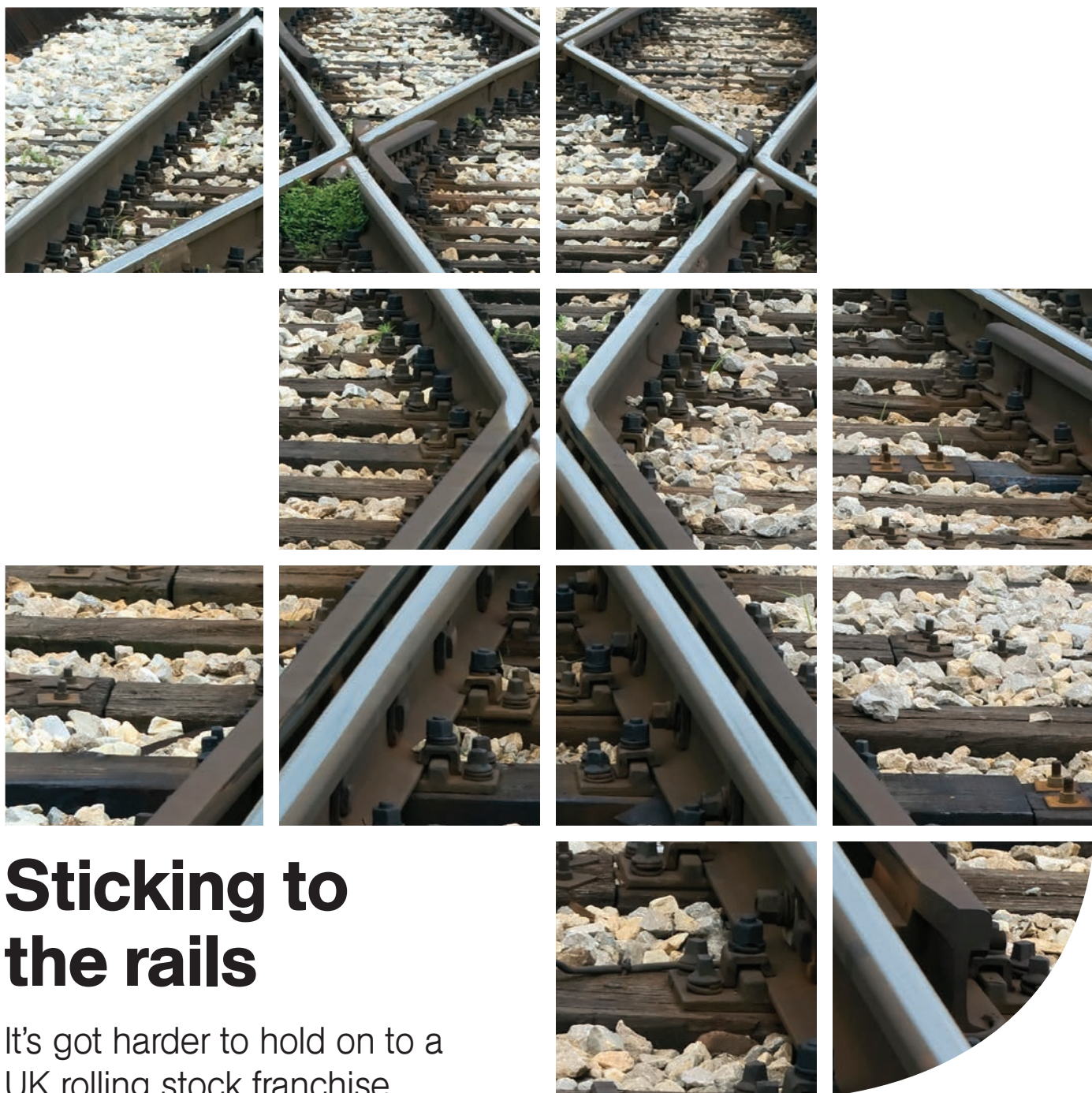
**NORTH AMERICA**  
Infrastructure Ontario

**LATIN AMERICA**  
Colombian health PPPs

**ASIA-PACIFIC**  
KalSel coal-fired, Indonesia

**EUROPE**  
Infrastructure fund regulation

**MIDDLE EAST & AFRICA**  
Sangaredi mine expansion



## Sticking to the rails

It's got harder to hold on to a UK rolling stock franchise

# The European Renewable Energy Investors Council

27<sup>th</sup> - 28<sup>th</sup> April 2017

(Pre-council mixer - Whisky Tasting: 26th April)

The Old Course Hotel, Golf Resort & Spa,  
St. Andrews, Scotland

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## Key speakers include:

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Innovation and Energy  
Scottish  
Government



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Cornelius**  
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## **Hummel Station, LLC** **USD 899.7 Million**

Financing of a 1,124 MW gas-fired generation facility in Snyder County, Pennsylvania  
Collateral Agent and Depositary Bank  
October 2015



## **CPV Valley Holdings, LLC** **USD 679.5 Million**

Financing for the ownership, development, construction, and completion of a natural gas-fired electric generation facility with an anticipated nominal rating of approximately 720 MW to be located in Wawayanda, New York  
Collateral Agent and Depositary Bank  
June 2015



## **Moxie Freedom LLC** **USD 592 Million**

Construction financing of a 1,028 MW gas-fired, combined-cycle power project in Pennsylvania  
Collateral Agent and Depositary Bank  
November 2015



## **Trans-Pecos** **USD 564.2 Million**

Trans-Pecos Pipeline  
Collateral Agent and Depositary Bank  
November 2015



## **Comanche Trail** **USD 447.9 Million**

Comanche Trail Pipeline  
Collateral Agent and Depositary Bank  
November 2015



## **EIF Pio Pico, LLC** **USD 443 Million**

Secured note issuance to finance the development, construction, operation, and maintenance of an approximately 318 MW natural gas-fired simple-cycle generating facility in San Diego County, California  
Collateral Agent and Depositary Bank  
February 2015



## **Jericho Wind, LP** **CAD 392 Million**

Financing for the development, construction, and operation of a 149 MW wind project located in Lambton, Warwick, and Middlesex Counties, Ontario, Canada  
Collateral Agent and Depositary Bank  
April 2015



## **Rhode Island State Energy Center, LP** **USD 375 Million**

583 MW capacity natural gas-fired combined cycle power generation facility and related property located in Johnston, Rhode Island  
Collateral Agent and Depositary Bank  
December 2015



## **St. Joseph Wind Farm, Inc.** **CAD 244 Million**

Refinancing for an operational 138 MW nameplate capacity wind generation facility located in Manitoba, Canada  
Collateral Agent and Account Bank  
November 2015



## **Coram California Development, LP** **USD 238.6 Million**

102 MW Coram Wind Farm  
Collateral Agent and Depositary Bank  
July 2015

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With oil prices set to rise once more in 2017, Saudi Arabia will soon show the world whether it is really serious about privatisations, IPOs and renewable power.

# Reforms in Riyadh

The start of 2017 has brought bad news for some groups of people: fans of the Trans-Pacific Partnership trade deal; fans of the UK's access to the European single market; fans of the Geneva Convention's protocol on the status of refugees. But January has at least brought good news to the oil industry.

In December 2016 the members of OPEC, the grouping of 13 oil-producing nations led by Saudi Arabia, agreed a deal to cut global oil production by 1.2 million barrels a day (b/d) for six months. The cut came two years after OPEC had decided to let market forces dictate oil prices, which led to a supply glut and global prices falling by half.

The original decision to allow oversupply was widely seen as an attempt to stifle the growing US shale market but has just as widely been seen as a failure in this respect. The biggest consequence of the decision seems to have been a crippling of the balance sheets of numerous countries dependent on oil revenues, as oil prices at first plummeted and then stubbornly refused to recover.

The deal made in late 2016 to cut OPEC production looked fragile. Saudi Arabia was no doubt keen to save face over its original decision to flood the market, and reluctant to give too much help to Iran, its main regional adversary, at a time it was opening up to international trade. But as *IJGlobal* went to press, the plan seemed to be working.

Reports suggested that OPEC production during January fell by 900,000 b/d and 11 non-OPEC nations had agreed to curb their output in support. Saudi Arabia, Kuwait, Algeria and non-OPEC member Russia all cut production faster than agreed. Brent crude prices had risen to around \$55 a barrel from less than \$50 for most of December.

If the deal stays in place and prices continue to rise, Saudi Arabia is likely to be the biggest beneficiary. The country ran a budget deficit of \$98 billion in 2015, and although this was reduced to roughly \$79 billion last year, the dramatic reduction in government revenues forced its leaders to propose radical plans. The question now is whether the government remains as radical if oil prices rebound strongly.

When the elderly King Salman ascended to the Saudi throne in 2015, it soon became clear that his 31-year old son Crown

Prince Mohammed bin Salman was going to have significant political sway. He has been the architect of Saudi Arabia's ambitious National Transformation Programme (NTP) and proposed wider economic reforms.

The most eye-catching of the new government's proposals was to privatise part of Saudi Aramco, by some distance the largest oil company in the world. This plan grabbed so much attention because Saudi government finances, and its oil reserves, are shrouded in so much mystery. Market commentators value Aramco at anywhere between \$2 trillion and \$10 trillion, which is some range.

The new OPEC deal could aid any IPO by raising the company's valuation, but technical questions remain to be answered. Listing domestically would be preferable because that would limit disclosure requirements. But the local stock market, Tadawul, has a market cap of less than \$570 billion, and so even a 5% stake in Aramco would probably be too great for it to bear. That points towards at least partial listing internationally, which would require regular reporting and market disclosures.

Perhaps more precarious are the country's plans for renewables investment. Saudi Arabia now lags far behind its neighbours in terms of solar procurement. At first Dubai, which has no gas or oil deposits, led the way. But now even gas-rich Abu Dhabi is developing significant solar schemes.

Under the NTP, Saudi Arabia plans to build 10GW of renewables over six years. The Crown Prince has also been pushing the use of PPPs for new infrastructure but few projects have emerged. Advisers have long been trying to push private investment in infrastructure in the country but these overtures have long fallen on deaf ears outside the power sector.

And renewables programmes are nothing new in the country. In 2012 the government unveiled a plan to develop 23.9GW of renewable energy by 2020 and 54GW by 2032. The procurement process for these targets was never launched however.

Saudi Arabia is a very conservative and traditional country and changing its secretive business culture and diversifying its energy sector will not be painless or without opposition. 2017 could be a crucial year for the future of the country. ■

**Jon Whiteaker**  
Editor

# Briefings

## STRUCTURED TRADE FINANCE

### Kernel prices debut Eurobond

Ukrainian agribusiness Kernel Holding priced its debut \$500 million Eurobond in late January. Kernel will use the proceeds from the issue to pay down some of its \$600 million of bank debt, mostly consisting of one-year pre-export financing facilities.

The five-year senior unsecured fixed rate 144A benchmark bond priced on 24 January with a coupon of 8.75%, compared to reported initial guide pricing of 9.5% to 9.75%. ING and JP Morgan were lead arrangers. The bond has been rated B+ by Fitch, two notches above Ukrainian sovereign debt, and B by S&P.

The new bond should offer a slight discount on Kernel's existing borrowings, which have an all-in cost around 9%. The company is expected to prioritise use of the longer-dated borrowings to make acquisitions and carry out its investment programme.

### Kaz Minerals adds to PXF

Copper mining company Kaz Minerals has raised an additional \$50 million from ING Bank via an accordion option on its existing pre-export facility. The additional commitment will leave the borrower with \$283 million of outstanding pre-export debt. The deal is a preliminary measure to Kaz negotiating a long-term pre-export refinancing by mid-2017.

The borrower is attempting to restructure its balance sheet after years of low copper prices. In October the lenders on the mining company's pre-export facilities agreed to waive the net debt to Ebitda covenant on the deal until July 2017. The deal was originally signed in 2012 and totalled \$1 billion, then replaced with a \$334 million four-year facility in 2014 with the same waiver extension to July 2016. It has been partially repaid in instalments and reduced to \$260 million as of October.

### Metinvest approaches restructuring deal

Metinvest, the distressed Ukrainian mining and steel business, has moved a step closer to restructuring its debt pile by agreeing the deal with a majority of bondholders and a committee of lenders on its pre-export finance loans.

The creditors agreed to the terms published last year, under which Metinvest's three Eurobonds and its existing pre-export loans will be consolidated into two loans

with extended maturities.

The existing \$750 million 2018 notes, \$289.6 million 2017 notes and \$85.5 million 2016 notes will be combined into one \$1.125 billion note maturing in December 2021. The new notes will pay a coupon of 10.875%, of which 30% is payable in all circumstances and 70% if funds are available; if not, interest will be capitalised. From 1 January 2019, 100% of the coupon will be payable.

### RMK refinances PXF

Russian Copper Company (RMK) successfully refinanced an existing pre-export facility with a new \$300 million five-year loan in December 2016.

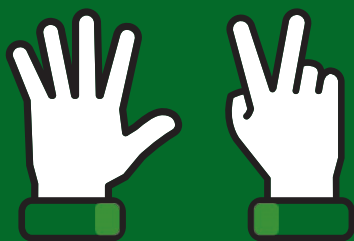
The deal comes with a holding company guarantee and is secured against both export revenues and assets. Coordinated by Natixis (also facility and security agent), the lead underwriters are Alfa Bank, Sberbank, Rosbank, UniCredit (Russia), UBS and Societe Generale.

RMK is the third ranked cathode copper production and second in copper wire rod production in Russia, and the group also has significant activities in Kazakhstan. ■

More structured trade finance news at [tradefinanceanalytics.com](http://tradefinanceanalytics.com)



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# Briefings

## FUNDS

### Starwood Energy Infrastructure Fund III to close in Q1

Connecticut-based Starwood Energy Group Global is set to conclude fundraising for its Starwood Energy Infrastructure Fund III by Q1 2017, *IJGlobal* has learnt. A Securities and Exchange Commission (SEC) document confirms that the fund is targeting \$1.5 billion and as of 1 January 2017 had \$854 million in total commitments. The vehicle is an unlisted, closed-ended equity fund targeting institutional investor capital for assets in the gas-fired, power, renewables and battery storage sectors in North America. The manager's latest acquisition was that of the Marcus Hook gas-fired generating assets from NextEra Energy Resources for of \$765 million. Prior to that, Starwood Energy had made a \$100 million investment in US energy storage provider Stem.

### Ancala concludes UK fundraising and targets Europe

London-based infrastructure investment manager Ancala Partners has raised £400 million (\$425.2 million) for its UK infrastructure platform, which it launched with Willis Towers Watson at the beginning of 2016. The platform was targeting between £300-400 million in commitments and it reached a £160 million first close in February 2016. Ancala also said it is preparing a similar mid-market investment platform with a broader European focus that it plans to start marketing in 2017. The sectors included in the investment criteria are utilities, transport, energy, renewables, social infrastructure and

telecommunications. Commitments into the platform primarily came from UK local government pension schemes (LGPSs).

### Edmond de Rothschild announces BRIDGE II's first close

Edmond de Rothschild has achieved a €147 million (\$156.7 million) first close on its second infrastructure debt fund BRIDGE II. First close was reached in December 2016 with commitments coming in from five institutional investors from Italy, Germany and France, the manager said. The Luxembourg-regulated fund is expected to hold an interim close by the end of January 2017 and a final close by Q2 2017 at a similar amount as its predecessor, which closed at €595 million in 2015. In June 2016, the manager closed a €250 million separately managed account (SMA) for an undisclosed European institutional client, taking the amount managed across the three vehicle to roughly €1 billion. BRIDGE II has already made three investments across the social and telecoms infrastructure sectors, the latter via a first investment in a fibre optic PPP in France.

### AMP Capital closes on global infrastructure platform

AMP Capital has reached a \$2.4 billion final close on its global infrastructure platform, which includes the AMP Capital Global Infrastructure Fund and the relaunched Strategic Trust of Europe (SITE). GIF contributed to the total by raising \$1.4 billion, while SITE already had \$1 billion in seed assets. While AMP Capital only invests through GIF, investor commitments and investments are blended across the platform. The manager said that more than 50 institutional investors from the UK, the US, Canada, Japan, Belgium, Denmark, Middle East, Ireland, Australia, Spain and Finland committed to the platform since it began fundraising in 2015. The investor base primarily includes pension funds and life insurance companies with a smaller number of family offices.

### Macquarie's North America fund IV in fundraising

Macquarie Infrastructure and Real Assets (MIRA) has begun fundraising for Macquarie Infrastructure Partners IV (MIP IV). A source said that the manager was holding investor meetings for MIP IV as early as the end of October 2016. The fund is understood to be targeting between \$3.5 billion and \$4 billion in commitments. Like its predecessors, MIP IV is 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 seeks commitments from global institutional investors, particularly pension funds, with the majority of capital expected to come from US-based investors.

### Antin closes third infrastructure fund

Antin Infrastructure Partners has closed its third fund at its hard cap, raising €3.6 billion (\$3.8 billion) in less than five months. Commitments came from 85 investors globally including pension funds, insurance companies, asset managers and sovereign wealth funds. The majority of investors (70%) were from European investors, predominantly from the Nordics, Germany, France and the UK, with the remaining portion being evenly spread across investors from North America, Asia and the Middle East. New Mexico Public Employees Retirement Association (PERA) first emerged publically as an investor in November 2016 with a €65 million ticket. The fund will retain the same investment mandate as its predecessors and will be a 10-year PE style fund investing in brownfield only projects in the energy, transport, social infrastructure and telecoms sectors. Like the previous funds, the third fund is understood to be targeting 15% gross returns and 5% gross yield. ■

More funds news at  
[ijglobal.com](http://ijglobal.com)





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# Briefings

## COMMODITIES

### Trafigura launches revolver refinancing

Trafigura launched in January a \$1.5 billion revolving credit facility to refinance the \$1.91 billion one-year tranche of a revolver closed last year. The deal will also look to increase the size of Trafigura's \$3.19 billion three-year facility.

ABN Amro, Bank of America Merrill Lynch, Citigroup and Mizuho are active mandated lead arrangers and bookrunners. JPMorgan and Bank of Tokyo-Mitsubishi UFJ are passive MLAs and bookrunners. The new facility will comprise one tranche with a 364-day maturity. The facility is due to reach close in March.

The revolver has been launched with guide margin pricing of 65bps over Libor, in line with the existing \$1.91 billion tranche closed in March 2016 which it replaces. The transaction is structured as an amend-and-extend of the existing facility. A spokesperson said: "Taking into account the total size of the one-year refinanced tranche and the extended three-year tranche, we should reach around the same level as last year."

### Pacific Drilling avoids default

Pacific Drilling, the floating rig drilling contractor, has agreed amendments to the terms of its existing \$500 million revolver and \$1 billion term loan as it seeks to restructure its debt. The firm has managed to waive the leverage cover ratio covenant and raise the maximum net debt per vessel test level to \$400 million until the end of the second quarter on 30 June 2017.

In return, Pacific Drilling said it

had permanently repaid \$25 million of the revolver; prepaid \$76 million of the senior secured term loan; and applied \$31.7 million of cash collateral towards the next principal payments on the term loan, due in May 2017. This leaves the firm with \$493.5 million of cash and cash equivalents, including restricted cash.

The term loan was signed in February 2013 and is divided into two \$500 million tranches: one tranche provided by GIEK maturing in 2026 and one five-year tranche maturing in 2019. The five-year revolver was signed in June 2013 and pays a margin of 250-325bp over Libor, depending on the company's leverage ratio.

### Scorpio Tankers arranges new loan

Scorpio Tankers, the Monaco-based downstream oil shipping line, has received commitments for a \$172 million loan facility to finance eight new tankers.

Scorpio has received commitments from DekaBank, Kexim, GIEK and Macquarie Capital for the loan, which will have multiple tranches of tenors between six and 12 years. The loan will pay a blended margin of 202bp over Libor annually, with terms and conditions similar to those in its existing loan facilities.

Proceeds will be used to finance up to 60% of the market value of eight new medium range tankers under construction at Hyundai Mipo Dockyard, and due for delivery in 2017 and the first quarter of 2018.

### UKEF supports Vitol's Sankofa project

UK Export Finance has provided \$400 million of support for Vitol and Eni's Offshore Cape Three Points oil production project offshore Ghana. UKEF joined commercial banks in signing a \$1.35 billion project financing for the project.

The ECA's support comprises an eight-year \$310 million direct loan and \$90 million of 12-year cover for a portion of the \$740 million of commercial bank lending,

in support of UK-headquartered contractor GE Oil & Gas, which is providing subsea production systems to the project. A further \$217 million of commercial bank debt is covered by MIGA.

The commercial lenders are Bank of China, HSBC, ING, Mizuho, MUFG, Natixis, Societe Generale and Standard Chartered. They are providing two uncovered 10-year term loans of \$470 million and \$180 million as well as the \$90 million covered tranche. The IFC is lending \$235 million from its own account and \$65 million from its Managed Co-Lending Portfolio Program.

The project's sponsors are Eni (44.444%), Vitol (35.556%) and Ghana National Petroleum Corporation (20%).

### Sofitex arranges upsized trade financing

Sofitex, Burkina Faso's largest cotton exporter, has agreed €212 million (\$129 million) of financing to support its cotton buying programme. It has signed sign two facilities – one with international and one with domestic lenders.

The financing comprises a €90 million loan from Societe Generale, Société Internationale de Financement and BNP Paribas and an €122 million loan in CFA francs from a group led by Ecobank Burkina Faso. Sofitex arranges financing on a regular annual basis; however the international loan has been upsized from last year's €70 million one-year facility, which it refinances. BNPP is to join the financing in addition to SG and SFI, who are lending on the existing facility.

The loans are secured against Sofitex' warehoused cotton supplies, as previously, and will be used to buy cotton from local traders and transporting it to seaports in Ivory Coast, Togo, Benin and Ghana, prior to selling to international trading houses. ■

More commodities news at [tradefinanceanalytics.com](http://tradefinanceanalytics.com)



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# Briefings

M&amp;A

## Hong Kong tycoon's DUET takeover under threat

A group of companies controlled by Hong Kong tycoon Li Ka-shing reached an agreement to buy Australian power and gas utility owner DUET Group for A\$7.4 billion in January. The acquisition consortium includes Cheung Kong Infrastructure (CKI), Cheung Kong Property Holdings and Power Assets Holdings.

The transaction will be Ka-shing's largest investment in Australia and follows the federal government's decision in August to disqualify the bids of CKI and China's State Grid from the privatisation of electricity utility AusGrid on "national security" grounds.

The DUET deal is subject to full approval from DUET's shareholders and the Foreign Investment Review Board. Australia recently unveiled the Critical Infrastructure Centre, a new government body to protect against security risks from foreign ownership of key national assets.

## ExxonMobil bets on the Permian Basin

ExxonMobil has signed a deal to double its resource in the Permian Basin in the US. ExxonMobil agreed to pay \$6.6 billion of ExxonMobil shares and deferred contingent cash payments to owners the Bass family. ExxonMobil is to acquire 3.4 billion barrels of oil equivalent of resource in the highly prolific Delaware Basin in New Mexico.

The Permian Basin is one of the most cost efficient locations to drill in the US. Permian assets have remained acquisition targets despite depressed oil prices. In November 2016 ExxonMobil

boosted its midstream offering in the Permian Basin through a new joint-venture with Sunoco Logistics for which ExxonMobil has a preferred provider agreement and 15% equity.

## 3i buys EISER's portfolio with pension backing

UK listed investment manager 3i has established a new vehicle with commitments from Dutch and Danish pension fund managers APG and ATP to acquire the assets of the end-of-life EISER Global Infrastructure Fund.

3i, APG and ATP committed £700 million to the 3i Managed Infrastructure Acquisitions vehicle. The deal signed almost a year after 3i began exclusive negotiations. The 3i vehicle is acquiring five assets including Belfast Airport and ESP Utilities in the UK, and stakes in various transport concessions in Spain.

The sale to the 3i vehicle facilitates the option for existing LPs of the EISER fund, maturing in 2017, to reinvest their capital in the new vehicle and stay invested in the portfolio.

## OHL responds to LatAm disposal rumours

Spanish construction company OHL is rumoured to be planning sales of Latin American concessions, including Peruvian Red Vial 4 road, and stakes in Chilean and Colombian highway projects.

OHL said on 25 January that "within its general asset rotation policy it holds conversations with diverse investors for the sale of shares in some of its infrastructure assets in LatAm", though added that "at the present date none of them are formalised and there is no firm decision".

Ratings agent Moody's downgraded OHL to Caa1 in November, citing a slump in earnings for its engineering and construction business and rising recourse debt levels. OHL argued that three repeated downgrades by Moody's have been uncalled for, because OHL had raised €1.4 billion through the divestment of shares in Abertis and MLO. OHL has since sold its last 2.5% stake in Abertis.

## Eurotunnel plans interconnector sell-down

Groupe Eurotunnel, which owns the channel tunnel between the UK and France, is seeking to sell part of its 100% stake in the 1GW Eleclink interconnector project. The merchant power interconnector is due to run along the 50.5km Channel Tunnel which serves road vehicles as well as high speed trains. Construction on the transmission cable has already begun.

Eurotunnel bought out its co-sponsor STAR Capital's 51% stake in August 2016 for €75 million. The debt raising, led by Citi and HSBC, for this roughly €400 million project was targeted for mid-2016 but is heavily delayed. The implications of the UK's impending exit from the EU are not entirely clear, though Eurotunnel had said it is not a negative factor hampering the project financing.

## Macquarie's GIB purchase draws politicians' scrutiny

Macquarie has yet to be official confirmed as the preferred bidder in the UK government's privatisation of its Green Investment Bank (GIB) yet it has already come under attack from politicians over assets it is reportedly planning to sell.

The privatisation was launched in March 2016 and was due to conclude in February 2017. Up to 100% of the renewables bank is for sale, though government would retain a golden share, with a separate capital fundraising of up to £2.4 billion part of the deal.

Various politicians including former business secretary Vince Cable have vocally opposed an "asset-stripping" of the bank and in early 2017 have been calling for the planned sale to Macquarie to be cancelled. Ten new holding companies for some of the GIB's largest assets were incorporated in late 2016, including for the Rampion, Galloper and Westernmost Rough offshore wind farms. ■

More M&A news at  
[ijglobal.com](http://ijglobal.com)



# Briefings

## CAPITAL MARKETS

### Acwa Power bond due March

Saudi Arabian developer Acwa Power has re-scheduled its previously cancelled \$1 billion dollar-denominated bond for March 2017. Acwa first announced the bond in November 2016 with plans to invest the proceeds in greenfield projects in Saudi Arabia. The bond was postponed to 2017 however due to “timing constraints” and investor requests for more time to evaluate the offering.

Jefferies, Citibank, Mizuho, Standard Chartered, and China Construction Bank Singapore are the main bookrunners on the deal. The bonds are understood to mature in 2039, with roughly 30% of the notes structured as a Sukuk.

Details of the issuance emerged as Acwa confirmed it was deferring a previously planned IPO until 2019 or 2020. Saudi’s sovereign wealth fund PIF is now considering an injection of equity into the company.

### Santiago metro places bonds for lines 6 and 3

Santiago Metro, the government-owned subway operator, has placed \$500 million in 30-year bonds to finance the new lines to the capital city’s metro system. The proceeds will be used to finance the new lines 6 and 3, which are extensions to lines 2 and 3, and for the refinancing of liabilities.

The 144A/Reg S was 8x oversubscribed and achieved a coupon rate of 5%. More than 200 investors from the US, Europe and Asia purchased the paper. Bank of America Merrill Lynch and JP Morgan advised Metro de Santiago on the transaction.

### Pembina closes notes offering

British Columbian Pembina Pipeline has closed a C\$600 million (\$452.8 million) senior secured medium-term notes offering.

The issuance followed Pembina’s receipt of final regulatory approval for a planned C\$235 million expansion of pipeline infrastructure in northeast British Columbia.

The net proceeds from the notes issue is expected to be used to repay indebtedness under Pembina’s unsecured \$2.5 billion revolving credit facility due 31 May 2020 and an unsecured operating facility of \$30 million due May 2017, as well as to fund its capital programme and for general corporate purposes.

Pembina conducted the offering in two tranches, comprising \$300 million in senior unsecured medium-term notes, series 8, and \$300 million in senior unsecured medium term notes, series 9. Both offerings were rated BBB by DBRS and Standard & Poor’s Ratings Services.

### Project bond refi for Spanish solar portfolio

Solar developer Celeo, wholly owned by Spanish infrastructure and energy group Elecnor, has closed a €41.6 million (\$44.3 million) refinancing of eight Spanish photovoltaic plants via a project bond issuance.

This transaction is among the first refinancings via project bonds to close successfully in Spain, as well as one of the first involving roof-mounted installations and the first involving unrated debt.

Banco Santander was structuring agent, arranger and sole bookrunner for the transaction. The bonds are subject to English law and listed on the Frankfurt Stock Exchange’s Quotation Board. They are guaranteed against the plants themselves and the income generated from them. The projects, seven of which are roof-mounted, have a total installed capacity of 15.3MW.

### India agencies to rate infrastructure projects

Crisil, part of Standard & Poor’s, and Fitch’s India Ratings, have announced they will start rating the creditworthiness of individual Indian infrastructure projects.

Given the financial stress on banks and the financial health of infrastructure companies, there is an urgent need to bridge the funding gap in the infrastructure sector, according to India Ratings. Finance Minister Arun Jaitley says the country requires infrastructure investments of \$1.5 trillion over the next 10 years.

The two agencies will use scales based on the expected loss model, which assesses the probability of default and the recovery prospects of the asset under evaluation during the lifetime of the debt instrument. The focus will be on embedded factors, such as termination payments, contractual payments and will help assess infrastructure projects based on their recovery aspects.

### MidAmerican Energy offers dual-tranche green bonds

Berkshire Hathaway subsidiary and Iowa-based rate-regulated utility MidAmerican Energy has initiated an \$850 million dual-tranche mortgage bond offering. The proceeds are expected to be used to finance capital expenditures including the company’s 551MW Wind X and 2GW Wind XI projects which were previously financed with general funds.

The offering comprises \$375 million of 3.1% first mortgage bonds due 2027 and \$475 million of 3.95% first mortgage bonds due 2047. Provisional ratings on the bonds were Aa2 by Moody’s Investors Service and A+ by Standard & Poor’s Ratings Services and Fitch Ratings.

Others to issue green bonds in the US over the last 12 months include Pattern Energy Group, Bank of America and Southern Power. ■

More capital markets news at [ijglobal.com](http://ijglobal.com)

## Briefings

### POLICY & REGULATION

#### Lebanon to revive offshore upstream tender

Lebanon intends to restart its first offshore hydrocarbons licensing round, offering five exploration blocks. The round has been delayed for three years by political deadlock. At its first sitting since being formed in December 2016, Lebanon's cabinet passed two decrees on 4 January 2017 defining the round's blocks and specifying conditions for exploration and production tenders and contracts.

The first round will offer five offshore blocks, with a further five planned for later rounds. 46 bidders were prequalified for the round in 2013. Lebanon's Energy Ministry will gauge the interest of the companies that were previously prequalified and decide whether to hold a new prequalification round. Multiple gas reserves have been discovered off the coast of Lebanon and Israel since 2009.

#### NY governor proposes JFK airport overhaul

New York state governor Andrew M. Cuomo has proposed a \$10 billion plan to overhaul the John F Kennedy International Airport in Queens, New York. The governor outlined a \$7-8 billion on-airport development and about \$1.5-2 billion in road access works, including expanding the Van Wyck interchange as well as improving mass transit access.

The plan addresses key bottlenecks in road access to and from JFK on the Van Wyck and at the Kew Gardens interchange. The panel also recommended the development of actionable plans to expand rail mass transit access to the

airport. The governor did not outline a timeline for the redevelopment plan, but expressed the potential for raising private capital for the airport overhaul.

#### Tamil Nadu launches utility solar tender

State-owned Tamil Nadu Generation and Distribution Corporation (Tangedco) has opened a reverse auction tender for 500MW of utility scale solar power capacity. The upper limit tariff benchmark rate has been set at Rs4.50 (\$0.07) per kWh. Bid submissions are due on 10 February 2017.

Tangedco will sign 25-year power purchase agreements (PPA) with the winning bidders. The latest tender will compensate for last October's undersubscribed round, which restricted the size of the solar developments to 50MW. Only 20 bids for a combined capacity of 116MW were submitted, according to consultancy Bridge to India.

Other concerns for potential bidders, besides economies of scale, were grid curtailment, payment delays and the strict requirement to start operations within 10 months of signing the PPA.

#### Trump orders Dakota Access, Keystone pipeline approvals

President Donald Trump issued executive orders on Tuesday (24 January) calling for his administration to expedite approvals for the controversial Dakota Access (DAPL) and Keystone XL pipelines.

Trump said that executive approval will be "subject to a renegotiation of terms" for both of the pipeline projects.

TransCanada issued a statement Tuesday afternoon confirming that it will pursue an option to construct the roughly \$8 billion Keystone XL pipeline, which was rejected by the previous administration in November 2015.

The Dakota Access pipeline is nearly completed but it is unclear whether delays caused by former-President Barack Obama blocking the project could have lasting repercussions on its offtake agreements. These were negotiated before oil prices fell in 2015.

#### Premier Colin Barnett promises Perth Freight Link tunnel

Premier of Western Australia Colin Barnett said a re-elected Liberal Government will build a 3km tunnel to Fremantle as part of the next phase of WA's biggest road project – the Perth Freight Link.

"The government has decided, if re-elected, we will build a tunnel", Barnett said.

Construction of the tunnel, between the Winterfold Road and Stock Road intersection in Hilton to High Street in East Fremantle, is expected to start in 2020, around the same time the Roe Highway extension through Beeliar Wetlands nears completion.

Barnett has previously been evasive about the tunnel plan. He said he was now confident an underground solution was the best option after work had been done in recent months comparing different routes and costings.

#### Criticism for UK's failed carbon capture programme

The UK's failed carbon capture and storage (CCS) commercialisation programme has been criticised in a report by the country's National Audit Office. The UK government scrapped its £1 billion (\$1.23 billion) CCS commercialisation scheme in November 2015. The surprise decision drew widespread criticism, as the government had already said it would support two projects under the scheme.

These were the 2.1GW Peterhead power plant in Scotland and the 426MW White Rose project in Yorkshire, England. The Capture Power consortium comprising Alstom, BOC and Drax Power were the sponsors for White Rose, while SSE and Shell headed up the Peterhead project. The government had already cancelled its first CCS competition in 2011, after spending £68 million on developing it. ■

More policy & regulation news at [ijglobal.com](http://ijglobal.com)

# Company shortlists

## Americas

### MLA (North America)

ICBC  
MUFG  
Societe Generale  
Sumitomo Mitsui Banking Corporation

### MLA (Latin America)

Banco Santander  
Bancolumbia  
BBVA  
Credit Agricole CIB  
MUFG  
Sumitomo Mitsui Banking Corporation

### Bond Arranger

Citigroup  
Goldman Sachs  
HSBC  
MUFG  
RBC Capital Markets

### Financial Adviser (North America)

EY  
KPMG  
MUFG  
Societe Generale  
Whitehall and Company

### Financial Adviser (Latin America)

Banco Santander  
BBVA  
Structure  
Sumitomo Mitsui Banking Corporation

### Legal Adviser (North America)

Latham & Watkins  
Mayer Brown  
Norton Rose Fulbright  
Nossaman  
Skadden  
Milbank, Tweed, Hadley & McCloy

### Legal Adviser (Latin America)

Allen & Overy  
Clifford Chance  
Milbank, Tweed, Hadley & McCloy  
White & Case

### Legal Adviser (Latin America, Local)

Galicia  
Garrigues  
Morales & Besa  
PPU

### Technical Adviser

Arup  
Leidos  
Lummus Consultants  
Stantec  
Turner Townsend

### Sponsor (Latin America)

Brookfield Asset Management  
EDF  
Fermaca  
Vinci Concessions

### Alternative Lender

AMP Capital  
BlackRock Infrastructure Debt  
MetLife

### Infrastructure Fund

BlackRock  
Brookfield Asset Management  
Meridiam  
Star America Infrastructure Partners  
Stonepeak Infrastructure Partners

### Due Diligence Provider

BDO  
Mazars  
INTECH

### Sponsor (North America)

Brookfield Asset Management  
Meridiam  
Pattern Energy Group  
Plenary Group  
Vantage Airport Group

## Europe and Africa

### MLA

BNP Paribas  
HSBC  
MUFG  
Societe Generale  
Sumitomo Mitsui Banking Corporation

### Bond Arranger

Citigroup  
Deutsche Bank  
HSBC  
Societe Generale

### Financial Adviser

BNP Paribas  
Deloitte  
KPMG  
Macquarie Capital  
Societe Generale  
Synergy Consulting

### Legal Adviser

Allen & Overy  
Ashurst  
DLA Piper  
Linklaters  
Norton Rose Fulbright  
White & Case

### Technical Adviser

Arup  
Infrata  
Mott MacDonald

### Sponsor

Bluefield Solar Income Fund  
Macquarie Capital  
Mirova

### Due Diligence Provider

BDO  
Mazars  
Operis

### Alternative Lender

Allianz Global Investors  
Aviva Investors  
Edmond de Rothschild  
La Banque Postale Asset Management  
Legal and General Investment Management  
Schroders  
Standard Life Investments

### Infrastructure Fund

Ardian Infrastructure  
First State Investments  
InfraVia Capital Partners  
Macquarie Infrastructure and Real Assets

## MENA

### MLA

BNP Paribas  
MUFG  
National Bank of Kuwait  
Sumitomo Mitsui Banking Corporation

### Financial Adviser

Deloitte  
KPMG  
Sumitomo Mitsui Banking Corporation  
Synergy Consulting

### Legal Adviser

Allen & Overy  
Hogan Lovells  
Latham & Watkins  
Norton Rose Fulbright  
Shearman & Sterling  
White & Case

### Sponsor

ACWA Power  
ENGIE  
Kepco



## Asia Pacific

### MLA

HSBC  
Mizuho Bank  
MUFG  
Societe Generale  
Sumitomo Mitsui Banking Corporation

### Financial Adviser

DBS Bank  
MUFG  
Societe Generale  
Sumitomo Mitsui Banking Corporation  
Synergy Consulting

### Legal Adviser

Allen & Overy  
Ashurst  
Linklaters  
Norton Rose Fulbright  
Shearman & Sterling

### Technical Adviser

Arup  
Mott MacDonald

### Sponsor

Ayala Corporation  
Mitsubishi Corporation  
Plenary Group

### Due Diligence Provider

BDO  
Mazars

**The awards will be handed out at four regional dinners:**

### Americas

15th March 2017  
Mandarin  
Oriental,  
**New York**

### Middle East

7th March 2017  
Emirates  
Tower Hotel,  
**Dubai**

### Asia-Pacific

9th March 2017  
Marriot Tang  
Plaza Hotel,  
**Singapore**

### Europe and Africa

29th March 2017  
The Guildhall,  
**London**

## Briefings

### PEOPLE

#### Government/Development Banks

Latin American Development Bank (CAF) has named Peruvian economist **Luis Carranza** as its new president effective from 1 April 2017 for five years. Carranza succeeds Enrique García Rodríguez who has been president of CAF for the last 25 years. Carranza has previously held a number of senior positions, including Minister of Economy and Finance in Peru twice, chief economist for Latin America and emerging markets at BBVA in Spain and has also worked for the International Monetary Fund.

US President Donald Trump has appointed **Elaine Chao** as Transportation Secretary to head the **US Department of Transportation**. A former labour secretary, Chao will head the department and will take over office from secretary Anthony Foxx. Chao has worked in both previous Bush administrations and has sat on numerous corporate boards. She was President George W. Bush's labour secretary, which made her the first Asian-American woman ever appointed to a cabinet position.



#### Banks

Peter Lyneham left his position as managing director at **Goldman Sachs** infrastructure team after more than 17 years of service. Lyneham was based in London and was one of the founding members of the infrastructure investment group of Goldman Sachs. He

is understood to have left the company for family reasons. Managing directors **Matteo Botto Poala** and **Kunal Koya** will take over Lyneham's responsibilities. Philippe Camu is the unit's global head and CIO, based in London.

**Christopher Marks** has joined MUFG with a mandate to expand the bank's presence in Africa and central and eastern Europe. Marks will be based in MUFG's London office. He joins from the African Development Bank where he was a senior adviser. Marks has over 20 years of experience in financial advisory and the capital markets.

#### Law Firms

**Squire Patton Boggs** has appointed **John Danahy** as an energy-focused partner in its real estate practice in London, and Dr. Sabine Pittrof as a partner in Frankfurt. Danahy joins the firm from the real estate team at King & Wood Mallesons in London. His practice focuses on energy and infrastructure-related real estate, as well as traditional real estate development and property investment work, particularly for large international investment funds. Pittrof, who joins from Deloitte Legal, will be a partner at the firm's global corporate practice group. Pittrof provides corporate law advice on German and international business transactions.

#### Funds

**UK's Pensions Infrastructure Platform (PiP)** has appointed **Tony Poulter** as its new chairman. He

replaces Joanne Segars, who is chief executive of the Pensions and Lifetime Savings Association (PLSA). Prior to joining PiP, Poulter served for six months as senior adviser at First State Investments, where he joined in September 2016 after almost 10 years at PwC. Segars two-year term as PiP chairman ended in December 2016.



**Brookfield Renewable Energy Group** appointed **Dan Benoit** as chief investment officer of the company's North American platform. Replacing Benoit as lead for the capital markets team as vice-president of capital markets, North America is **Marcus Enns**. Benoit joined Brookfield Renewable in October 2009 and was most recently senior vice-president of capital markets, North America. In his new role, his focus will shift toward mergers and acquisitions. Previously, he was associate director of equity capital markets at Scotia Capital.

#### Sponsors

Rock Infrastructure has appointed **Trevor Sturmy** as partner and member of its rail team. A project finance veteran, Sturmy will be focusing on upgrades and renewals on the rail network, in addition to other activities, the company said. Previously, he led HSBC's project finance team's infrastructure and PPP activities in Europe and Africa. In that role, he was involved in transactions in a number of markets and sectors, including transport (road, rail and air), defence, healthcare, water/wastewater, and education.

Managing director **Martin Langham** and vice-president **George Walley** of the UK Green Investment Bank's offshore wind team are to leave to join Canadian energy business **Enbridge**. Both are responsible for managing the bank's stakes in all of its offshore wind investments. They also provide asset management and technical services to the GIB's Offshore Wind Fund, which counts multi-billion pound wind farms Rhyl Flats, Sheringham Shoal, Gwynt y Mor and Lynn and Inner Dowsing amongst its portfolio. The pair are also understood to assist the GIB's M&A team in technical and commercial aspects of transaction due diligence. GIB is in the process of being privatised, with Macquarie widely reported to be the preferred bidder, and it is not yet known if Langham or Walley will be replaced. ■

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# Sticking to the rails

**With new entrants changing the face of the UK rail industry, success for the new rail leasing and financing firms hinges on their ability to keep fleets stuck to lines beyond franchise expiry. By Beatrice Mavroleon.**



**T**he UK government has a long history of working with the private sector to manage and operate the country's rail sector. The creation of the rolling stock companies, or ROSCOs, who since the privatisation of British Rail in the late 1990s have owned the majority of the UK's rolling stock fleet, has attracted investors seeking predictable returns stretching across long investment horizons.

Ownership of these companies has now changed hands a number of times, bringing in pension funds, quasi-sovereign pension funds, and infrastructure funds.

There have also been new entrants in train manufacturing in recent years. A market previously dominated by Siemens, Alstom and Bombardier, has now made room for Japan's Hitachi, Spain's CAF, and Switzerland's Stadler. Subsidiaries of non-UK operating companies, including Deutsche Bahn and SNCF, have also flocked to the sector.

In response to increased market liquidity, the Department for Transport (DfT) has attempted to inject greater competition into UK rail.

## Rolling stock leasing

The rolling stock leasing market has been disrupted by Rock Rail winning two important contracts. The newcomer is due to provide trains for the Great Northern route to and from Moorgate in London, and will be supplying some of the vehicles for the East Anglia rail franchise.

The government is keen to end ROSCO dominance. But there is also uncertainty regarding Rock Rail's business model and the sector's future.

One area of concern is the withdrawal of the Section 54 undertaking, a legal provision that ensured that new rolling stock would continue to be used somewhere on the British network, even after the end of the franchise into which it had been delivered. With the DfT no longer providing these state guarantees, refranchising becomes a risk for new participants in the sector. It is also not clear

what will happen to the trains the new fleets have replaced.

This uncertainty raises concerns. One of which is what happens if the old rolling stock provider, whose vehicles had been kicked off a railway by the arrival of a new participants' trains, returned at the end of the franchise with newly refurbished, fully amortised trains available at cutthroat-low lease rental rates with which the new train provider could not compete. And while a ROSCO can afford to have a small part of its fleet out of operation for some time, a newcomer with a much smaller fleet, and debts to pay, may not have the same room for manoeuvre, one source argues.

ROSCO Eversholt may attempt to play exactly this trick at the end of the current East Anglia Rail franchise, leaving Rock Rail's new trains out in the cold, said the source.

To understand the issue, it is important to consider rolling stock specifications. While some railway lines – such as the East Anglia franchise – can accommodate the more universal, one-size-fits all vehicles, others require a very specific type of train. This relates to what is known in the industry as gauging, in other words estimating the space that is required for a train to move through tunnels and under other structures, taking into account the degree to which the vehicles swing as they move along a bend, explained Charles Ford at Hogan Lovells.

## Stickiness

Trains that have the specific requirements necessary for operating on a particular line

benefit from what the industry describes as “stickiness”. As the natural choice for the railway on which they operate, they are able to defend themselves from other fleets attempting to undercut their lease rental rates.

One such sticky set of vehicles is Rock Rail's fleet for the Moorgate line. To work on this railway, the trains must be smaller, with doors at the front and back, and a number of other specific technical features.

This protects Rock Rail's Moorgate trains from refranchising risk, but not its East Anglia fleet.

Rock's founding partner Mark Swindell is unfazed by any such risk. “The UK rail network isn't a go-anywhere network. Very rarely do you have trains that you can take and swap for trains somewhere else. Rolling stock assets are not like aircrafts and so the leasing industry considerations for the two classes are different too”. The railways were privatised as a declining industry, Swindell explained. “But use of trains over the last 20 years has exploded and the growth in passenger numbers is set to continue. The rolling stock sector cannot be an oligopoly and increased competition to fund new trains can only be a good thing, bringing down costs and driving up value for money for the taxpayer and passenger.”

Swindell says Rock is interested in the upcoming contracts for South Western, East Midlands, where the franchise ends in July next year, and possibly even HS2.

In fact, the fleet that will be procured for HS2, which will result from a process that was set in motion by the DfT's publication of a Periodic Indicative Notice on 20 January 2017, will likely score very high marks in terms of ‘stickiness’. However, the number of vehicles required means they may have to be procured in multiple fleets from different sources.

## Project versus asset finance

Under a traditional ROSCO asset finance model, the focus is on preserving the residual value of the asset, and less

attention is given to ensuring reliability of passenger service. With project finance, availability payments are dependent on train availability for passenger services. As well as this more hands-on approach to providing services to passengers, project finance deals can also provide new, custom-made trains. Which is what Rock Rail and a few others are offering.

And the risks these companies face are not as high as some industry observers may believe, argues Jacqui Nelson, who is responsible for financial services firm MDT's land transport activities. "It's like if you had an iPhone and someone offered you an old Nokia instead, because it's cheaper," she says, explaining why older trains pose little threat to new fleets.

And to think that they do pose a threat means the old trains wouldn't have found another home during the years of the newcomer's franchise, which is unlikely to be in the interests of the owner of the old trains, notes Clifford Chance's Paul Carrington. And with long manufacturing lead times for rolling stock, existing stock generally does find a use.

Additionally, older trains may have higher running costs and lower reliability, which can also make them less attractive, said Louise Auty, of counsel at Norton Rose Fulbright.

"The industry knows that certain ROSCOs are trying very hard to scare off new entrants," notes one source. Swindell even argues that the withdrawal of Section 54 is an overstated risk. After all, many of the ROSCO's deals have not benefitted from this guarantee, and they have succeeded in managing this risk. But what is true is that the changing environment – including the permanent withdrawal of the Section 54 – does call for a more nuanced understanding of the industry to ensure utilisation of fleets.

### Thameslink and Intercity Express

And last year wasn't the first time a procurement process for UK rolling stock came closer to project finance models. During the years that led up to the 2008-

2009 financial crisis new intercity high speed trains were procured to replace ageing fleets on the Great Western and East Coast mainlines, under the Intercity Express programme. A few years later, new trains were also procured to increase service frequency and capacity on the Thameslink route through central London.

Unlike previous rolling stock procurement processes, these were run under a model similar to a PPP, with the government leading procurement rather than the train operating company.

This was seen as desirable because the importance of these projects and the volume of trains needed (and the value associated with them – it is estimated that train operators will pay £7.65 billion for using the new Intercity Express trains over 27.5 years, while for Thameslink this figure is £2.8 billion) were so great that the government needed greater control over procurement.

The Department for Transport (DfT) had argued that a single operator could not lead the procurement for the IEP deal, because the trains would operate over multiple existing franchises. But the government is unlikely to revisit these models due to the complexity of the fleet procurements and associated projects impacting the two procurements, says Burges Salmon's Briony Thomas. A National Audit Office (NAO) Report said it was not clear whether the decision to carry out the two procurements at similar times, combined with the decision to procure all the required trains in one package to achieve economies of scale impacted on the market's appetite to respond. The Department for Transport awarded both contracts more than three years later than intended, largely due to pauses to the procurements and financing challenges, according to the report.

Other market observers feel the IEP and Thameslink procurement processes left deep scars. "The fact that the contract is controlled centrally and isn't going to be managed in the way that people have managed previous fleet introductions creates questions about how effectively

and efficiently the snagging issues and initial wrinkles of the fleet introduction will be resolved," Thomas says, pointing to the complexity of the documentation for these deals. "Contractual processes and what actually happens on the ground are not always aligned."

But there is little desire to replicate the IEP and Thameslink models, Clifford Chance's Carrington thinks. After all, this method of sourcing trains was influenced by the financial crisis and a drying up of liquidity, a situation that stands in stark contrast to today's environment.

### Drivers for new players

Further market liberalisation in Europe, with a raft of new rail legislation coming through the EU in a number of countries, is set to attract additional investors to the sector. As state involvement in rail is pulled back in countries that previously had a monopoly of state owned operators, banks with no previous rail sector experience may start to form rail portfolios. This could see the UK act as a testing ground for banks before they embark on activities in emerging European markets.

And changing models for franchises can also unlock doors to capital inflows, Carrington explains.

Last year, Transport Secretary Chris Grayling announced that changes should be made to integrate track upgrades and maintenance work with the operation of trains.

Some seem unsure whether this would be a wise move by government. "It's uncertain whether there will be a wholesale reunification of track and train, as this would put a lot of risk in one basket," says Tom Johnson, partner at Norton Rose Fulbright.

Infrastructure is already part of rolling stock financing in some cases as depot financing is often tied to rolling stock, Paul Carrington argues: "There is great potential to having infrastructure investment as part of the franchise as it will enable new investors in rolling stock who may actually be more accustomed to investing in hard fixed infrastructure." ■

**DATA ANALYSIS:** Infrastructure finance volumes were depressed in 2016, though M&A activity was spurred by low oil prices.

## Global league tables – 2016

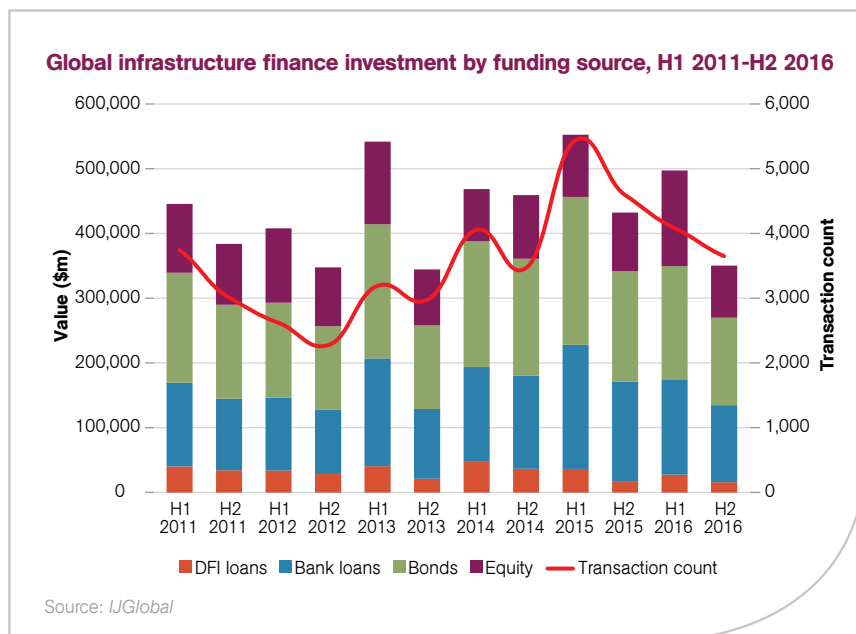
The global infrastructure finance market continued its downward trend from its recent high of H1 2015 in the second half of 2016. Across the full-year, the total number of global infrastructure finance transactions fell sharply compared to 2015, while the total value of those transactions declined despite several big tickets deals being concluded during the year. 2016 saw the long-term trends of restricted pipeline and abundance of capital continue.

Infrastructure finance saw a 26% decrease in deal volume on the previous year and a 25% decrease in overall deal value compared to 2015.

IJGlobal's infrastructure finance figures reflect all types of financing for energy and infrastructure projects, inclusive of project, corporate and public finance facilities. These 2016 full-year tables are the first time IJGlobal has published year-on-year data which represents all types of financings used to fund projects. The data gives the most comprehensive overview available of the state of the global infrastructure finance market.

### M&A ACTIVITY

Though the market saw dips in terms of both transaction volumes and values, there were some areas of growth last year. The



overall infrastructure finance market was significantly boosted by increased M&A activity during 2016, not least due to a surge of disposals in the oil & gas sector. With oil prices depressed, many companies in the sector looked to reorganise their balance sheets and dispose of assets.

The list of top 10 infrastructure transactions for the year is dominated by acquisitions. This is a consequence of a limited pipeline of greenfield transactions, which has resulted in high demand for

operational assets. Last year also saw an increase in the value of equity invested per transactions, with debt-to-equity ratios averaging 70:30.

### LEADING LENDERS

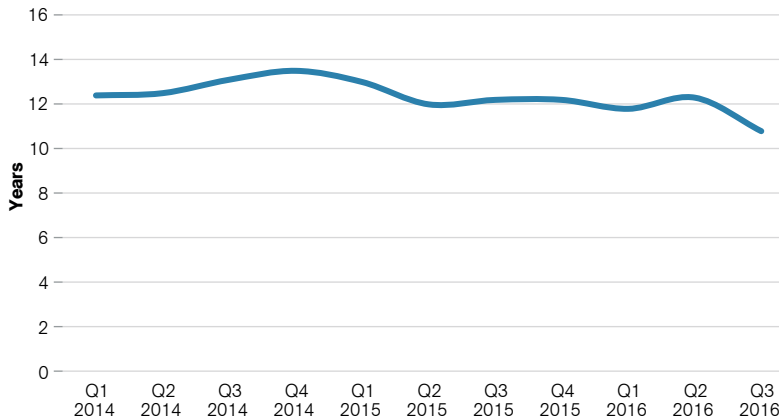
Japanese lenders remained the dominant force in infrastructure finance lending last year, with MUFG and Sumitomo Mitsui Financial Group taking the first and second spot, respectively. They led the way in the MLA league tables by both total value of

### Largest closed infrastructure financings, full-year 2016

Sector	Transaction name	Transaction value (\$m)	Location	Financial close date
Oil & Gas	Yamal LNG	30,249.00	Russia	25/06/16
Power	Barakah Nuclear Power Plant (5,600MW)	23,714.00	United Arab Emirates	20/10/16
Oil & Gas	Tengizchevroil Expansion	16,000.00	Kazakhstan	27/07/16
Power	Ausgrid Privatization	12,623.78	Australia	01/12/16
Power	Acquisition of ITC Holdings Corporation	11,300.00	United States	14/10/16
Oil & Gas	Acquisition of Columbia Pipeline Group	10,200.00	United States	30/06/16
Power	Acquisition of Meenakshi Coal-Fired Power Plant (1,000MW)	9,720.26	India	17/11/16
Power	Acquisition of AGL Resources	8,000.00	United States	01/07/16
Transport	Port of Melbourne Privatization	7,379.96	Australia	31/10/16
Power	Acquisition of Fortum Distribution Sweden	7,050.58	Sweden	22/07/16



**Average tenor for commercial senior bank facilities for global infrastructure finance**



Source: IJGlobal

loans disbursed and number of projects lent to. Despite the overall decline in the market, MUFG acted as MLA on marginally more deals in 2016 than compared to 2015, as did SMBC. In a market of limited opportunities, the cheap source of funding available to Japanese lenders enabled them to take a greater market share.

MUFG and SMBC were joined by mainly European lenders in the top 10 but sponsor Chevron made an unusual

appearance in the MLA league tables this year after it provided a \$9 billion sponsor loan to its Tengizchevroil Expansion project in Kazakhstan.

## SECTORS

Renewables was the most active sector with 477 transactions closed in 2016 for a total value of roughly \$100 billion. The sector continues to grow, and while Europe is becoming a mature market with

established portfolios changing hands, regions like Latin America and the Middle East are increasingly investing in greenfield renewable power plants.

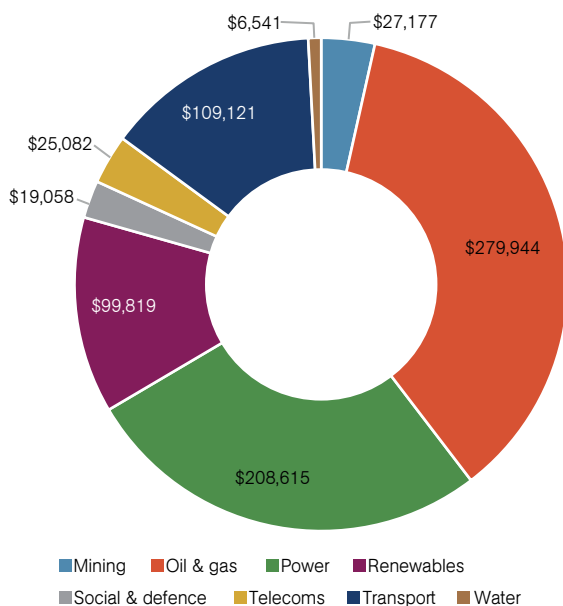
Oil and gas was the biggest sector in terms of transaction value, at just under \$280 billion, due primarily to the increased M&A activity described previously. Power was the second biggest sector in terms of value, with roughly \$209 billion of transactions closed during the year.

## PROJECT FINANCE

If you strip out corporate and public finance transactions, the market still saw a decline last year. Global project finance volumes fell by over 10% in 2016, compared to the previous year. Limited deal flow was the contributing factor with 25% fewer deals closed in 2016 than 2015. Over the year a total of 667 deals reached financial close totalling \$276 billion.

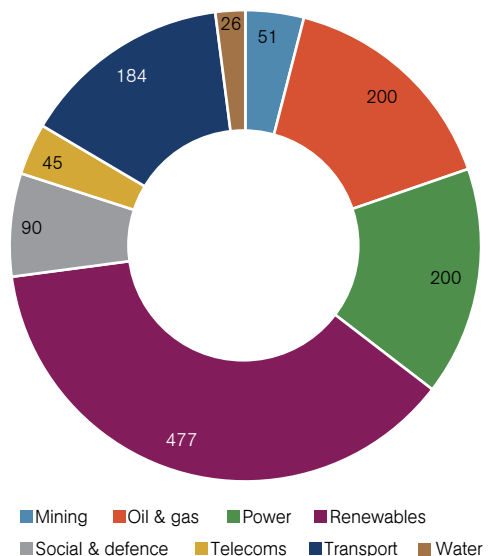
Project finance lending fell by 15% on the previous year, while equity investment remained roughly consistent at \$43 billion. However over the course of the year the average amount of debt per deal has increased with the average debt/equity ratio on project finance deals in Q4 2016 at around 80:20. ■

**Value of investment in each sector in 2016**



Source: IJGlobal

**Number of transactions by sector in 2016**



Source: IJGlobal

## MLAs

Rank	Company	Total \$(m)	Transactions
1	Mitsubishi UFJ Financial Group	15,806	164
2	Sumitomo Mitsui Financial Group	13,588	127
3	Chevron	9,000	1
4	ING Group	8,730	92
5	Mizuho Financial Group	7,691	69
6	Societe Generale	7,543	72
7	BNP Paribas	7,150	72
8	HSBC	6,672	54
9	Credit Agricole Group	6,526	79
10	Natixis	6,003	64

## DFIs

Rank	Company	Total \$(m)	Transactions
1	Japan Bank for International Cooperation	8,082	12
2	China Development Bank	6,866	4
3	European Investment Bank	4,794	19
4	Export-Import Bank of Korea	2,974	5
5	Export Development Canada	2,901	23
6	KfW	2,153	22
7	Inter-American Development Bank	2,133	14
8	International Finance Corporation	2,112	20
9	Overseas Private Investment Corporation	1,929	13
10	EBRD	1,767	15

## Sponsors

Rank	Company	Total \$(m)	Transactions
1	Novatek	15,142	1
2	India Power Corporation	9,720	1
3	KEPCO	8,908	4
4	Pemex	8,675	5
5	Chevron	8,652	2
6	Cheniere Energy	8,550	5
7	Industry Super Holdings	8,507	6
8	Emirates Nuclear Energy Corporation	7,905	1
9	Total	7,788	9
10	Australian Super	6,874	3

## Legal advisers

Rank	Company	Total \$(m)	Transactions
1	Clifford Chance	89,905	86
2	Latham & Watkins	87,839	53
3	Milbank, Tweed, Hadley & McCloy	71,974	63
4	Linklaters	71,582	61
5	Allen & Overy	68,344	78
6	White & Case	63,468	40
7	Norton Rose Fulbright	43,656	77
8	Herbert Smith Freehills	40,629	42
9	Shearman & Sterling	37,310	29
10	Baker & McKenzie	36,652	20

## Insurance advisers

Rank	Company	Total \$(m)	Transactions
1	Jardine Lloyd Thompson	42,372	13
2	Aon	11,644	18
3	Marsh Insurance	8,859	19
4	INTECH Risk Management	7,615	9
5	Willis Towers Watson	5,120	18
6	Benatar & Co	5,030	2
7	Indecs Consulting	1,726	1
8	Moore McNeil	1,274	1
9	Averbo Risk Solutions	1,236	1
10	Mandy McNeil International	1,222	2

## Technical advisers

Rank	Company	Total \$(m)	Transactions
1	Arup	33,468	27
2	Poten & Partners	30,249	1
3	Atkins	24,555	3
4	Mott MacDonald	23,072	39
5	IHS	16,000	1
6	SgurrEnergy	8,755	10
7	Leidos	8,066	16
8	CH2M Hill	7,936	2
9	BTY Group	6,490	7
10	Nexant	6,300	1

## Financial advisers

Rank	Company	Total \$(m)	Transactions
1	HSBC	33,422	12
2	Gazprombank	30,249	1
=	China Development Bank	30,249	1
=	Portland Advisers	30,249	1
=	Sberbank	30,249	1
6	Standard Chartered Bank	25,183	4
7	Royal Bank of Scotland	20,855	4
8	Societe Generale	20,356	13
9	Macquarie	19,363	14
10	JPMorgan	18,025	5

## Bond arrangers

Rank	Company	Total \$(m)	Transactions
1	Royal Bank of Canada	8,751	48
2	JPMorgan	7,584	42
3	Citigroup	6,932	36
4	Barclays	5,439	33
5	Bank of America	4,914	24
6	Mitsubishi UFJ Financial Group	4,302	33
7	Santander	4,282	18
8	UBS	3,847	20
9	Societe Generale	3,559	25
10	Deutsche Bank	3,385	20

# All pain – no gain

US/EU sanctions against Russia have been a disaster for the international export credit business and European trade flow. Is it time for a rethink? By Sean Keating.

**E**xport credit agencies, particularly the European majors, have had a hard time balancing their mandates with US and EU sanctions against Russia.

European trade has taken the brunt of sanctions collateral damage and while European ECAs have been willing to offer cover for deals that, by definition, must meet all the EU sanctions legislation, the pool of commercial lenders willing to co-finance, and the number of export opportunities in the commodities space (notably oil and gas) plummeted in 2014.

## Europe's sanctions strategy

Although EU regulation is not as draconian as that of the US, potential grandfathering of US sanctions made many international banks with large asset bases in the US too anxious to lend to unsanctioned Russian borrowers – even for ECA-covered deals. A small pool remained – Societe Generale, UniCredit and Intesa Sanpaulo for example. But even with lenders in place, the opportunity for export credit deals was slim – in part because initially Russian borrowers had access to cheap domestic dollar funding, but largely because the major project sector in Russia, oil and gas, was effectively off limits.

Geopolitically, nothing has changed – yet. But with a new president in the US and growing frustration among EU governments that sanctions are not having the required political effect in Moscow, a review of sanctions regulation on both sides of the Atlantic appears likely. Trump has publically promised to look at the regulation, and although EU policy has recently tightened, and the bloc has signed an association agreement with Ukraine, individual EU governments have voiced concerns about whether the pain will ever

result in the desired gain.

For the US, initially the main political driver behind sanctions, there has been no real economic backlash – the US has not taken its fair share of the pain. According to a June 2016 working paper from CEPPI – The Impact of the Russia Sanctions on Sanctioning Countries' Exports – "the European Union bears 76.7% of all lost trade and 78.1% of lost trade in non-embargoed products." Germany has been hardest hit bearing 27% of global lost trade. But France has also witnessed a 5.6% cut and the UK 4.1%. Conversely, the US has registered just 0.4%.

## Key projects hampered but not halted

The bitter irony for export credit lenders and ECAs – apart from the fact that US Exim would have been unable to lend anyway – is that while sanctions initially scuppered some major potential international ECA-backed deals (South Stream for example), and sourcing funding for major Russian projects has become more difficult, deals are still getting financed – albeit via more complicated multi-sourced structures.

The flagship example is the recent signing of the final ECA-backed tranche of debt for the \$27 billion Yamal LNG project – the largest project financing in Russia to date.

Sponsored by Novatek (50.1%), CNPC (20%), Total (20%) and Silk Road Fund (9.9%), the project involves construction of a 16.5 mtpa three-train LNG plant with feedstock from the South-Tambeyskoye field in the Yamal peninsula. The scheme also includes the creation of 200 wells, construction of a gas pipeline

system, shipment infrastructure (which will include a jetty with two tanker loading berths at the port of Sabetta), a new fleet of LNG carriers, an airport and a 1,000MW power plant.

The sheer scale of the project and the \$19 billion external financing requirement meant the debt was always going to be multi-sourced. But given the combined international commercial bank/ECA debt only constitutes around 6% of the loans raised, Yamal LNG shows sanctions are hampering, but not preventing, key Russian economic stimulus projects.

The debt breakdown on Yamal LNG mirrors the general market project funding diversification in Russia as borrowers have adapted to sanctions – and gives a flavour of the cost of that borrowing.

The largest chunk of debt closed in April when China Development Bank and China Eximbank (Chexim) signed €9.3 billion (\$10.6 billion) and Rmb9.8 billion (\$1.5 billion) of 15-year loans for the project. The euro-denominated loans priced at 330bp over six-month Euribor during construction and 355bp post-construction. The renminbi loan priced at the same basis point rates but over the six-month Shibor benchmark.

Additional borrowings have also come via a Rb150 billion 15 year bond issue sold to the National Welfare Fund of Russia and a €3.6 billion 15 year EXIAR-covered line of credit from Sberbank and Gazprombank (€2.7 billion from Sberbank and €900 million from Gazprombank – both priced at 460bp over six-month Euribor).

The international ECA-backed debt comprises a €400 million 15-year Coface-covered tranche and €350 million 15-year

Sace covered tranche – both provided by Intesa Sanpaulo and priced at 250bp over six-month Euribor – and a €200 million 15-year JBIC direct loan.

As with any multi-sourced debt the pricing is a mixed bag. But overall Yamal LNG is competitively priced and the cost of the Chinese debt, at just 80bp higher than the Coface/Sace-covered facilities, is surprising – even allowing for the Chinese equity participation – given the amount lent and that the project comes with significant technical risk given its Arctic location.

## Russian borrowers adopt new tools

Chinese development and commercial bank debt into Russia has been growing throughout 2016. In March Gazprom raised a €2 billion (\$2.19 billion) five-year bilateral credit from Bank of China – its largest bilateral deal to date and its first from a Chinese bank. And in September, Vnesheconombank (VEB) raised its first untied financing from Chinese commercial banks – a Rmb10 billion (\$1.5 billion) three-year syndicated loan with a three-year extension option coordinated by Harbin Bank. Both loans will be used for project funding rather than general corporate finance.

But Chinese lending has not been the only new tool available to Russian borrowers. Russia's domestic ECA EXIAR, founded just five years ago with advisory from Sace, has more than doubled its volume of insured exports – up from \$5.9 billion in 2015 to around \$12 billion for 2016.

A chunk of that increase is down to the €3.6 billion of cover EXIAR provided for Yamal LNG. The ECA has become more proactive since the government expanded its mandate to support projects within Russia, and its sphere of influence, that will have a future export income stream, like Yamal LNG, rather than its traditional export support role.

That new role looks set to continue to expand. In June EXIAR signed a memorandum of understanding with Gazprombank and Sace to support Socar's

GPC Project, which involves the construction of a petrochemical plant at Garadagh, near Baku, in Azerbaijan, intended to supply Europe, Turkey and China.

## European ECAs still have time for innovation

Despite the enforced funding diversification, Russian borrowers have still occasionally managed to tap European ECAs since sanctions first bit in 2014. For example, in June 2015, Metalloinvest raised a €267 million 10-year ECA-backed facility via BTMU, Credit Agricole, ING, SMBC, Societe Generale and UniCredit – guaranteed by Oesterreichische Kontrollbank and UKEF – to finance equipment for its third hot briquetted iron plant at Lebedinsky.

## The key question is whether commercial bank appetite will pick up in other sectors

And some deals have even included ECA innovations. In April, Russian rail operator Aeroexpress, which holds a 15-year concession for rail services between Moscow and its airports, closed a SERV-covered deal to fund procurement of 11 Stadler Bussnang double-decker trainset (a total of 62 double-decker carriages). The €184 million trainset supply contract was financed via a Rb11.1 billion (€167 million/\$179 million) ECA-covered loan and although arranging the deal proved a contracted process, the outcome was a facility with two firsts for the ECA market.

Aeroleasing is the borrowing vehicle for the procurement and acts as lessor to the beneficiary Aeroexpress. The original procurement was for 25 trainsets (118 carriages) for €381 million and documentation for financing signed in 2014. However, that debt was never drawn. Following the imposition of US/EU sanctions, the subsequent retreat of western lenders from the Russian market, the plunge in the value of the rouble and a decline in passenger numbers, the supply

contract and financing were revised, finally signing on 29 April 2016.

The €167 million-equivalent debt provided by Gazprombank is split between a €134 million SERV-covered tranche and a €33 million VAT facility. With the borrower's income stream locally denominated, a non-rouble financing was a non-starter. Consequently, the €134-million equivalent cover was provided by SERV as a rouble-denominated policy in favour of Gazprombank (Switzerland) – a first for a western ECA. Furthermore, SERV has also approved a rouble-denominated refinancing guarantee – another western ECA first – thus enabling the borrower to refinance the debt in the Russian capital markets.

## Increasing commercial bank appetite?

Although more lenders and investors are regaining their appetite for unsanctioned Russian borrowers – a fact borne out by recent activity in the bond and unsecured loans market (see “Secure enough to go unsecured” on [Tradefinanceanalytics.com](http://Tradefinanceanalytics.com)), the European ECA-covered debt market has yet to feel the impact.

Demand from borrowers is in place. Just two months ago Norilsk Nickel signed a €37.8 million 13-year ECA-covered bilateral credit with Commerzbank to finance 85% of the contract value for the construction of an electric power substation in the Norilsk area for which Thyssen Schachtbau is EPC contractor.

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.”

And international ECAs seem willing to provide cover and direct loans when regulations allow. The key short term question is whether the appetite of commercial banks for such deals will pick up to the same degree as is happening in other lending sectors to Russia – for the moment the indications are looking their best since 2014. ■



## UK EXPORT FINANCE BOARD

# Finance for all viable UK exporters

By Noel Harwerth

I took up the role of the UK Export Finance Board on January 1 this year, so I am starting 2017 with a number of New Year's resolutions to provide the UK's export community with the very best export finance support in the world. My predecessor, Guy Beringer CBE, has left very large shoes to fill, but at the same time he has helped ensure that his successor is in an enviable position.

In recent years, UKEF has seized the opportunities created by new legislation and addressed challenges created by developments in the global financial sector. We have significantly expanded our support for exporters, in particular through our short-term trade finance products.

Our innovative approach to supporting exporters, comprehensive product offering and substantial appetite to take on new business has been recognised with prizes recognising our pioneering work in areas such as local currency financing, Islamic finance and capital markets facilities. And the British Exporters' Association has given us nine out of ten rating for our product suite for the last three years, putting us firmly at the top of the European export credit agency league table.

The last financial year saw an increase of 23% in support, and where the department purely supported large corporates prior to 2011, 77% of the companies it supports are now small and medium-sized enterprises.

With its departure from the European Union, the UK is entering a brave new world of trade opportunities, as well as some possible challenges. When Louis Taylor, UKEF's CEO, joined the department in 2015, he identified an admirably simple mission: that no viable UK export should fail for lack of finance or insurance. This works just as well in a post-Brexit context. But in order to fully realise this mission, we know that we need to be supporting a thousand, not hundreds, of exporters. It calls for an exponential increase in the scale of our ambition.

The announcements in the 2016 Autumn Statement are clear evidence of our intent. UKEF now has double the risk appetite, up to double the capacity in individual countries, and a more active approach to managing risk concentrations in its

portfolio. We provide support in 40 local currencies, allowing overseas buyers to "buy British, pay local." Taken together, these measures will help us ensure that we are able to fully exploit our portfolio capacity of £50 billion, of which £30 billion remains.

Alongside our innovation, flexibility and customer focus, integrity is core to our business. Our governance bodies include the Export Guarantees Advisory Council, which advises our Secretary of State on our anti-bribery and corruption, environmental, social and human rights and sustainable lending policies. In 2016, we signed up to the Equator Principles, a

global framework to promote sustainable decision-making in financing projects, alongside our existing environmental, social and human rights commitments. And we are also building our compliance function, to provide holistic oversight and further strengthen our level of assurance that we are meeting all our legal, regulatory and international obligations.

But none of this will have any impact on the exporters that need our support unless we can reach more of them. That is why we are putting renewed emphasis on marketing and business development, and

constantly review our products and processes to make sure they are fit for purpose. This year we will introduce two new measures to ensure that even more companies can access UKEF support.

The first, bank delegation, will mean that we can streamline the application process for UK exporters by allowing banks to provide UKEF's trade finance support within specific credit criteria without duplicating application procedures. This is good news for exporters, as our support will be available more quickly. It's good news for UKEF, as it will allow us to leverage banks' customer bases, and to reach more exporters. And it's good news for the bank, as it will give them greater certainty of cover, and relationship managers will only need to market one set of products – their own.

Secondly, we are making our export working capital support available to companies in exporters' supply chains. This will help ensure that more British companies than ever before



Noel Harwerth

are able to sell their goods and services overseas through main contractors. On average, exporters have roughly 27 companies in their UK supply chains, but those of firms like Bombardier and GE number in the thousands, so this enhancement will mean a huge increase in the number of companies that are eligible for UKEF support.

Innovations like these are critical to realising the scale of our ambition. They will also ensure that more companies that don't currently sell overseas can access government financial support when they eventually begin exporting. Support for first-time exporters will be a vital part of the whole-of-government drive, led by the Department for International Trade (DIT), to boost the UK's trade. This exporting movement relies on getting more companies to sell overseas, with the recently-launched GREAT.gov.uk platform offering tailored support for companies at every stage of their export journey.

UKEF already has a range of support designed for SMEs, and part of this proposition is an offer of free and impartial face-to-face guidance with our network of local staff, helping companies of any size and in any sector find the right solution – whether from the private sector or government. Now, through this campaign, we have the opportunity to support companies undertaking their first international contract. We therefore need to ensure that our proposition works for these companies as well as their more experienced peers, something that will help us fully

realise our role in the government's export drive.

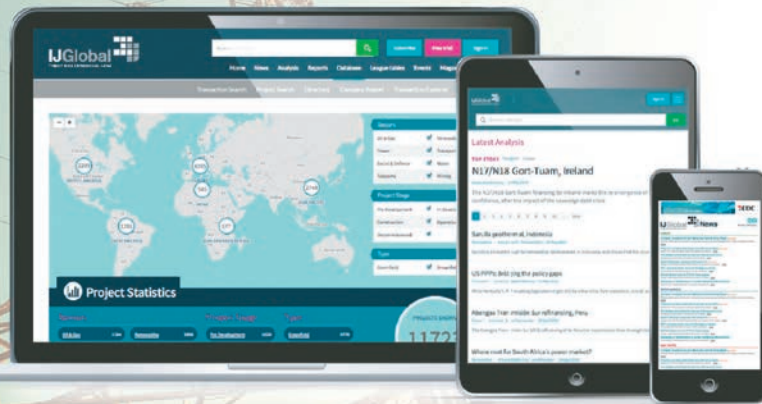
We also have a role to play in DIT's wider trade objectives. For example, on the inward investment agenda; UKEF's flexible and innovative support is a compelling part of the offer to companies looking to set up operations in the UK. In 2015, we signed a memorandum of understanding with GE UK, in which it affirmed its commitment to investment in its UK operations and UK jobs. We plan to replicate this arrangement with other overseas investors in the UK in coming years.

And we can also support DIT colleagues' trade negotiations, using our country risk positions on some 200 countries, our track record and appetite for further support to help create engagement and incentives when discussing trade deals.

Our Business Plan for the period 2017-20, which will be published in March, outlines this and much more. It sets out the scale of our ambition for the next three years, to support multiples of the number of exporters we currently do and to fulfil our potential to drive the UK's trade objectives.

In the course of my international business career I have seen the positive power of international exports on national economies. An increase in exports from the UK will result in national benefits and local benefits as well. I look forward to supporting the department, under Louis Taylor's dynamic leadership, and hope to have the opportunity to engage with as many in the industry as possible as we realise this ambitious blueprint for success. ■

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# Europe

INSIDE

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## Pipeline & procurement deals



## Projects with recent tender updates

Wylfa Newydd Nuclear Power Plant  
Vestmoldtransgaz Natural Gas Pipeline  
Acquisition of 80% in GlobalConnect  
Trans Adriatic Pipeline  
Trafford Power CCGT  
NSN Link Subsea Power Interconnector  
Acquisition of FPS Towers  
MeyGen Tidal Power Project Phase 1B

## Closed deal values by sector

**Transport:** \$6.72 billion

**Renewables:** \$5.16 billion

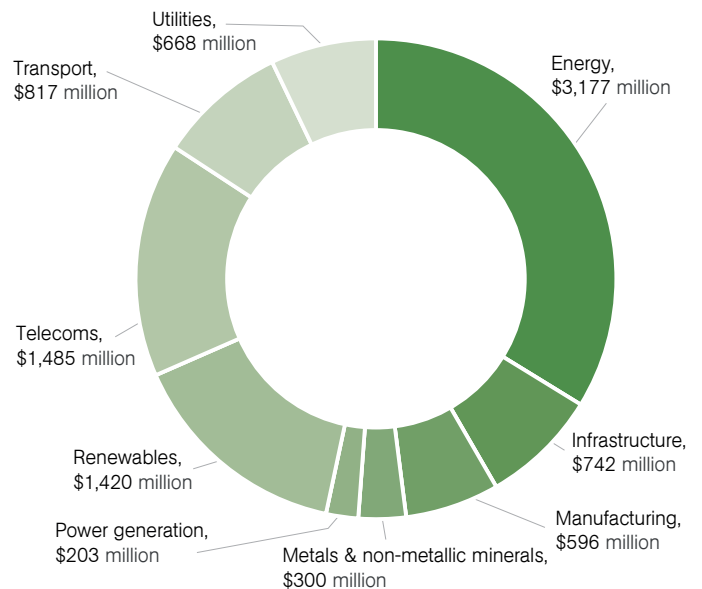
**Power:** \$3.72 billion

**Telecoms:** \$3.43 billion

**Social & defence:** \$1.86 billion

**Oil & Gas:** \$1.77 billion

## Closed trade finance deals



## Closed infrastructure deals



Source: IJGlobal, from 1 November to 31 December 2016

# Clearing the hurdles

Regulatory frameworks for fund managers in Europe are intended to aid cross-border investments but inconsistencies remain. By Viola Caon.

A comprehensive regulatory framework for alternative investment fund managers, the Alternative Investment Fund Managers Directive (AIFMD), was implemented at a Europe-wide level in 2013. Its aim was to create a level playing field for cross-border investments and reduce risks to investors by enhancing supervisory powers, but, like all regulation, has also added a layer of paperwork for market participants.

To a different degree, Solvency II, which came into effect in 2016, has also had an impact on the infrastructure market, as it targeted life insurance companies, among some of infrastructure funds' main investors.

Private infrastructure funds seem to be relatively sheltered from the next European directive looming on the horizon, the Markets in Financial Instruments Directive II (Mifid II), but pooled funds have not been so lucky.

## Mifid II in the UK: The LGPSs case

Mifid II, which is scheduled to come into force in January 2018, imposes pre- and post-trade transparency requirements, as well as capital requirements, on cross border investors. The legislation is targeted at those managers that market to retail investors, which, for the time being, generally excludes infrastructure and energy fund managers given their institutional nature and their so called "qualified investors" audience.

However, in the UK, local government pension schemes (LGPSs) have unexpectedly fallen under the gaze of the Financial Conduct Authority (FCA). This is because the latest Mifid II consultation included them in the retail investor category, prompting negative reactions from

industry groups and LGPSs themselves.

The Pension and Lifetime Savings Association (PLSA) argued that the reclassification threatens the ability of LGPSs to invest in infrastructure, as the majority of infrastructure investment firms are structured to explicitly exclude retail investors.

According to the PLSA response, as a retail investor, there is no guarantee that asset managers would be willing to do business with LGPS funds, or would not impose significant cost for doing so.

Mike Weston, CEO of the Pensions Infrastructure Platform (PiP) which is part of PLSA, said: "Most infrastructure funds are not set up to market to retail investors. Typically infrastructure has been viewed as more appropriate for institutional investors who can take a long-term view and can hold illiquid assets. Therefore if you change previously categorised institutional investors to retail investors it will be more difficult for infrastructure managers to take them as clients."

PLSA and a number of LGPSs are urging the FCA to opt-up LGPS clients to a professional investor status within the Mifid II framework. "We urge the FCA to distinguish between the investment activity of local authorities and local authority pension funds, so the latter may retain its professional client status to continue its effective investment strategies," said Graham Vidler, director of external affairs at PLSA.

The Local Pensions Partnership (LPP), which includes the Lancashire County Pension Fund and the London Pensions Fund Authority, also issued a response to the FCA consultation and joined the PLSA in demanding that their clients are opted-up to a professional investor status.

In its response, LPP highlighted that within its existing regulatory permissions

it can only transact with professional clients and eligible counterparties. "Opting up existing and potential new clients from the LGPS client base to elective professional status would be essential for the continued operation of our and other LGPS pools," the response read. It added that obtaining regulatory permission to deal with retail clients would have significant resource, operational, financial and governance implications.

The FCA had not addressed such objections at the time of writing, but it is widely believed in the industry that the LGPSs will likely be opted up as qualified investors before Mifid II comes into effect.

## Entering the EEA

While safe from Mifid II, infrastructure and energy fund managers marketing their products across borders in Europe still face a number of challenges.

Since 2013, all European alternative managers, including those investing in real assets categories such as infrastructure and energy, have to comply with the AIFMD, which was launched by the European Commission in 2008/2009 to establish a harmonised regulatory framework for monitoring and supervising the perceived risks posed by such managers following the financial crisis.

The AIFMD was welcomed with a different degree of warmth from country to country. In the UK the FCA established almost immediately that fund managers handling between £500 million and £1.5 billion in assets might be allowed to opt out of paying restrictions that would force managers to receive half of their pay in units of their funds and to defer payment over longer time periods. Cutting fees, more transparency and different capital



requirements are among the main points the directives tries to tackle.

While definitely harmonising cross-border fund distribution for alternative managers, the directive did not directly address the issue of managers coming from outside the European Economic Area (EEA).

The directive means these managers have to comply with a patchwork of private placement rules (PPRs) in order to market a fund. Many UK-based fund managers who have their funds registered in offshore markets such as Guernsey and Jersey fall in the same category as managers from North America, Asia and Australia.

A very delicate stage for such managers, is pre-marketing, Hogan Lovells' partner Nicholas Holman explains: "So-called 'pre-marketing' is a difficult area. Ideally, managers want to be able to sound out investors about a possible new fund product in order to work out the investors to whom it is most likely to appeal and thereby only incur the costs and endure the hassle of local compliance (e.g. registering the fund) if the early signs are that this will be worth it."

However, Holman continues, some countries have difficult rules about pre-marketing (such as Germany), some do not really allow pre-marketing at all (like Norway and Sweden), and most do not define it clearly, leaving managers operating in a legal grey area.

Such a fragmented situation causes most managers to restrict their marketing to the more straightforward jurisdictions, which limits both their ability to raise capital and the investment opportunities for investors located in the countries with a more restrictive regulatory framework.

"So, one decision that a manager based outside the EEA has to make if they wish to raise significant capital from EU investors is whether to stick to the private placement rules and accept the limitations, or alternatively whether to establish a parallel fund within the EU so that they can access the passport but without subjecting the non-EEA based fund to the burden of AIFMD regulation," Holman concludes.

A number of managers confirmed on

background that for non-EEA managers there are indeed more straightforward regulatory frameworks to access in Europe than others. Among the hardest are Denmark, Italy, France and Germany, while the UK and the Netherlands are said to be the most open jurisdictions.

Tavneet Bakshi, global head of due diligence at placement agency FIRSTavenue, says: "We have worked with a number of non-EU managers looking to raise European capital. The regulatory frameworks in each country differ, with varying timing to register, reporting complexities and associated costs. Taking advantage of pre-marketing activities can allow a manager to understand which regional pockets of capital to focus on; this is particularly important in Germany, where the cost and time of registering is at the higher and more complex end of the spectrum," she says.

## AIFMD extension

The European Securities and Markets Authority (ESMA) has produced two sets of advice – one in July 2015 and another in July 2016 – on the extension of the AIFMD passport to non-EU Alternative Investment Fund Managers (AIFMs) and Alternative Investment Funds (AIFs).

The most recent covered 12 non-EU countries including Guernsey, Jersey and Switzerland, for which ESMA issued positive advice in July 2015, and Hong Kong, Singapore and the United States, for which ESMA did not reach a final decision. In October 2015 Australia, Canada, the Cayman Islands, Japan, the Isle of Man and Bermuda were identified as a second wave for which another review is due in July 2017.

While the passport regime works reasonably well for EEA members, even when the managers are using the AIFMD passport some local regulators create obstacles, sources pointed out. This is an area the EU authorities are aware of, and are looking to fix during 2017.

It is still up for debate, for instance, whether PPRs will continue to be applied once so-called third countries receive

an AIFMD passport. Moreover, some member states have unexpectedly added 'gold plating' provisions to the passport regime, e.g. additional fees, appointments, regulator reviews/enquiries.

Both ESMA and the European Commission (EC) are trying to address these issues. On 20 January 2017, the EC launched a public consultation for the mid-term review of the Capital Market Union (CMU) plan. CMU focuses on the cross-border distribution of funds, targeting all companies, including infrastructure projects. It aims to mobilise capital in Europe by gathering evidence to improve passporting and build a system where investors have more choice and lower charges. European Commission Vice-President Valdis Dombrovskis, responsible for Financial Stability, Financial Services and Capital Markets Union, said: "We want to move faster and be more ambitious. This mid-term review consultation will help shape the next phase of our work to build a single market for capital in Europe."

Implications for the UK if, as expected, it leaves the single market when it exits the European Union, are less clear. It is likely to become a 'third country' too, which will be subject to the passport extension assessment as well as general scrutiny of its regulatory framework.

"Despite the UK already having a fully-equivalent regime and offering equal market access, the decision on actual implementation of the third country passporting rests with the European Commission, and may be clouded by political issues at play," Matthew Baker, partner at law firm Berwin Leighton Paisner (BLP) said.

"Access to the UK market by EEA AIFMs (i.e. other than the UK) post the UK's withdrawal from the EU will depend on the extent to which the UK implements equivalent legislation. Until such time, EEA AIFMs/EEA AIFs will not be able to access the UK market by way of passport or PPRs. One would hope that this be sufficient incentive for Brexit negotiators, on both sides of the table, to act both sensibly and expeditiously," he concluded. ■

**NEWS ANALYSIS:** France plans to reduce its dependence on nuclear power, but rhetoric has yet to be matched with action. By Olivia Gagan.

# Replacing nuclear

Think of France's power sector and you'll likely think of nuclear: the country has relied on nuclear for its primary, state-backed source of power since the 1970s, with around 75% of the nation's electricity capacity coming from the atomic technology.

But in recent years the French government has outlined plans to try and diversify its power mix, and has set a number of related environmental targets. In 2015 the government passed a bill which set a target to reduce the contribution made by nuclear power to the country's total electricity supply to 50% by 2025. The intention is for renewable energy and gas-fired generation to fill the gap.

In the same year the government said France would reduce its greenhouse gas emissions by 40% by 2030 compared with 1990 levels. The target for 2050 is for greenhouse gas emissions to be a quarter of what they were in 1990.

The government's push to transform France's power sector does not stop with those announcements. There has been a run of energy tenders, policy announcements and consultations issued by the in recent months, which, if followed through, pave the way for a very different French energy market in the coming years.

### BETTER CONNECTED

In December 2016 the government announced plans to run a public consultation on state support for the €740 million (\$784.6 million), 1GW IFA 2 interconnector project which, once completed, will share power between the UK and France.

In late January energy regulator CRE approved the project and set 31 December 2018 as a deadline for its sponsors, the UK's National Grid and

France's Réseau de Transport d'Electricité (RTE), to reach a final investment decision.

The UK's referendum decision to leave the European Union has cast some doubts on the project. In April 2016, French transmission system operator RTE applied for a state financial incentive to the French Energy Regulatory Commission (CRE) to build the interconnector, and included investment in the project into its 2017 spending plan.

But RTE said their application was written under the assumption that the UK would remain a member of the EU. By granting its approval in January, the government seemed to that it is still in support of the project, though it is understood to have requested feedback from the industry on its viability.

RTE and Italian counterpart Terna are already in advanced discussions over the €1 billion financing of a 1GW interconnector between France and Italy. That line is scheduled to be in service by 2019.

### OFFSHORE WIND

As *IJGlobal* went to press, the government was also in the process of launching a third offshore wind tender round, with a 500MW project off the coastline near Dunkirk likely to be procured as a result. Another site off the island of Oléron is also being considered as part of the third wave tender.

Offshore wind is just one of the renewable energy technologies being promoted by the French government. On 27 October the French government approved a decree laying out how it will achieve its renewables targets. The programme will be reviewed in 2018 and every five years subsequently.

Under the programme, the government plans to increase its renewables

capacity to between 71GW and 78GW by 2023, a target that would see the country double its existing installed capacity.

Marine power tender winners, a new floating offshore wind tender, a 3GW solar tender and an extension to the planned third offshore wind tender have all been announced since mid-2015.

### BETTER LATE THAN NEVER

Announcements are one thing: the rhetoric will need to be reinforced by action from sponsors willing to develop and raise financing for the eventual projects. Banks have been left waiting for several years for the first round of French offshore wind projects to enter commercial financing.

International players may also be hoping that the market opens up: to date, the young French renewables market has been dominated by home-grown players. A consortium of EDF and Alstom won three out of four development sites on offer under France's €7 billion (\$7.9 billion), 2GW first offshore wind round tender in 2012, for example. The second, €4 billion, 1GW tender was won by Engie, EDP Renewables, Neoen Marine and Areva in May 2014.

For those that do decide to enter the market, a forthcoming presidential election may slow an industry which needs regulatory certainty to proceed with project development.

The French government has postponed until after the 23 April 2017 presidential election the decision on which, if any, nuclear reactors will close to meet its nuclear reduction target. And the various possible outcomes of that election make it hard to guess how decommissioning will proceed.

In France, for now at least, nuclear power remains king. ■

**NEWS ANALYSIS:** The UK construction industry is deeply fragmented and facing severe skills shortages. By Beatrice Mavroleon.

# Infrastructure outsourced

The global financial crisis of 2008-2009 led to a 13% decline in Britain's construction output index, according to the Office for National Statistics. As a result of this, many skilled professionals left the industry, never to return.

And the problem hasn't been resolved in the nine years that followed. In fact, an IHS Markit report sponsored by the Recruitment and Employment Confederation highlights engineering as one of the key permanent staff skills in short supply in late 2016.

But the problem is older than the crisis. With the UK lagging behind its European peers in terms of investment in certain types of large-scale infrastructure, and in terms of infrastructure investment as a whole, this means that many of the skills now needed for the country's flagship projects haven't been developed over recent years and decades, or at least not at the scale that may be required.

For example, the last nuclear reactor built in the UK was Sizewell B, which was completed in 1966. As a result, home-grown nuclear engineers are scarce and often close to retirement. This also explains why building Hinkley Point C may have been difficult without an international sponsor.

The same goes for tunnelling and high-speed rail skills, needed for the ongoing HS2 development, which will connect London with a Birmingham via a high speed line, and Crossrail, a new commuter link cutting across the capital city.

## BREXIT

All this means the UK construction industry is dependent on foreign expertise on a number of levels, ranging from the simplest day-to-day construction work to the most high-skilled, complex engineering

abilities. And, given this dependence, the UK's departure from the EU following last year's referendum does not bode well.

The immediate aftermath of the EU referendum brought with it expectations that the UK construction industry would see declining output in 2017 with uncertainty negatively impacting new investment in construction.

With pound sterling depreciating and costs of imported products and materials rising, numbers of new contract awards declined, said Noble Francis, economics director at the Construction Products Association (CPA). At the time, the CPA predicted total construction output would fall by 0.6% in 2017.

However, with activity holding up in the second half of 2016, this year now looks rosier, although expectations of slower growth have now been pushed back to 2018. The CPA now expects total construction output to rise 0.3% in 2017, while 2018 may only see 0.2% growth, compared to previous expectations of a 1.2% increase. "The fall in contract awards is taking longer to feed through," Francis explained.

The Royal Institution for Chartered Surveyors (RICS) also highlights Brexit and skills shortages as concerns.

According to their most recent construction market survey, expectations for the sector are improving, but financial constraints and skills shortages are key impediments to growth.

## FLAGSHIP PROJECTS

And the problem of skills shortages may impact some of the country's largest projects.

Last September, the Commons public accounts committee warned that the Department for Transport may

struggle to source the skills required for all its transport infrastructure plans. "The extensive programme of infrastructure investment over the next few years is increasing the demand for engineering, project management and commercial skills across the industry. The Department and HS2 Ltd are competing with consulting and engineering firms, and other government projects for scarce skills, which represents a key challenge that will also impact on project costs," the committee said.

And beyond skills, fragmentation of the industry is also a problem. With many of the UK's construction firms not as large as their European counterparts, they often struggle to compete. Even the scattered array of professional institutions and organisations that support the industry points to fragmentation of the sector, noted one source.

Although consolidation may help create bigger, stronger companies, margins in the construction industry are wafer thin, which means investing in training staff is difficult. But there may be an answer.

"In order to deliver the UK's planned infrastructure pipeline, capacity, productivity and skills in the sector must all be improved. Fixing the fragmentation of the industry and accelerating investing in technology will go a long way towards improving efficiency and effectiveness," said Malcolm Bairstow, head of global infrastructure and construction at EY.

This should drive higher productivity which will help improve current, unacceptably low margins and enable businesses to make the necessary investments in skills, training and improved ways of working," said Malcolm Bairstow, head of global infrastructure and construction at EY. ■

**NEWS ANALYSIS:** Greece is trying to speed up its sluggish privatisation programme after missing fund raising targets in 2016. By Alexandra Dockrey.

# Could do better

The Greek government tabled its 2017 budget in late November. It set out plans to raise €2.03 billion (\$2.17 billion) from privatisations, principally through the sale of its 14 regional airports, the sale of Greek gas network operator DESFA and the leasing of the land of the former Hellinikon Airport to Lamda.

A deal agreed in 2013 to sell DESFA for €400 million to Azerbaijan's Socar collapsed at the end of 2016 however, with the original valuation questioned. November's cabinet reshuffle and a subsequent change of privatisation leadership are aimed at unclogging the deal pipeline.

Since Socar agreed to pay €400 million for 66% of DESFA in August 2013, the buyer responded to a European ruling by agreeing to let Italian gas infrastructure company Snam take 17%. But Socar has since found it necessary to request changes to the deal. Socar wished to lower its valuation of the company because a new law passed in July 2015 did not raise tariffs as much as expected. Greece's energy ministry responded by saying it was "legally impossible" to accept Socar's request to pay in instalments.

### TARGET MISSED IN 2016

Greece set a target of raising €2.5 billion in 2016 through its privatisation programme but only generated €500 million.

A joint venture between German airport operator Fraport and Slentel (a subsidiary of the Greek Copelouzos conglomerate) was named as preferred bidder for the sale of 14 regional airports in November 2014. The latest expectation for financial close is February 2017.

Fraport and Slentel agreed an upfront payment of €1.234 billion and annual payments of €22.9 million over the

40-50-year concession. With a €1.4 billion investment commitment by the buyers over the concession, Fraport and Slentel could transform the airport experience for tourists on the Greek islands.

The buyers need €813 million in debt, equity and operational cash flows. The European Bank for Reconstruction and Development approved a €90 million loan and the IFC is considering one of €75 million. With many commercial banks internationally unwilling to lend in Greece, development bank support is vital.

Italy's state rail company Ferrovie Dello Stato has been an important participant in Greece's privatisation programme. Its subsidiary Trenitalia agreed in July 2016 to buy 100% of Trainose, the state's national passenger and freight train operator, for €45 million, pending authority approval. It has also been linked to the potential privatisation of the Athens metro system.

The privatisation of a 24% stake in ADMIE, Greece's electricity transmission company, by state-owned parent company Public Power Corporation, likewise attracted a state-owned foreign buyer: State Grid Corporation of China, offering €320 million. In late November 2016 PPC's shareholders gave their approval.

Fellow Chinese company COSCO agreed in April 2016 to pay €368.5 million to buy 67% of Piraeus Port Authority, and paid a €280.5 million first instalment in August.

### TO COME

Greece's plan to sell part of its 30% shareholding of Athens International Airport (AIA) is waiting in line. But the market is hoping politician can agree to extend AIA's concession period, reported earlier this year to be 20 years. As it stands

the concession is due to mature in 2026, not an appealing prospect to investors needing to make a return.

Expression of interest were submitted for the sale of the tolled, operational Egnatia motorway in December, and binding offers were due for the relaunched sale of the country's rolling stock company EESSTY as *IJGlobal* went to press.

Meanwhile the government has promised to speed up the privatisation process, and the departure of Shipping Minister Theodoros Dritsas is widely seen as positive to the sale of 67% of Thessaloniki Port Authority.

### GOVERNMENT REFRESH

The removal of Dritsas came about in an early November 2016 minister reshuffle by left wing Syriza party Prime Minister Alexis Tsipras as he seeks to push through further reforms in exchange for bailout funding from the EU.

An opponent to the privatisation of PPC, energy minister Panos Skourletis, has been moved out to the interior ministry.

The reshuffle also moved Stergios Pitsiorlas, the chairman of privatisation fund the Hellenic Republic Asset Development Fund (HRDAF), to become deputy economy minister.

HRDAF, also known as Taiped, has so far been the body in charge of privatisations, but a newly formed fund is due to eventually replace it – the Hellenic Corporation of Assets and Participations – with new leadership.

Privatisations remain vital to the Tsipras-led government, and last month's cabinet changes and new leadership for the privatisation fund are targeted at helping unblock privatisations obstacles as the country moves into 2017. ■



# North America

INSIDE

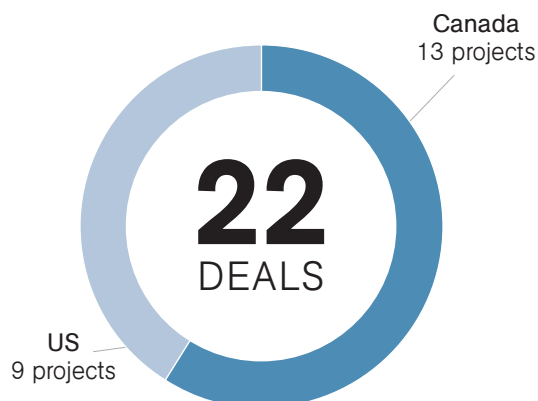
Infrastructure Ontario

Vista Ridge water pipeline, US

Clean energy – no reverse gear

Repercussions of DAPL denial

## Pipeline & procurement deals



## Projects with recent tender updates

Miami Streetcar Light Rail System PPP

Fargo-Moorhead Flood Diversion Channel

Groves Memorial Community Hospital PPP

New Westminster Secondary School PPP

Statoil's Kai Kos Dehseh Oil Sand Assets

Brigham Resources' Upstream Assets

Acquisition of South Fraser Perimeter PPP

Virginia Interstate 66 (I-66)

## Closed deal values by sector

**Oil & gas:** \$11.96 billion

**Renewables:** \$8.23 billion

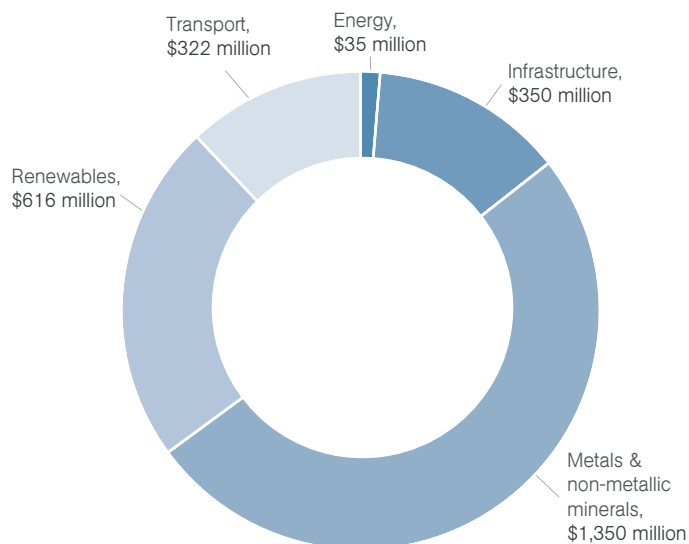
**Power:** \$7.40 billion

**Transport:** \$2.95 billion

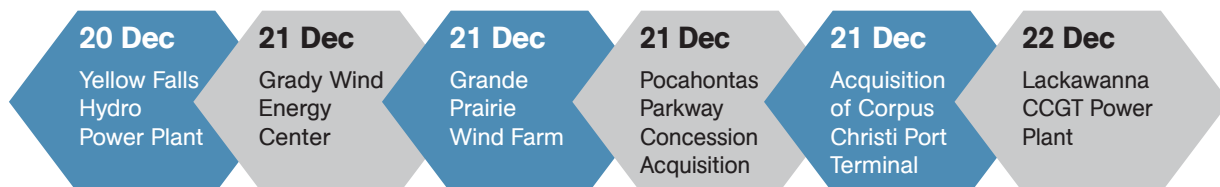
**Water:** \$949 million

**Telecoms:** \$303 million

## Closed trade finance deals



## Closed infrastructure deals



Source: IJGlobal, from 1 November to 31 December 2016

# Changing tracks

Infrastructure Ontario hopes to transfer its experience in PPPs to the procurement of transit and heavy rail projects, as it seeks to respond to the province's growing population. By Sakshi Sharma.

Infrastructure Ontario, a crown agency of the Canadian province, has the considerable task of procuring Ontario's sizable pipeline of transport projects, one of the largest in North America. Multiple upcoming rail developments are part of the province's C\$30 billion (\$23 billion) *Moving Ontario Forward* 10-year transport investment plan.

Overreliance on road infrastructure is an increasing problem for Ontarians, especially in the Greater Toronto and Hamilton Area (GTHA), as the region's population grows. According to figures by Ontario's transport agency Metrolinx, the GTHA will continue to have one of Canada's fastest growing populations over the next few decades. While today the region's population is just over six million, it is estimated to grow to 8.6 million by 2031. This growth will necessitate an increase and upgrading of the region's transport network. "Existing transport infrastructure networks have been identified as being at their limit and unable to support the projected future growth in the region," says Chris Gauer, Infrastructure Ontario's executive vice-president for civil, roads and transit.

According to a recent report by Metrolinx, average round trip commuting times in the province have slowed to 82 minutes, longer than almost any other region in North America. This has had an adverse impact on the region's economy, which the agency estimates is costing business and residents C\$6 billion every year. Furthermore, greenhouse gas emissions have risen, with transport seeing larger growth in emissions than any other sector since 1990.

The government of Ontario wants to shift traffic on to new light rail transit (LRT) and regional express rail networks. A

flood of new rail tenders are due throughout 2017, says Gauer: "Ontario's focus on light rail transit and regional rail is the largest infrastructure development in North America. The regional express rail will be a transformational project and it will change travel behaviour in the entire region."

## Building momentum

IO is already one of the foremost procurers of infrastructure projects across Canada and the world. The agency has a proven track record in efficiently bringing projects to market and monitoring them through to construction and operation. However historically it has focused more on social infrastructure projects rather than transport. According to *IJGlobal* data, 35 social infrastructure PPP transactions valued at about \$9 billion closed between 2011 and 2016, compared to just nine transport PPP transactions worth \$5.7 billion over the same period.

One transport project in procurement is the Hurontario LRT – a new 20km rapid transit rail line between Port Credit GO Station in Mississauga to the Gateway Terminal at Steeles Avenue in Brampton. The tender was launched to the market in October 2016 and firms had until 26 January 2017 to submit responses.

Hurontario is one of the few Ontario LRT projects where the province is also contracting out the operation, as well as maintenance, of the transit line as part of the tender. Gauer says that integrating design, construction and maintenance of an asset with long-term operations requires the project company to be responsible for meeting standards, service levels and performance specifications as specified by Metrolinx, in consultation with the municipalities. "This means that the project

company's equity and debt will be at risk for all aspects of performance, providing it with strong incentives to ensure cost-effective and efficient performance," he adds.

Hurontario LRT is the fifth light rail project launched to date in Ontario, following on from the C\$5.3 billion (\$4.03 billion) Eglinton Crosstown LRT in Toronto. Reaching financial close in July 2015, Eglinton remains the largest LRT in the province to date. The 11km long Finch West LRT is at final bid stage with three shortlisted groups, while two earlier LRT procurements, the Confederation Line in Ottawa and the Waterloo LRT in the City of Waterloo, are under construction.

A tender for the new Hamilton LRT is expected to be issued this year. This new LRT line will involve modern light rail vehicles running from McMaster University through downtown Hamilton to Queenston Circle. The project will also connect directly to the new West Harbour GO Station, and provide for a pedestrian connection to the Hamilton Centre GO Station. According to the proposed procurement timetable, major construction works are expected to begin in 2019.

Alongside the Hamilton LRT, another 13km Sheppard East LRT is in planning and awaiting an RFQ. The line will run along Sheppard Avenue from Don Mills subway station to east of Morningside Avenue in Toronto. IO is also planning a C\$1.48 billion investment to replace the existing Scarborough rail transit.

The government of Ontario has committed C\$8.4 billion in support of these new transit projects in and around Toronto.

## Furthering the model

In a bid to attract private sector capital and expertise the provincial government

is seeking to implement a majority of the projects using PPP or what Ontarians refer to as the Alternative Financing and Procurement (AFP) model. IO has brought 89 AFP projects worth C\$39 billion in capital costs since it was formed. Their latest market update includes projects with a total capital value estimated at C\$11.8 billion, excluding a C\$14 billion in projects under construction.

“Infrastructure Ontario is an execution agency with expertise in various methods of project delivery. Our experience has shown that for the largest, most complex infrastructure projects, AFP offers faster and more innovative delivery,” says Gauer. “Our earliest projects were largely buildings, mainly hospitals, courts, jails, colleges. More recently with the government’s transit expansion initiative we have seen new, large transit initiatives get funded that offer value delivered under the AFP model.”

Gauer says that in a public-private partnership, the added value on large projects comes from the appropriate allocation of project risks to the party that best manages them. “This helps drive performance and create accountability in project delivery that leads to enhanced on-time and on-budget performance and improved quality of work. Our track record bears that out- of 51 completed projects, 49, or 96%, were delivered on-budget and 37, or 73%, were delivered on-time.”

Over the past few years project procurement has shifted from the provincial level down to the local city and municipality level across Canada. Municipalities have mirrored provincial contract structures and methods to attract the private sector to their projects. In some cases Ontario municipalities have also engaged IO as a project adviser, for example IO is an adviser to the City of Ottawa and Region of Waterloo on their LRT projects.

Furthermore IO anticipates supporting due diligence on the second phase of the Ottawa LRT and the city of Waterloo regional transportation hub. The City of Toronto is considering extending Eglinton Crosstown LRT. Preliminary

discussions between the City of Toronto and IO regarding Scarborough Subway have been initiated. “IO has no formal role in these yet, but depending on the municipality’s willingness and their ability to take it forward we could look to work with them,” says Gauer.

### Regional Express Rail

Beyond the city specific light rail transit projects, Ontario is undertaking a large scale expansion of the Regional Express Rail (RER) involving modernisation of the larger Ontario commuter rail network. The expansion programme will comprise several packages of work, Gauer explains, which would include new stations, customer amenities, electrification, a train control system and operations and maintenance.

Ontario’s inter-regional public transportation service, GO Transit, has historically offered all-day, two-way services only along a few lines, while providing peak rush hour service on its other lines. RER will add an all-day, two-way service to the Barrie line and the inner portions of the Kitchener and Stouffville lines, as well as increasing the frequency of service on the rest of the corridors to as often as every 15 minutes.

With these improvements Metrolinx expects to nearly double RER ridership to 127 million riders per year by about 2029 from 65.7 million in 2015. In total the RER expansion is a C\$13.5 billion project and will be delivered in three packages which will include electrifying five of the seven rail network lines, Gauer says.

Package one will be a series of 14 design, build and finance projects involving track upgrades, bridge improvements, grade separations and station improvements. “This would set the stage for the balance of the electrification to follow,” says Gauer. Package two will comprise region-wide redevelopments of 64 stations including the central Union Station in Toronto. “We will also pursue these under a design, build, finance and maintain approach with the precise composition of the contract dependent on market engagement.”

Package three will consist of actual

electrification of the system including signal communication upgrades, remaining civil works, purchase of new electric vehicles and operation of the rail network. The first four of the 14 projects of package one are in procurement, one project is at RFP stage, while three are between the RFQ and RFP stage. The remaining projects from package one are expected to be tendered out over this year.

IO is also planning to launch tenders to seek qualifications for the station and network electrification packages through first half of 2018, according to Gauer.

### Funding the developments

The public share of these costs is expected to come from a combination of federal subsidies, increased taxes, and some specifically on road and fuel users, as well as potential efficiencies from a PPP approach.

IO maintains that any project with a value of over C\$50 million is evaluated to determine whether alternative delivery models, such as PPPs, could deliver the greatest value for the taxpayer.

In August 2016, the Government of Canada and the Government of Ontario reached a bilateral agreement to provide about C\$2.97 billion in combined funding for projects that will reduce commute times and make public transit more efficient and inclusive for people in the province. The Federal Government is providing Ontario with C\$1.48 billion under the new Public Transit Infrastructure Fund, and will cover up to 50% of the funding needed for projects supported under this agreement.

For their part, Metrolinx has published a proposal to raise funds to help finance the planned rail expansion programme.

The majority of dedicated revenues – about C\$1.3 billion annually – would be raised through a one percentage point increase to the harmonized sales tax (HST – a combined federal and provincial value added sales tax in Canada). A regional fuel and gasoline tax of five cents per litre and a business parking levy are expected to generate annual additional revenues of about C\$330-350 million, each respectively. ■

**DEAL ANALYSIS:** The Vista Ridge pipeline project tapped the bank rather than bond markets to complete the largest financing ever for a US water PPP. By Sakshi Sharma.

# Vista Ridge water pipeline, US

Private financings of major water projects in the US are relatively rare, largely due to a lack of federal funding for them in comparison to developments in other sectors such as transport. Which makes the \$3.4 billion financing for the Vista Ridge water pipeline in the Texan city of San Antonio, which reached financial close in November, impressive if only for its size. But not only is it by far the largest ever water PPP in the country, it is the first since 2014. And unlike most large US infrastructure projects, its debt came entirely from the bank rather than bond market.

The San Antonio Water System (SAWS) was the procurement authority for Vista Ridge. In July 2014 it selected a consortium led by Spanish company Abengoa to develop the project, with final approval granted in November that year. By the end of 2015 however, Abengoa had declared insolvency following several years of declining financial performance.

The Spanish government gave the company four months to come up with a new, viable financial restructuring plan, under Article 5 of the Spanish Insolvency Law. In an effort to restructure its debt, Abengoa agreed to hand over 80% equity ownership in Vista Ridge to Garney Construction, reducing its own equity stake to 20% and becoming a 'silent' partner in the project.

The SAWS board formally approved this change in equity ownership for the project on 18 May 2016. Garney Construction, a Kansas City, Missouri-

based company, had been part of the original Vista Ridge consortium but as a minority shareholder and construction partner. While the company had never developed a PPP or built a project of this scale before, it had a strong financial position and a 20-year working relationship with SAWS. Garney was to finance project-level equity on balance sheet, partly supported by a letter of credit backed by Commerce Bank.

## CONTRACTUAL RATES

Water PPPs often lead to controversial hikes in customer prices as a result of concession payments. But SAWS claims that an interest rate lock in the Vista Ridge contract will save ratepayers upward of \$500 million over the project's 30-year concession lifecycle. The new fixed price (the capital & raw groundwater unit price) is set at \$1,606 per acre-foot.

Once operational, the new water plant will deliver 168,970m<sup>3</sup> per day of water (50,000 acre-feet per year) through a 22.5km pipeline. The project involves the construction of new production wells, pumping stations, raw water collection, storage tanks and pipeline to deliver the new water supply. The water will be delivered from the Carrizo and Simsboro Aquifers in Bureson and Milam Counties, located northeast of Austin, Texas.

Water constrained San Antonio suffers recurring stage 4 droughts, exacerbated by a growing population. The project will provide a total of 20% of the

city's water.

All costs of construction and right-of-way acquisition are being covered by privately raised debt and equity capital. No public funds from the city will be used to build the project. Under the concession, SAWS will only pay for water actually delivered and for certain associated operating and maintenance expenses once the project is operating. Construction on the pipeline began in January 2017 with commercial operations due to begin by April 2020.

## BANK LENDING

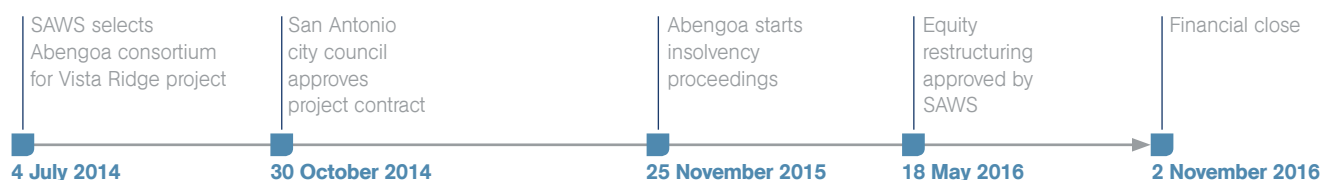
All of the \$852 million debt for Vista Ridge was raised in the bank market. The sponsors also provided \$75 million in sponsor equity.

SMBC was coordinating lead arranger and structuring agent, while ING, Credit Agricole, Societe Generale, Korea Development Bank, CoBank and Commonwealth Bank of Australia were the other lenders.

The five-year debt has a mini-perm structure tailed by a long-dated swap. The debt also covered repayment of a guaranteed bridge loan of \$120 million that Abengoa's US subsidiary had taken out for the deal in July 2015.

The debt was reportedly priced at a tight 175bp over Libor. The project sponsors plan to tap the capital markets in the next 18 to 24 months for a bond issue to refinance the original debt facility during the project's construction phase. ■

## Timeline





**NEWS ANALYSIS:** Not even President Trump can prevent further growth in the renewable energy sector. By Chase Collum.

# No reverse gear

In January outgoing American President Barack Obama gave four reasons why he believes the trend toward clean energy is irreversible, even in the face of anticipated opposition from the new administration of climate change-denying President Donald Trump.

Obama asserted that economic growth has been successfully decoupled from energy sector emissions, that the private sector is now driving the clean energy transition independent of government initiatives and subsidies, that the American power sector is being transformed in large part due to market dynamics, and that global momentum will not be slowed by a policy shift from the US government.

## MOTION OF THE OCEAN

The first six months of 2016 saw energy-related carbon dioxide emissions in the US at their lowest since 1991 at 2.53 billion metric tons, according to the US Energy Information Administration (EIA).

The first offshore wind farm in the US was established in 2016 with more such projects in development, even if one developer (Fishermen's Energy) has had some setbacks.

Meanwhile, utilities made significant progress toward lowering carbon footprints and have been vocal about their plans to continue to do so regardless of what are seen as short-term political upheavals. Berkshire Hathaway subsidiary Mid American Energy's planned 2GW wind farm in Iowa – the largest in the US to date – was approved by regulators and Minnesota's utility commission approved Xcel Energy's plan to add 1.8GW of wind power and 1.4GW of solar to its portfolio as a coal replacement.

Xcel Energy vice-president of

policy and federal affairs summed up the sentiments of many US utilities late last year when he said that “regardless of the outcome of the election, Xcel Energy will continue to pursue energy and environmental strategies that appeal to policymakers across the political spectrum because we are focused on renewable and other infrastructure projects that will reduce carbon dioxide emissions without increasing prices or sacrificing reliability.”

Federal Energy Regulatory Commission (FERC) and US EIA statistics suggest that roughly 21GW of wind and solar power – including both utility-scale and rooftop – were installed throughout the year, accounting for 68% of new capacity added. *IJGlobal* data shows that during President Obama's eight-year term, nearly 440 renewable energy projects were brought into operation, after just over 100 during the term of his predecessor George W. Bush. What's more, roughly 5.3GW of aging power plants were planned for retirement last year.

## STATE OF CHANGE

By any measure, the power sector in the US is significantly shifting toward cleaner fuels, cleaner turbines, and fuel-free generation. Post-election many in the renewable power project finance space told *IJGlobal* that while federal policy may shift away from renewable energy support in the coming four years, states and corporations are likely continue to push the industry forward.

In Illinois, the state legislature enacted a new energy bill expected to double its energy efficiency portfolio and allow for 4.3GW of new solar and wind while at the same time supporting continued reliance on nuclear power. Other states have followed similar policy

pathways, with Washington passing a carbon tax into law, and California Governor Jerry Brown adamantly defending the state's climate stance.

Not all states are jumping on the renewables bandwagon, however. In Wyoming this year a handful of legislators led by Senator Larry Hicks submitted Senate File 71, which would effectively ban the use of renewable resources larger than 25kW net metering systems.

## TAKING OFF THE TRAINING WHEELS

According to the 10th annual levelised cost of energy analysis published by Lazard in December 2016, greenfield wind and solar generation facilities are able to compete with even the most efficient fossil fuel generation resources without the need for subsidies.

On a cost per MWh basis, the low end of the wind power pricing spectrum fell far below that of any other resource at \$32 per MWh. That compares to utility-scale solar at \$46 to \$49 per MWh (depending on the technology), combined-cycle gas at \$48 per MWh, coal at \$60 per MWh and nuclear at \$97 per MWh.

Supporting this analysis, several conversations with market participants, especially in California and Texas, have revealed strong confidence in renewables' ability to compete without subsidy training wheels against fossil fuels on the open market.

Power projects will always be financed with an eye toward returns. So as the economics of renewable energy projects continue to become more favorable, it is unlikely that investors will eschew the sector simply because they want to help Trump make good on campaign promises to save coal country. ■

**NEWS ANALYSIS:** An executive order from the new US President may not be enough to save the Dakota Access Pipeline. By Chase Collum.

# Dead or just delayed?

In December the US Army Corps of Engineers (USACE) denied easement to allow the \$3.8 billion, 1,882km Dakota Access crude oil pipeline to cross federal land near Lake Oahe, a decision which looked to have killed the project. Then in late January, President Donald Trump issued an executive order calling for the project's approvals to be expedited. But even with this presidential reprieve, the pipeline faces many problems.

Dakota Access was originally proposed by Energy Transfer Partners (ETP) and Phillips 66 in 2014. The pipeline begins near Stanley, North Dakota and end at Patoka, Illinois, crossing through South Dakota and Iowa along the way and as of November was 84% complete.

The project has come under public scrutiny as part of its route skirts near sacred burial grounds for the Standing Rock Sioux tribe. Strong responses to protests by law enforcement and the National Guard brought increased negative attention to the situation, drawing movie stars, famous musicians and environmental protectors from around the world.

At the heart of the protest was the Standing Rock Sioux claim that the project would endanger the tribe's only natural water source. Those fears were given credence when it was revealed that the pipeline was originally set to cross waters upstream of Bismark, North Dakota. That route had been denied, since it would potentially endanger those waters. With international attention turned onto the project, the outgoing Obama administration ensured the easement was not granted.

The developers – Energy Transfer Partners (ETP), Sunoco Logistics Partners and Phillips 66 – locked in the majority

of its shipping agreements with its nine offtakers in late 2014 during a favorable oil price environment, with those commitments hinging on a commitment to ship oil by 1 January 2017. By mid-2016, the pipeline had contracted 90% of capacity for up to 10 years.

After the easement was initially granted for the project in July, details on the project financing came to light with co-lead arrangers including Citibank, Mizuho, MUFG and Toronto-Dominion (TD) Bank. In November, however, Norwegian DNB Bank – who is among the 17 financial backers signed onto the financing – said that it was reviewing its position and may pull out for philosophical reasons.

## SUPERFLUOUS CAPACITY

The Institute for Energy Economics and Financial Analysis and the Sightline Institute said in a report published in November that the pipeline's 570,000 barrel per day capacity may be largely "superfluous by mid-2017" if the downtrend in Bakken production continues.

The report asserted that "the Bakken already has ample takeaway capacity for the oil it produces", and that "the region's oil transport infrastructure is already overbuilt, with some 60% of its capacity currently unutilised."

"Together with local oil refineries," the report said, "the region's existing pipelines and oil-by-rail facilities ... can handle nearly 2.5 million barrels of Bakken crude throughput per day."

According a recent report from the US Energy Information Administration, Bakken companies are producing fewer than 950,000 barrels of oil per day. Roughly 250,000 barrels of oil per day were shipped out of the Bakken as of

March 2016, with about 100,000 of those barrels being delivered to the Pacific Northwest through take-or-pay contracts. That leaves about 150,000 barrels per day that could be shipped via the Dakota Access pipeline instead of by rail. With that in mind, one of the developers' most vocal arguments in favor of the project – that it will help mitigate the need for transport of Bakken oil by rail – loses much of its steam.

## WANING DEMAND

In an August court filing, a declaration by ETP senior vice-president of engineering Joey Mahmoud said that "the long-term transportation contracts give shippers a right to terminate their commitments if DAPL is not in full service per the contract deadline", and that "a loss of shippers to the project could effectively result in project cancellation." The company subsequently denounced delays associated with the Obama administration's scrutiny of the project in September, seeking court intervention.

Whiting Petroleum, Continental Resource and Hess – three of the largest active companies in the Bakken region – have had credit downgrades within the last year by Standard & Poor's and Moody's, which were sceptical of the companies' high levels of debt. What's more, revenues for the three producers were down between 60% and 70% for the first nine months of 2016 from the same period in 2014.

With that in mind, it is more than likely that shippers would be keen to renegotiate the terms of their commitments for Dakota Access capacity, and that – more than the potential need to settle on an alternative route – could be fatal. ■

# Latin America

INSIDE

Colombian health PPPs

Chile leads in 2016

## Pipeline & procurement deals



## Projects with recent tender updates

Acquisition of 42.5% stake in Electrogas

Autopista al Mar 2 PPP

Magdalena River Waterway PPP

Access North Bogota Road PPP

Acquisition of 23.6% in CPFL Energia

Agua Negra Tunnel IDB Structuring Facility

Agua Negra Tunnel

Manta Port Redevelopment PPP

## Closed deal values by sector

**Oil & gas:** \$5.49 billion

**Transport:** \$3.31 billion

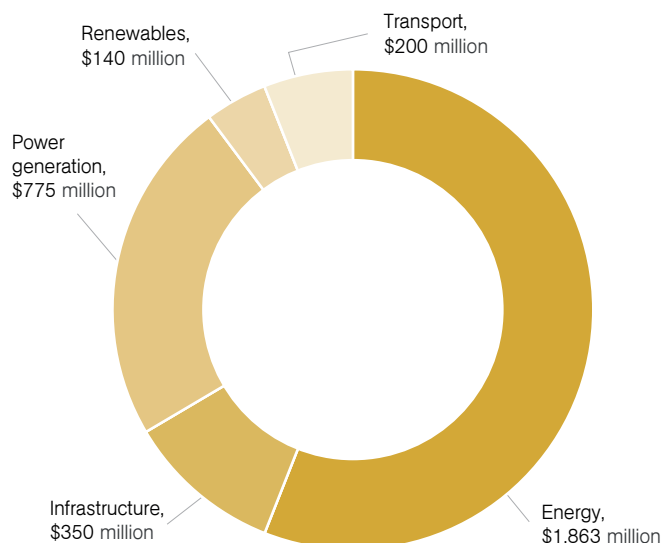
**Renewables:** \$2.02 billion

**Power:** \$1.95 billion

**Mining:** \$113 million

**Social & defence:** \$18 million

## Closed trade finance deals



## Closed infrastructure deals

**16 Dec**

Acquisition of 13.6% in Mineracao Paragominas

**16 Dec**

Acquisition of Pacifico Solar Programme

**20 Dec**

Acquisition of Ventika Wind Complex

**21 Dec**

Linea Amarilla Toll Road Concession

**21 Dec**

Manantiales Behr Wind Farm

**29 Dec**

Acquisition of Duke Energy's Brazilian Hydro Portfolio

Source: IJGlobal, from 1 November to 31 December 2016

**NEWS ANALYSIS:** After the success of its Fourth Generation of Highways Programme (4G), Colombia is roll-out health PPPs. By Rosie Fitzmaurice.

# Healthy ambition

The Bogotá District Health Secretary announced in December that it is to launch the procurement of six new hospital PPPs aimed at reviving the capital city's tired public health service.

Bogotá's health infrastructure is in urgent need of an upgrade: it is facing a severe shortage of hospital beds – estimated at about 5,000 – and a number of existing facilities badly need modernisation, such as enhancement for earthquake protection.

The recent Fourth Generation of Highways Programme (4G), led by national infrastructure agency ANI, has been a clear success.

The federal government has already approved 33 toll road projects, 10 under the first wave of public PPPs (which receive government payments *vigencias futuras*), nine in the second wave, two under the third, and 12 private initiatives, which don't receive government backing. For the public PPPs, sponsors receive a portion of the government payments in US dollars. This portion was revised upwards at the request of both sponsors and lenders in order to attract international investors.

Seven first-wave concessionaires have already closed project-level debt for their projects, through some complex and innovative funding structures.

Of these closed transactions, worth Ps13.2 billion, 48% of debt has been provided by local banks and 24% by international lenders. Another 18% came from institutional investors through the purchase of both US dollar and local bonds as well as through peso-denominated debt funds. FDN has provided the remaining 10%. Pesos funding represents 66% of the total, with 34% in US dollars.

## Colombia's infrastructure pipeline until 2019

Project(s)	Cost (Ps billion)	Tender launch
Bogotá's first metro line	9,580	2017
Medellín metro	3,200	2017
Barranquilla intermodal transport	n/a	n/a
Four pilot education PPPs	880	2017
Bogotá's six hospital PPP's	1,600	2018
Military forces retreat	450	2019
Source: IJGlobal		

## HOSPITAL PPP MODEL

The hospital programme, known as “Bogotá Mejor para Todos”, entails the construction of new 1,200-bed hospitals and the upgrade of existing 800-bed facilities.

The first three projects will replace existing hospitals, while the following three will create brand new facilities. All six projects are located in capital city.

City officials have opted for a combination of hospital PPP models for the programme. The first three PPPs will be developed under the “Bata Gris” (grey coat) model, while the latter three will be structured under the “Bata Blanca” (white coat) model. Under the grey coat structure the concessionaire is required to provide non-medical services, such as laundry, surveillance, waste management, security and equipment maintenance. While under the white coat concept the concessionaire also manages medical services, which are more often provided by state doctors.

According to data from the Inter-American Development Bank (IDB), most Latin American and Caribbean countries to date have implemented hospital PPPs under the grey coat model (70%), over the white coat model (30%).

Clemente del Valle, president of FDN, has commented that while hospitals structured as grey coat projects and public works usually receive more proposals at tender stage, a disadvantage is that they

also carry the risk that the infrastructure will be under-utilised when being operated by the public bodies.

## OTHER PPPS

Despite Colombia's recent success at roads procurement, the country's infrastructure deficit remains vast. Carlos Alberto Sandoval, vice-president of structuring and project management at FDN estimates the total required investment in Colombian infrastructure at Ps409 trillion until 2035. This investment includes Ps47 trillion in water, sanitation and solid waste, Ps56 billion in urban transportation, Ps17.4 trillion in the health sector and Ps7.2 trillion in education. Other sectors also require investment.

The government appears keen to benefit from the use of PPP in a number of these sectors. The FDN has already been mandated on the structuring of some projects that are due to be procured in the near to medium term.

One such project is a pilot for school PPPs in the cities of Cartagena, Barranquilla and in the department of Antioquia. Colombia has been working with the International Finance Corporation (IFC) on the structuring of the pilot since 2015. The project contemplates the construction, expansion and improvement of 68 primary and secondary-level public educational institutions. ■



**DATA ANALYSIS:** Chile was the most active infrastructure finance market in Latin America during 2016. By Rosie Fitzmaurice.

# Chile leads in 2016

Year-end data from *IJGlobal* shows that Chile was the most active market in Latin America for energy and infrastructure financings in 2016, by total value of transactions.

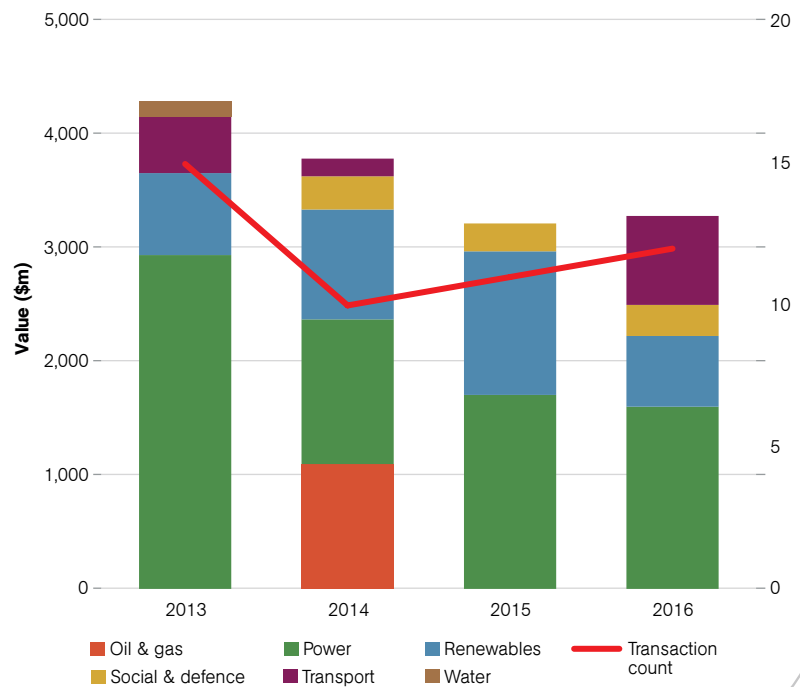
While some sectors, such as transport, grew in value in 2016, there was a decline in conventional power deals compared to 2015 and the market is much smaller than it was just a few years ago. In 2013, \$2.9 billion in power primary financings reached financial close, while just \$1.6 billion worth of power deals closed last year. Declining activity in this sector reflects how the energy policy of Chile's government has moved away from conventional baseload power in favour of renewables.

However, two landmark power transmission projects did reach financial close in 2016. They are the \$750 million debt package in support of the TEN transmission line, which will connect Chile's central (SIC) and northern electricity grids (SING), and the \$850 million financing for the Interchile transmission project. Both projects will serve to reduce congestion on the national transmission system caused by a boom in renewable energy generation capacity.

There was a rise in closed deals in the transport sector, which has been far less active than the energy sector in recent years. The largest transport transaction in 2016 was the \$500 million equivalent dual-currency loan package backing the expansion of Santiago's Arturo Merino Benítez airport. The deal is considered one of the most important infrastructure projects to be tendered by Chile's MOP in the last decade.

Six renewables deals closed in Chile during 2016, which is the same number as in 2015. However, the six transactions

Closed project finance deals in Chile, 2013-2016



Source: *IJGlobal*

closed in 2015 raised almost double the amount of debt closed last year, as the 2016 projects were on average much smaller in terms of installed capacity (MW).

The largest two renewables deals to close in 2016 were EDF's 115.5MW Cabo Leones I wind and 115MW Santiago Solar PV projects. The French developer was also the most active sponsor by this measure in Chile last year. The largest projects to close in Chile during 2015 were LAP's 185MW San Juan wind and SunEdison's 146MW Laberinto merchant solar projects.

The total value of Chilean primary financings in 2016 could easily have been significantly higher. A number large transactions were expected to close by the end of December but have now rolled over

into 2017.

Mainstream was expected to achieve financial close on the Aela wind portfolio – which comprises the Aurora, Sarco and Cuel projects – by year-end, but the deal is now due to close this year. Six lenders are now expected to provide debt for the transaction, after Mizuho recently dropped out of the bank group while KfW and La Caixa joined the deal.

Another major transaction in the market is Octopus LNG, which signed an \$850 million term financing in December 2016 backing the development of a 600MW gas-fired power plant and the offshore Penco Lirquén LNG regasification terminal to be located in Chile's Bio Bio region. Financial close is expected soon. ■

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# Asia-Pacific

INSIDE

Indian solar surges  
KalSel coal-fired, Indonesia

## Pipeline & procurement deals



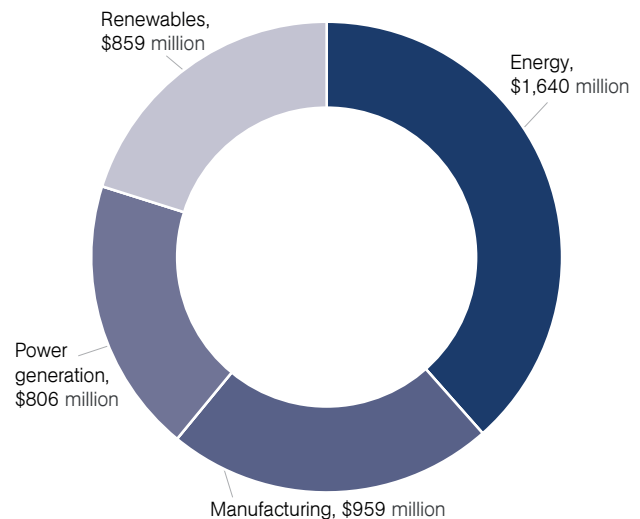
## Projects with recent tender updates

Hemaraj Chonburi Waste-to-Energy Plant  
Sirajganj 4 Dual Fuel Power Plant  
Malaysia PV Solar Farms  
Bangkok Yellow MRT Line PPP  
Bangkok Pink MRT Line PPP  
Kuala Lumpur-Singapore High-Speed Rail  
Sinopec's Sichuan-to-East China Gas Pipeline  
Cunderdin PV Solar Plant (100MW)

## Closed deal values by sector

**Power:** \$22.09 billion  
**Transport:** \$6.38 billion  
**Oil & gas:** \$5.59 billion  
**Renewables:** \$1.92 billion  
**Water:** \$56 million  
**Mining:** \$39 million

## Closed trade finance deals



## Closed infrastructure deals



Source: IJGlobal, from 1 November to 31 December 2016

# 3rd Annual Asia Pacific Energy & Infrastructure Finance Forum

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**DATA ANALYSIS:** India is meeting its growing electricity demand, at least in part, through a surge of new solar power projects. By Mia Tahara-Stubbs.

# Solar surge

The total installed solar generating capacity in India nearly doubled in 2016 and that pace of growth is now set to be replicated in 2017.

The state of Tamil Nadu launched a 500MW solar tender in early January, while Solar Energy Corporation of India was due to launch its own solar tender for 2-3GW in generating capacity to be built across the country as *IJGlobal* went to press.

This recent push for solar power procurement is being driven by economic growth. Although growth forecasts were trimmed following the recent demonitisation of high value currency notes, the Asian Development Bank still expects India's economy to grow by 7% in 2017 and by 7.8% in 2018.

The country also has one of the fastest-growing electricity sectors in the world, according to the US Energy Information Administration. Net electricity generation is expected to expand by an average 3.5% a year between 2012 and 2040.

## TURBO CHARGING FORWARD

Prime Minister Narendra Modi shot the starting pistol for increased renewables investment in June 2015 when he raised the country's target for installed solar capacity by 2022 from 20GW to 100GW.

Annual installations, both of rooftop and utility-scale solar, more than doubled year-on-year in 2015 to 2.3GW. This is forecast to have nearly doubled

again to 4GW in 2016, according to Mercom Capital data.

As of December 2016, India had 9GW of utility-scale solar power in operation, 14GW in development and another 6,308MW that has been tendered out.

New solar capacity installations are projected to surge to just over 9GW in 2017 and continue to expand at that pace through to 2020.

## HOMEGROWN BUSINESS

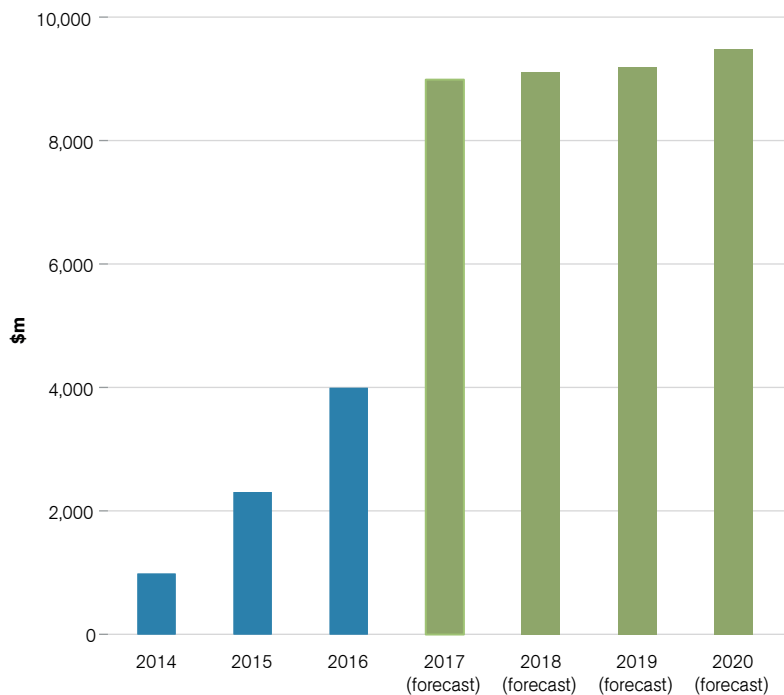
Local conglomerates such as Tata Power and Adani together own just under 20% of the utility scale solar power plants in operation in India, while US-based First Solar scrapes into the list of top 10 solar developers at eighth place with a market share slightly over 2%, according to Mercom Capital data.

Indian companies also dominate the league table for the 20GW of projects in the pipeline, with ReNew Power, Adani and Greenko leading the pack. The only internationals, Solar Direct and EDF, squeak in at the bottom of the top 20 developers in terms of pipeline.

One challenge for foreign developers is arranging financing. So far, most utility scale solar power projects in the country have been financed by Indian banks. Despite solar tariffs falling to successive historic lows in recent years to hit Rs4 (\$0.07) per kWh by December 2016, an even steeper fall off in module prices have made banks more comfortable providing project financing for solar developments.

As a result, average interest rates on solar project financing has been trending down over the past year, from an average 11.50% in the fourth quarter of 2015 to just under 11% by the last quarter of 2016, according to Mercom Capital data. ■

India: annual solar installations 2014-2020, installed and forecast



Source: *IJGlobal*

**DEAL ANALYSIS:** After years of setbacks, yet another long-delayed Indonesian power project has finally reached financial close. By Mia Tahara-Stubbs.

# KalSel coal-fired, Indonesia

After five years, sponsors Adaro and Korea East-West Power finally reached financial close in January on their 2x100MW \$540 million KalSel coal-fired independent power producer (IPP) project in Indonesia.

Indonesia remains the most active and accessible market for international independent power producer projects in Southeast Asia. But the “so long” process, as several advisers put it, of closing the KalSel transaction has left many daunted by the prospect of helping with the government’s ambitions to build 35,000MW of new electricity capacity.

KalSel was originally tendered out in 2011, with the two 100MW coal-fired power plants in South Kalimantan, on the southern end of the Indonesian side of the island of Borneo, subsequently awarded in 2012 under what was supposed to be a fast track programme.

## FINALLY FINANCED

One obstacle to bringing the project to financial close was the presidential election in July 2014 that brought to power President Joko “Jokowi” Widodo. The election meant the project did not receive formal approval until the end of that year.

Other stumbling blocks ranged from a change in the issuance process of the business viability guarantee letter (BVGL) from the Indonesian government, to a switch of the export credit agency support from Korea Finance Corporation to Korea Export-Import Bank and then, eventually, to Korea Trade Insurance

Corporation (K-Sure).

Reconciling lenders’ concerns about the coal agreement between parent company Adaro (whose largest coal mine is located in South Kalimantan) and the project vehicle also caused delays, sources told *IJGlobal*. As did the arrangement for currency conversion through a designated converting bank.

The 25-year power purchase agreement (PPA) was finally signed in October 2014. Under the terms of the PPA, the sponsors had 12 months to reach financial close but this deadline has been repeatedly extended.

As it turned out, it was the closing of another long-delayed coal-fired power plant, the \$4.3 billion 2,000MW Central Java ultra-supercritical coal-fired power plant, that paved the way for KalSel to reach financial close, advisers told *IJGlobal*. Sponsors Adaro, J-Power and Itochu were awarded Central Java way back in June 2011 and finally closed on its financing on 6 June 2016.

With Central Java no longer distracting Adaro or the government, the financing documents for KalSel were signed at the end of November 2016 with financial close following on 23 January 2017.

The 20-year \$422 million senior loan for KalSel priced at 155bp over Libor, with a gradual step up to 180bp. The loan is split into a \$401 million tranche insured by K-Sure and a \$21 million uncovered tranche provided by Korea Development Bank (KDB). The project is being financed

on a 75:25 debt-to-equity ratio.

The six mandated lead arrangers on the senior loan were DBS, KDB, HSBC, MUFG, Mizuho and SMBC. All the banks, except HSBC, are also providing an equity bridge loan.

## THE EXHAUSTING RUN

After his election, Jokowi set a target to install 35,000MW of new power generation capacity, raising hopes the pace of tendering out IPPs in Indonesia would be streamlined and proceed at a faster pace.

Instead, the Indonesian government and state-owned utility PLN, which procures the power plants, has continued to tweak the process and try out different models, which has turned transactions into time-consuming marathons.

The government and PLN need to choose and stick to a template model for PPAs and guarantee, one adviser told *IJGlobal*.

In the meantime, the slow pace of procurement has forced Jokowi’s government to abandon the 35,000MW goal and scale down in November 2016 its ambition to build 19,000MW of new power capacity by 2019.

Still, deals are getting done, even at what seems at a perpetually delayed pace. The next IPP financing on the horizon is the \$2 billion, 1,000MW expansion to the Cirebon coal-fired power plant. The Marubeni-led consortium developing that deal is expected to achieve financial close by the end of the first-quarter of 2017. ■

## Timeline



# Middle East & Africa

INSIDE

CBT – no ties necessary  
MENA financing volumes

## Pipeline & procurement deals



## Projects with recent tender updates

ACWA Power Bond Facility 2016  
Fadhili Combined Heat and Power Plant PPP  
DEWA Solar PV Phase III  
Busega-Mpigi Highway  
Nova Scotia Solar PV Plant  
Empire Solar PV Plant  
Acquisition of 30% in Zohr Gas Field  
Al Khafji Solar Desalination Plant PPP

## Closed deal values by sector

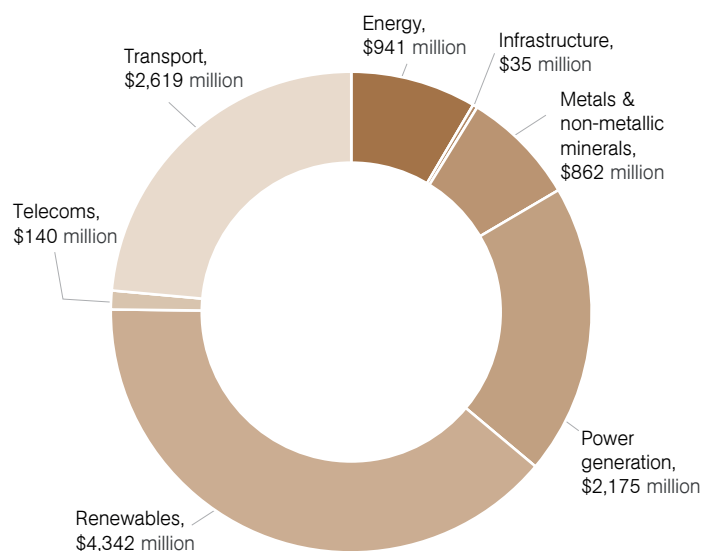
**Power:** \$3.44 billion

**Oil & gas:** \$2.90 billion

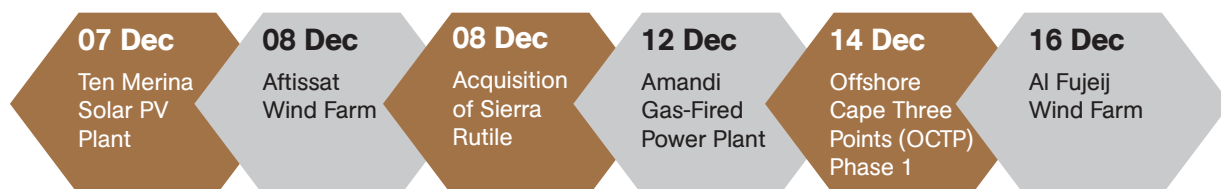
**Renewables:** \$978 million

**Mining:** \$476 million

## Closed trade finance deals



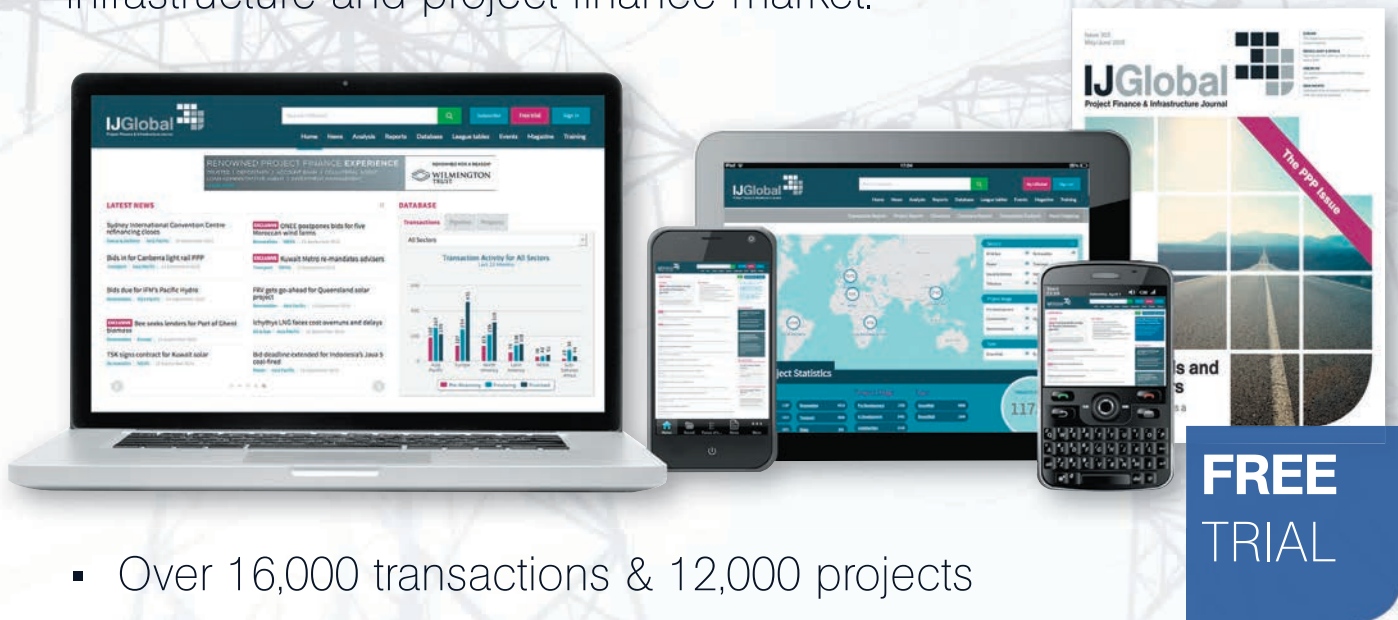
## Closed infrastructure deals



Source: IJGlobal, from 1 November to 31 December 2016

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**NEWS ANALYSIS:** DFI loans and a rare untied ECA loan have enabled banks to push tenor limits for CBG's Sangaredi mine expansion in Guinea. By Sean Keating.

# CBG – no tie necessary

The \$823 million multi-sourced facility to fund Compagnie des Bauxites de Guinée's (CBG) Sangaredi bauxite mine expansion – the first project in a two phase expansion – has set new benchmarks in terms of length of tenor and complexity for project financings in countries with similar credit and political risks as the Republic of Guinea.

Closed on 3 November 2016, the deal features both local and international commercial tranches, DFI-backed debt and untied ECA cover – and the majority of that debt is on a 15 year tenor.

CBG – 51% owned by Halco Mining (a consortium comprising Alcoa, Rio Tinto and Channel Islands-based commodity trader Dadco) and 49% by the Republic of Guinea – has always been a strategic project for its foreign shareholders which have historically been offtakers for all the bauxite produced to feed their Atlantic basin alumina refineries.

The two-stage expansion project will feed bauxite to Mubadala's Emirates Global Aluminium under an offtake agreement signed with CBG in 2012.

Few single project financings could be more important to the income of a national economy. CBG is the single largest contributor of revenues to the Guinean government budget, and, more significantly, much of that income is in foreign currency: The existing mine accounted for 16% of the country's GDP, 20% of government revenues and employed approximately 5000 Guinean nationals in 2014.

Already the largest bauxite mining operation in Guinea, the Sangaredi expansion will increase production capacity from 13.5 million to 18.5 million metric tons per year – in effect a 30% increase in potential revenues

against the backdrop of a strong bauxite market that continue to thrive based on demand from China and the Middle East. In terms of taxation income alone – corporate taxes, withholding taxes, customs duties and import taxes – the IFC estimates the expansion will benefit the Guinean government by \$140 million per annum.

The scope of the two-stage project includes enlarging and upgrading the mine infrastructure, rail system, port facility and processing plant infrastructure and utilities. Fluor, which executed the feasibility study and early engineering, has been awarded the EPC contract and project completion is expected in 2018/19.

Although a flagship deal for the Republic of Guinea, the financial engineering behind the project also sets a benchmark for African mining finance. The deal features a rare example of untied cover – a \$293 million 15-year UFK covered tranche that accounts for around 35% of the debt.

The tranche is the largest UFK-covered loan into the African mining sector to date and could prove the catalyst to more sponsors attempting to tap the product. In short, Sangaredi is a viable alternative to the proliferation of tied export credits on offer from China, albeit subject to eligibility.

Structured, modelled and led by CBG's financial advisor BNP Paribas, the \$862 million facility comprises a \$643 million 15-year term loan split between the \$293 million UFK facility (funded by commercial banks), a \$200 million IFC direct loan and a \$150 million OPIC facility. The repayment schedule on the long term debt is over 12 years via 48 quarterly, sculpted, instalments.

The deal also includes an uncovered

\$165 million five-year revolving credit to meet working capital needs, and a \$15 million uncovered five-year local term loan.

Mandated lead arrangers and lenders on the UFK facility and the revolving credit are BNP Paribas (coordinator and agent bank), Natixis (documentation and technical bank), Credit Agricole, Societe Generale and ING Bank. The local term loan was provided by Banque Internationale pour le Commerce et l'Industrie de la Guinée (a BNP Paribas affiliate) and SGBG (a Societe Generale affiliate). White & Case provided lender counsel, with Norton Rose Fulbright acting for the sponsor. Bank of New York Mellon is trustee.

Although the borrower is a known quantity – Sangaredi has been operational for 40 years, has reserves of 385 Mt grading 48.6% Al<sub>2</sub>O<sub>3</sub>, resources of over 5 billion tonnes, and is considered one of the best bauxite mines worldwide due to its high alumina content and low silica – the UFK cover, combined with the direct loans from IFC and OPIC, was still integral to getting the commercial banks into the deal for such a long tenor loan.

Backed by the German government, the UFK scheme is an untied ECA programme managed by PricewaterhouseCoopers and Euler Hermes that provides cover for 90% of political and commercial risks. Although untied in terms of export credit, the scheme is directed at enhancing the supply of commodities to the German economy and the project was eligible on the basis of a long-term bauxite offtake contract with Dadco Alumina for its Aluminium Oxid Stade (AOS) refinery in Germany.

With the financing complete, the preliminaries for phase two of the project are expected to be launched in 2017. ■

**DATA ANALYSIS:** Power and water investment in MENA grew last year but the rest of the market declined. By Jordan Bintlcliffe.

# Power boost

The total value of greenfield project finance transactions to close across the Middle East and North Africa (MENA) region in 2016 was roughly \$12.6 billion, down substantially from around \$18.8 billion total recorded in 2015, according to *IJGlobal* data. A total of 17 greenfield PF deals closed during the year, the lowest level seen in the region since 2012.

It is not difficult to identify the cause of this decline. Depressed global oil prices all but halted greenfield oil and gas development in the region. Local banks and state owned entities are heavily exposed to oil price volatility, and that is likely to have made many reluctant to conclude financings during 2016.

Since 2010 the oil and gas sector has accounted for roughly 45% of all greenfield PF transactions closed. In 2016 the sector represented less than 15% of the wider market.

In the seven full years since 2010, the total value of conventional power transactions has been around half that of oil and gas transactions, yet last year it was by far the dominant sector. Bucking the wider trend, more than \$8 billion of power projects closed in 2016.

Privately financed power and water transactions are a mainstay of the region. Many MENA countries have experienced huge population surges in recent decades, making the need for additional generating capacity and better access to fresh water almost constant. But 2016 was particularly active for the sectors.

Major power projects long in the planning, such as the 2,400MW coal-fired Hassyan development in Dubai and Qatar's 3,000MW Facility D, finally reached financial close, and spate of desalination transactions were also concluded. Oman also had its own major

power project reach FC: the joint Ibri and Sohar 3 developments which have a combined generating capacity of more than 3,200MW.

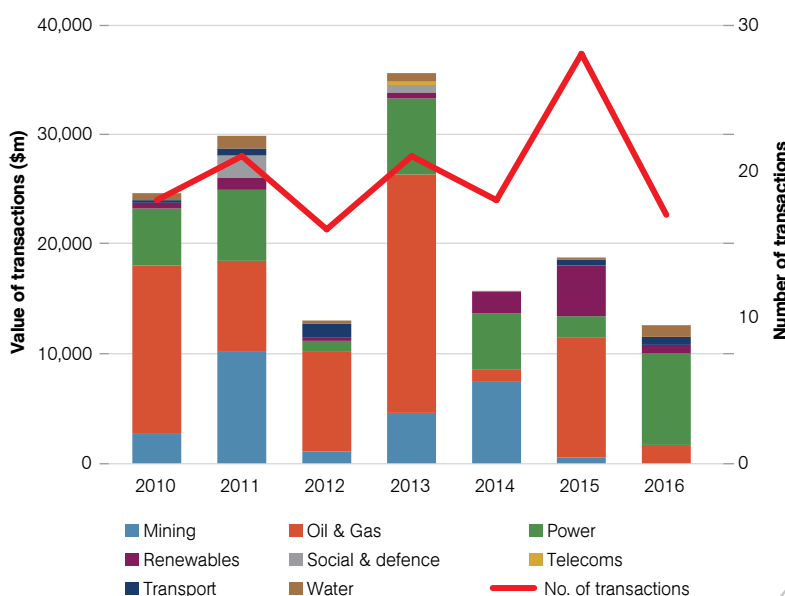
Although small in value compared to the power sector, the \$1 billion of water projects to close during the year was the largest total for that sector since 2011. Activity was particularly heightened in Oman, where the Barka and Sohar pair of desalination projects raised \$308 million and \$223 million in July, respectively. This followed Hyflux's \$250 million Qurayyat independent water producer project earlier in the year.

2016 was a disappointing year for renewables projects reaching financial close. The total value of renewables deals was just \$815 million, compared to roughly \$4.6 billion in 2015. Last year was the first yearly decline in the total value of closed renewables transaction since 2012 but looks set to be a blip rather than a sign of things to come.

*IJGlobal* data shows there are 47 new renewables projects in the MENA region which are either in the financing or pre-financing stage, and collectively they have a value of more than \$15 billion. Not all will reach financial close next year, but some significant deals, such as the 800MW third stage of the Mohammed bin Rashid Al Maktoum solar PV development in Dubai should do.

Saudi Arabia has significant plans for solar power development and is tendering its first privately funded renewables projects, the Al-Jouf and Rafha solar PV plants. In January 2017 the Saudi government said it was seeking \$50 billion of investment in solar and wind power and if its plans are realised that could have a significant impact on the total value of PF transactions over the next few years. ■

Primary financings to reach financial close in MENA, 2010-2016



Source: *IJGlobal*

# Chile Energy & Infrastructure Finance Forum 2017

May 3<sup>rd</sup> 2017 | Ritz-Carlton, Santiago, Chile

*Exploring Chile's new opportunities and challenges in infrastructure and energy financing*

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Minister of Energy  
Chile



**Eduardo Abedrapo Bustos**  
Coordinador de Concesiones  
**Ministerio de Obras Públicas (MOP)**



**David Orellana**  
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**US\$2,800 million**  
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## Newark Energy Center

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Joint Lead Arranger

**USA 2016**  
**ARES**

## Bishop Hill

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222 MW Wind Farm

Joint Lead Arranger

**USA 2016**  
**TerraForm**

## CPV Towantic Energy Center

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785 MW CCGT

Joint Lead Arranger

**USA 2016**  
**CPV TOWANTIC**

## Project Service

**US\$115 million**  
Service Area Acquisition

Mandated Leader Arranger

**USA 2016**  
**JLIF**

## LSP Park Generating

**US\$560 million**  
1,888 MW Portfolio

Joint CLA  
Joint Bookrunner

**USA 2015**  
**LS Power**

## Cheniere Corpus Christi

**US\$11,500 million**  
Natural Gas Liquefaction

Co-Structuring Lead, JLA  
Joint Lead Bookrunner

**USA 2015**  
**CHENIERE**

## Hummel Station

**US\$900 million**  
1,124 MW CCGT

Bank Joint Bookrunner,  
JLA, Co-Syndication Agent

**USA 2015**  
**PandaPowerFunds**

## St Joseph Energy Center

**US\$458 million**  
700 MW CCGT

Joint Lead Arranger

**USA 2015**  
**ARES**

## West Deptford Energy

**US\$595 million**  
738 MW CCGT

Joint Lead Arranger  
Joint Bookrunner

**USA 2015**  
**LS Power**

## Moxie Freedom

**US\$592 million**  
1,028 MW CCGT

Joint Lead Arranger

**USA 2015**  
**CAYTHNESS ENERGY**  
MOXIE ENERGY, LLC

## Rhode Island State Energy Center

**US\$375 million**  
583 MW CCGT

Joint Bookrunner

**USA 2015**  
**THE CARLYLE GROUP**

## New Salem Harbor Station

**US\$730 million**  
674 MW CCGT

Joint Lead Arranger

**USA 2015**  
**Footprint Power**

**IJGlobal**  
**Awards**

**North America Power Deal of the Year 2016**  
EIF Newark

**North America Refinancing Deal of the Year 2016**  
Sabine Pass and Creole Trail Pipeline Refinancing

**North American LNG Deal of the Year 2015**  
Cheniere Corpus Christi

**North American Merchant Deal of the Year 2015**  
Panda Hummel Station

**IJGlobal**

Full Year 2016 League Tables

**North America Power | MLA**  
Rank: 2

**Americas Power | MLA**  
Rank: 4

**InfraDeals**

**USA Bank Debt and Capital Market Debt Providers**  
Rank: 3

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