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IJGlobal

Project Finance & Infrastructure Journal

EUROPE
Silvertown Tunnel PPP, UK

ASIA PACIFIC
Formosa 2 offshore wind farm, Taiwan

NORTH AMERICA
Solar safe harbors ahoy!

LATIN AMERICA
Colombia's 4G roads

MIDDLE EAST & AFRICA
Facility D IWPP expansion, Qatar

Making a splash

The Solomon Islands does the dam thing

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[1] Project finance deals YTD 2019

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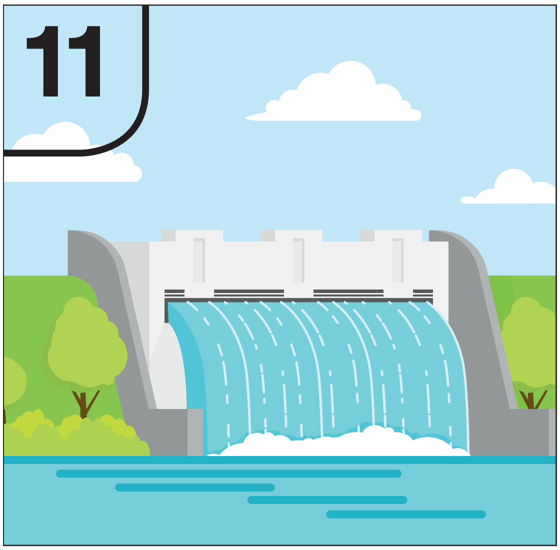

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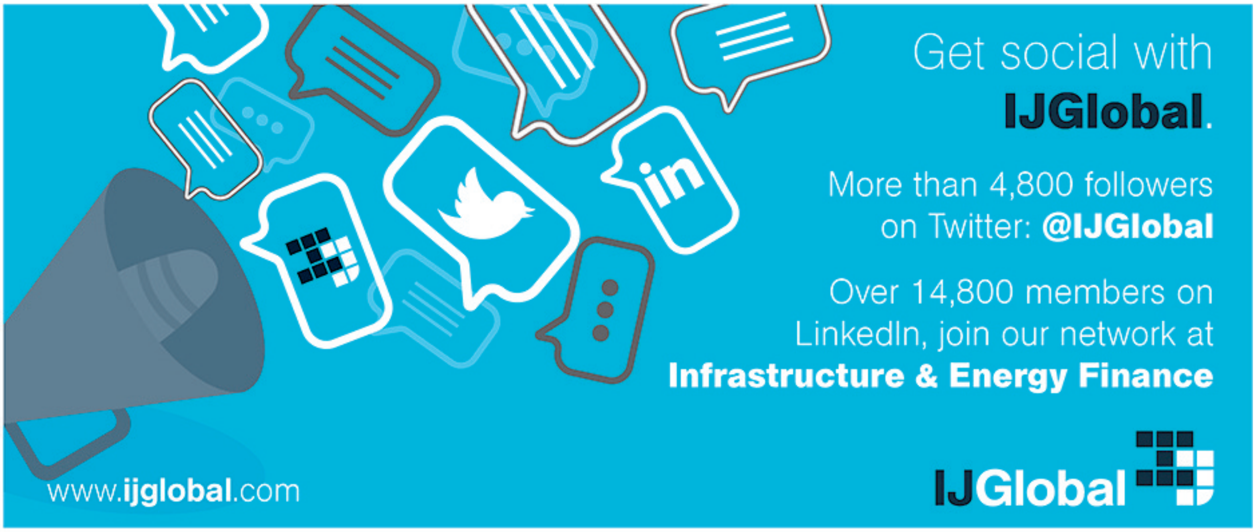

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Leslie Van De Walle (Chair), Andrew Rashbass (CEO), Wendy Pallot (CFO), Sir Patrick Sergeant, Jan Babiak, Colin Day, Imogen Joss, Lorna Tilbian, Tim Pennington

Jamaica is setting an example on infrastructure development for other Caribbean nations to follow.

Jamaican an impact

Kingston was both an ideal and atypical location for this year's Caribbean Investment Forum (CARIF), which *IJGlobal* produces in partnership with New Energy Events.

Jamaica is probably the most active market in the Caribbean for infrastructure finance right now. Few island nations in the region can boast a major project funded with private capital recently. Jamaica has financed several, across a number of sectors, and has a healthy pipeline of planned developments.

This makes Jamaica the exception rather than the rule in the region but also perhaps a model for others to follow.

Most Caribbean nations fall into two main categories. The first consists of small territories with strong economies, such as the Cayman Islands and the British Virgin Islands, which have less need for infrastructure investment and government balance sheets capable of funding projects without outside help.

The other group consists of nations with far less economic strength and often greater need for infrastructure development. Projects in these countries are mostly or entirely dependent on DFIs for funding.

A FORTUNATE CONFLUENCE

Jamaica is fortunate to be entering a period of economic strength, with public debt falling by around 50% in recent years and unemployment at an all-time low of 7.8%, according to IMF figures.

In turn, we were fortunate that the Prime Minister of Jamaica, Andrew Holness, joined us on the first day of CARIF to give a keynote speech. He was keen to stress the government's focus on heavy infrastructure spending, given the fiscal headroom the country now enjoys.

In September 2018, Mexican airport operator Grupo Aeroportuario Del Pacifico was awarded a 25-year concession to upgrade, finance, operate and maintain the Norman Manley International Airport in Kingston – the main entry port for most visitors to the country.

The deal was notable for the large number of international firms who expressed an interest in the contract, including Vinci, Egis, Acciona, Zurich Airport International and China Harbour Engineering Company.

Neighbouring countries have been keen to match this success. Barbados is on the verge of launching a tender for the upgrade of Grantley Adams International Airport. As with the Norman Manley project, IFC is the transaction adviser on this P3.

Meanwhile in other tourism-led transport projects, Bahamas last year picked Global Ports Holding for the redevelopment of the Prince George Wharf at the Nassau Cruise Port.

ROAD RACE

A more contentious sector for Jamaica has been roads. Prime Minister Holness said at CARIF that the government wants to reduce the road connection time anywhere on the island to less than 1 hour and 30 minutes, which would mean a big reduction in traffic congestion.

In 2016 the North-South highway opened for the first time, and an East-West link is in construction. Both projects are being funded and built by Chinese companies, which were given more than 1,200 acres of land as compensation as part of the contract.

Prime Minister Holness suggested that this deal was necessary at the time of agreement, and that the government would not need to take on so much debt for future developments. But the project demonstrates allure of Chinese capital despite a heavy presence of DFIs in the region.

Away from the stage, in more discreet areas of the conference venue, plenty of delegates were happy discuss the increasing competition DFIs and other investors face from Chinese companies. Often the choice is between a lengthy due diligence process that comes with funding from DFIs, and the quicker solution of Chinese investment.

This is not an easy choice for countries that need to upgrade their infrastructure quickly, as many storm-ravaged islands do. One delegate who has worked in senior positions at DFIs in the region bemoaned the US strategy of promising transformative investment into the region but delivering very little, nowhere more so than in Haiti.

CARIF showed that there is plenty of infrastructure development planned for the Caribbean and plenty of investors interested in the region. Who exactly funds this new infrastructure is still up for grabs though. ■

Jon Whiteaker
Editor

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Western Renewables Partners LLC
$583 Million
Financing to fund the acquisition of equity interests in a renewable energy portofolio
Collateral Agent and Depository Agent
August 31, 2018

Longwood Energy Partners LLC
$430 Million
Note Issuance related to Energy Company Acquisition
Collateral Agent and Depositary Bank
March 30, 2018

Phoenix Wind Repower, LLC
$365 Million
Financing for Tax Equity Bridge Loan and Letter of Credit facilities in connection with the Trinity Hills, Sherbino, and Silver Star wind projects located in the State of Texas
Collateral Agent and Depositary
December 21, 2018

Transelec Concesiones S.A.
$358 Million
Financing for the development, construction, ownership, operation and maintenance of four transmission lines in Chile
Offshore Collateral Agent and Account Bank
December 21, 2018

Aurora Solar Limited Partnership
$309 Million
Senior Secured Note Issuance related to various Solar Projects
Collateral Agent and Account Bank
November 15, 2018

Georgia Gulf Generating Holdings, LLC
$259 Million
Note Issuance related to Energy Company Acquisition
Collateral Agent and Depositary Bank
November 30, 2018

Otay Mesa Energy Center, LLC
$247 Million in aggregate
Approximately 600 MW Natural Gas-Fired Power Generation Facility, San Diego County, California – Amendment and extension of credit facilities
Depositary Agent
December 19, 2018

SJ Power Holdings, LLC
$247 Million
Financing for purchase of ownership interests in three electric generating plants located in the State of California
Collateral Agent and Depositary Bank
November 13, 2018

ORMAT Geotérmica Platanares
$125 Million
Development, construction and operation of 38 MWe geothermal power plant, located in western Honduras – financed by OPIC (Overseas Private Investment Corporation)
Offshore Account Bank
April 30, 2018

Cubic Corporation Lease Financing
$105 Million
Construction financing of Cubic Corporation's headquarters campus located in San Diego, CA
Collateral Agent
February 5, 2019

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Briefings

FUNDS

Final close for AMP Capital's GIF II

AMP Capital has closed the Global Infrastructure Fund II (GIF II) at $3.4 billion, exceeding its $3 billion target.

AMP Capital said the fund, which reached final close on 27 December 2019, attracted additional "significant" co-investment commitments.

Commitments came from over 60 institutional investors from around the globe including Asia, Europe, the Middle East, and North America. Investors include public and corporate pension funds, funds of funds, insurance companies, family offices and sovereign wealth funds.

GIF II will target investments across four sectors – communications, energy, health and transport – and has made five acquisitions to date.

MIP registers North American fund V

Macquarie Infrastructure Partners – the North American division of Macquarie Infrastructure and Real Assets (MIRA) – has launched its fifth North American fund.

A US Securities and Exchange Commission's document filed on 16 January marks the launch of Macquarie Infrastructure Partners V.

The vehicle's predecessor – Macquarie Infrastructure Partners IV – is a 10-year, closed-ended, unlisted fund managed by MIRA. The vehicle predominantly invests in core and core plus infrastructure in the telecoms, utilities, transport, power and waste management sectors in the US and Canada.

Fund IV targeted between seven and 10 assets. MIP funds invest primarily in operational assets, but have a mandate for investing up to 25% of capital in greenfield projects.

Final close was held at the $5 billion hard cap in January 2019.

Asterion's maiden fund closes at revised hard cap

Asterion Industrial Partners has held final closing on its maiden fund at the €1.1 billion ($1.2 billion) revised hard cap.

The manager raised Asterion Industrial Infrastructure Fund I's hard cap from €850 million. A US Securities and Exchange Commission's document dated 13 January stated that the vehicle was standing at €950 million in capital commitments at the time.

Investors include pension funds, sovereign wealth funds, asset managers, insurance companies and endowments from across Europe, North America, Middle East and Asia.

In addition to the €1.1 billion of capital commitments, Asterion has also generated more than €500 million of co-investment opportunities in some of its transactions closed to date also including opportunities pending closing, taking total capital under the company's management to close to €1.6 billion.

To date, the fund's sector exposures include investments in the energy services industry (sub-metering and renewable distributed energy), renewables and data centres, in line with its core strategy focus.

3i plans next strategy launch

London-based fund manager 3i is in the process of preparing the launch of the second incarnation of one of its fund strategies later this year.

3i Investments has obtained a first set of approvals for a successor to its 3i European Operational Projects Fund, with a second set of approvals to be sought soon.

A source said the first fund is about 60% invested following the acquisition of a portfolio of PPP projects from DIF Capital Partners. Fundraising on the new vehicle will be permitted once the first fund is 75% deployed, which is likely in H1 2020.

The new fund will target over €456 million ($503 million) obtained by its predecessor, and invest in European PPP projects in social infrastructure and transport, but also telecoms and utilities.

responsAbility reaches first close for climate debt fund

Swiss asset manager responsAbility has held a first close on a €200 million ($222 million) climate debt fund.

The Luxembourg-incorporated, responsAbility Access to Clean Energy Fund raised €151 million at first close, and anticipates a second close later this year.

It issues private debt to companies that offer solutions to households without electricity and business looking for cleaner energy, with a principal focus on Sub-Saharan Africa and South and Southeast Asia.

Investors committing to the initial funding round include Bank of America, EIB, Facebook, FMO, Government of Luxembourg, Shell Foundation, and UK's DFID.

Qatari state fund looks at Philippines infra

The Qatar Fund for Development (QFFD) has expressed openness in exploring opportunities for development cooperation with the Philippines in the areas of infrastructure and human capital development.

Finance Secretary Carlos Dominguez III said QFFD's commitment to provide assistance to sectors in the country that are most in need bodes well for the government's ongoing efforts to assist the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) in implementing long-term development projects that would serve as "beacons of hope" for poor communities.

Dominguez has not specified the amount QFFD will seek to deploy in the region. ■

More funds news at ijglobal.com

Briefings

M&A

DIF sells French PPP portfolio to 3i

DIF Capital Partners has sold a portfolio of French PPPs from its third infrastructure fund to 3i, which beat rival bidders Mirova and HICL to the post. The assets will sit in the 3i European Operational Projects Fund, a €456 million ($506 million) vehicle investing in the Benelux countries, France, Germany, Iberia and Italy.

A source told *IJInvestor* that 3i paid around €65 million for the portfolio. The manager plans to fund the purchase entirely with equity, but is understood not to have ruled out raising acquisition debt in the future.

Brookfield makes bid for TerraForm Power

Brookfield Renewable Partners, which took a controlling stake in TerraForm Power in 2017 following the SunEdison bankruptcy, has announced its intent to acquire all of the outstanding shares of the listed renewables roll-up from its investors.

Brookfield, whose existing interest in the yieldco amounts to a 62% stake, submitted its unsolicited, non-binding acquisition proposal on 11 January.

Under the terms of the proposal, each share of Class A common stock of TerraForm Power would be acquired for 0.36 of a Class A share of Brookfield Renewable Corp (BEPC). BEPC is a Canadian subsidiary of Brookfield Renewable Partners and will be a publicly-traded corporation.

BEPC's Class A shares will be economically equivalent to Brookfield Renewable units and fully exchangeable, on a one-for-one basis, into units of Brookfield Renewable.

GrainCorp completes bulk liquids terminals sale

Australian agribusiness GrainCorp has completed the sale of a portfolio of Australian bulk liquids terminals to ANZ Terminals for a total price of A$333 million ($234 million).

The portfolio ANZ Terminals acquired on 31 December 2019 comprises six operational facilities in Australia for the storage and handling of bulk liquid fats and oils, fuels and chemicals.

ANZ Terminals has paid A$314 million upfront to GrainCorp, with a A$19 million deferred payment.

Australian Securities Exchange-listed GrainCorp will report a profit of A$93 million before tax on the sale. Meanwhile, the company's subsidiary GrainCorp Oils will be a customer of ANZ Terminals with a long-term storage agreement.

Northleaf invests in Douglas Terminals

Northleaf Capital Partners has acquired a 90% stake in Belgian oil and gas storage Douglas Terminals from Hartree Partners and Ghent Transport & Storage (GTS).

GTS will retain a 10% stake in the asset and continue to operate the terminal under a management services agreement.

Northleaf, which invested through the Northleaf Infrastructure Capital Partners III fund, raised €65 million ($72 million), seven-year debt from Crédit Agricole (facility agent) and ING Bank.

Douglas Terminal is a 557,000 cubic metre liquid bulk storage terminal based in the Port of Ghent, Belgium. Operational since 2017, the facility consists of 17 tanks – 12 small and five large – with capacity to store jet fuel, gas, oil, diesel and biodiesel.

Adani to buy stake in India's Krishnapatnam Port

A subsidiary of Indian conglomerate Adani Group has signed a deal to buy a 75% equity stake in Krishnapatnam Port Co, the country's second largest private port, located on the Andhra Pradesh coast.

The buyer, Adani Ports and Special Economic Zone (APSEZ), is to pay cash to existing shareholders of the port.

The implied enterprise value of Krishnapatnam Port Company for the acquisition is Rs135.72 billion ($1.89 billion). This is roughly 10x the port's FY19 EBITDA, Rs13.5 billion. Internal accruals and existing cash balance will fund the acquisition. APSEZ's cash balance was Rs72.6 billion as of 30 September 2019.

Hyderabad-based CVR Group's subsidiary Navayuga Company built and operates the port.

Toulouse-Blagnac Airport sale completes

China Airport Synergy Investment Limited (Casil) has completed the sale of its 49.99% shareholding in Toulouse-Blagnac Airport to French construction company Eiffage.

The deal which closed in December 2019 sees France's fourth busiest airport return to French control. Eiffage joins the the French Government and local authorities as shareholder in Aéroport Toulouse-Blagnac (ATB) which holds the concession to operate the airport until 2046.

Eiffage paid €500 million ($557 million) for its stake, compared to the €308 million that Casil paid for the interest in 2015.

The exit by the Chinese investor is thought to have been motivated by the government's decision not to relinquish its 10.01% stake in the asset.

Casil early last year mandated Lazard to run the sale; meanwhile ATB's local shareholders launched legal action challenging the original privatisation process.

Amidst the legal wrangling, Effiage was named preferred bidder for the 49.99% stake and the sale was finally allowed to proceed in October 2019. ■

More M&A news at ijglobal.com

Briefings

CAPITAL MARKETS

Colombian power generator taps notes for plant upgrades

Colombia's Termocandelaria Power has tapped a series of unsecured bonds maturing in January 2029 for $186 million to finance the conversion of one of its gas-fired assets from open to combined-cycle.

JP Morgan and Scotiabank were the bookrunners in the reopening, which priced in early January. The existing bond was originally priced one year ago, in January 2019, with a coupon of 7.875%.

Performance of the bonds since then allowed the bookrunners to approach the market with initial price thoughts of 109.5bp for the new notes. This was increased to a final pricing of 110bp, translating into a yield of 5.9%.

Termocandelaria Power will use the proceeds to convert its 324MW Termocandelaria open-cycle gas-fired power plant, located in the department of Atlántico, into a 566MW combined-cycle facility.

ADB trust fund wraps local bond for Vietnamese solar

An Asian Development Bank (ADB) trust fund alongside Dutch bank ING have completed a non-recourse wrapped bond and bank loan project financing for an operational solar farm in Vietnam.

The bond is thought to be the first for a renewables asset in the country. ADB's Credit Guarantee and Investment Facility (CGIF) said the deal also represents its first guarantee in Vietnamese dong as well as the longest tenor bond it has ever wrapped.

The borrower, Hong Phong 1, issued the privately-placed project bond comprising a D400 billion ($17 million), five-year tranche and a D2.15 trillion, 15-year tranche.

The longer tranche has a back-ended repayment profile, starting to amortise after a seven-year grace period by the end of which the bank loan – a $30 million amortising senior loan with a seven-year tenor, provided by ING – will have matured.

The 15-year tranche has a fixed rate of 7.5%, understood to be the result of negotiations with the bond subscribers.

A source said the purchasers are the Vietnamese arms of global insurance companies with liabilities in local currency.

As they would typically struggle to find bonds with maturities of longer than five years, this deal was a rare, attractive opportunity for these investors to better match with the profiles of their liabilities.

Plenary plots bond for Miami-Dade County courthouse

The Plenary Justice Miami consortium is due to issue $310 million of bonds to partly-fund a new civil courthouse in downtown Miami.

The Plenary-led team was selected to design, build, finance, maintain and renovate the project in December 2019, and will receive payments over 30 years once operational under the terms of the P3 contract.

IJGlobal understands that the project bonds will be issued imminently.

Miami-Dade County on 17 December gave the consortium a two-month deadline to reach financial close on the project. The amortising senior secured notes will be used to finance a portion of its obligations under a long-term project agreement.

Plenary is also seeking to raise additional commercial bank debt. The consortium will need to make an upfront payment of $260 million at the end of February. Total availability payments will be around $810.41 million over the 30-year operation and maintenance (O&M) period.

Plenary Justice Miami consists of Plenary Group USA (equity provider), Tutor Perini (builder), HOK (architect) and Johnson Controls (O&M).

AllianzGI private placement funds Mexican gas pipeline

Clients of AllianzGI in the US, Germany, France and Canada have fully subscribed to $332 million of 20-year senior secured notes.

The notes were issued by TAG Norte Holding, a joint venture between Mexican utility IEnova and Canada's Brookfield Infrastructure, to finance the 450km Los Ramones Norte natural gas pipeline.

BBVA, Crédit Agricole CIB, MUFG Bank, Santander and SMBC acted as placement agents on the issuance.

TAG Norte Holding also renegotiated the terms of the original bank debt from March 2015 which included 12- and 20-year loans from commercial and development banks. The tenors of these loans were renewed for another 12 and 20 years, starting in 2019.

IJGlobal learnt that the placement agents on the bond issuance also participated in the new commercial debt tranche, increasing their ticket sizes to cover for the lenders that dropped out.

Meanwhile, all three development banks – Bancomext, Banobras and Nafinsa – remained on the deal.

National Grid prices euro-denominated green bond

The UK's National Grid has priced the first green bond from its green financing framework, aimed at financing UK electricity transmission projects with environmental benefits.

Initial price thoughts on the €500 million ($555 million), five-year bond are understood to be Libor +60bp to 65bp.

BNP Paribas is structuring adviser on the issuance, also acting as joint bookrunner alongside ICBC, ING and Mizuho.

National Grid said its dedicated green financing committee will select and assess potential projects. ■

More capital markets news at ijglobal.com

Briefings

PEOPLE

Asset Managers

DIF Capital Partners has appointed head of risk, legal and compliance **Anne Snel** to partner. She joined DIF in 2018 and was previously head of integrated risk at Rabobank. Snel also worked at De Nederlandsche Bank as senior supervisor and interim department head. Before this, she held a variety of roles at ABN AMRO Bank over the course of her 16-year career there, including about five years as senior investment manager in the private equity team.

Augustine Schneider-Maunoury has joined **InfraVia Capital Partners** as head of asset management from Bain & Company. During his time there, he focused on telecoms retail and wholesale businesses, cyber security, network equipment, software, and hospitality industry.

Banks

Project finance specialist **Agnes Mazurek** has joined **Santander Asset Management** as its global head of debt based in London. She returns to the UK from Vienna, where she worked at Kommunalkredit as head of placement and sales for nearly two years. Prior to that, Mazurek worked as a managing director at Macquarie in London for over two years. Before that she was the director of project finance at MUFG Bank, initially based in London and later in Sydney. Mazurek has extensive experience in credit and debt markets and built her career in project finance by working in various roles at Natixis, Dexia, Alstom and Société Générale.

Chris Radtke, co-head of the power and renewables investment banking group at **Credit Suisse**, has left the bank. Credit Suisse, which recently rebranded the group to reflect its expansion into infrastructure, appointed Radtke's co-head **Jonathon Kaufman** to lead the new unit. The new global infrastructure, utility and renewables group formalizes the expansion of the group's investment banking coverage into non-energy infrastructure as it reacts to the inflows of capital into private equity-style infrastructure funds.

LBBW has hired **Oliver Langel** to lead its lending efforts across North America. Langel, who previously worked at Citibank, WestLB, Banco Espirito Santo and Whitehall & Co, joined the German bank in January. His most recent position was as partner at Houston-based corporate finance and advisory firm Syren Capital, where he had been since 2014.

Advisers

Milbank has hired M&A partner **Lisa O'Neill** to its transactional services division in London. She advises clients on M&A, divestments, takeovers, JVs, reorganisations, and commercial contracts. O'Neill joins from McDermott Will & Emery where she had been a London-based partner since November 2014. She was a partner at Berwin Leighton Paisner from August 2012 until September 2014. Prior to that, O'Neill was with Allen & Overy and was based in several cities over a period of 12 years.

Squire Patton Boggs has hired **Campbell Steedman, Shibeer Ahmed** and **Christopher Skipper** from rival law firm Winston & Strawn to work out of its Dubai office. Steedman was Winston & Strawn's managing partner for the Middle East, having joined the firm from White & Case in 2016. Ahmed joined Winston & Strawn as head of banking and Islamic finance in 2016. As well as Islamic finance, he specialises on project finance transactions in energy and infrastructure. Skipper joined Winston & Strawn in 2017, and advises on private equity transactions, joint ventures, and corporate structuring.

Projects and construction lawyer **Nick Kramer** has left **CMS** in Dubai to join rival law firm **Norton Rose Fulbright** as a partner. Based in Dubai since 2005, Kramer was previously head of commercial construction in the Middle East for CMS. He joined Nabarro in 2014, ahead of that firm's merger with CMS and Olswang in 2017. He first moved to Dubai with Dentons, who he worked for between 2002 and 2014. Kramer has advised governments, developers and other types of corporates on projects in a range sectors across the Middle East and Africa.

Sponsors

UK student housing infrastructure provider **University Partnerships Programme** has named **Elaine Hewitt** as its new chief executive. She will start in her role on 1 April, succeeding Richard Bienfait who is leaving the company at the end of January to take up the role of chief financial officer at construction and consulting company Mace. Hewitt joins from NHS Property Services where she has served as CEO since 2015.

Itinera Infrastructure & Concessions has hired **Albert Raciatti, Ryan Prince** and **Arben Shasho** to pursue transport infrastructure PPPs across the US. Raciatti joins as chief economist focusing on infrastructure feasibility assessment, from Louis Berger where he held various positions over the course of over 20 years. Prince has been appointed as senior investment director focused on arranging project financing for transport PPP projects. Shasho joins as vice-president for traffic and revenue to lead the feasibility and investment grade studies for new managed lanes and toll road projects, support optimisation and performance improvements of existing assets.

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Briefings

POLICY & REGULATION

Ofcom announces full fibre investment plan

The UK telecoms regulator has unveiled a new five-year plan to accelerate investment in nationwide full-fibre broadband coverage by encouraging more competition in cities and supporting BT in rolling out faster speeds in rural areas.

The proposals map out how Ofcom will regulate BT, which owns and operates the UK's Openreach network, over the period from April 2021 to March 2026, identifying four key points: relaxing regulation of wholesale charges to encourage investment in fibre by Openreach, as well as competition from new networks; capping Openreach's charges on its slower copper broadband services; supporting investment by Openreach in rural areas; and retiring the copper broadband services and removing regulation on copper products in areas where full fibre has been rolled out.

Ofcom will work closely with the UK Government, which plans to invest £5 billion ($6.5 billion) to reach the UK's most inaccessible 20%.

According to the regulator, BT's regulatory scheme for 2018-21 has increased full fibre coverage from 3% to 10%.

PTC "curveball" upends wind project qualification plans

US wind developers spent the final days of 2019 frantically cancelling or rewriting contracts, after "a last minute curveball" – a tax bill signed by President Donald Trump unexpectedly extending the US production tax credit (PTC).

Under the old schedule, wind projects on which construction commenced in 2019 were eligible for PTC at 0.92¢/kWh, while projects entering construction in 2020 would get zero.

The new tax bill not only extends the PTC window by a year but also increases the PTC to 1.38¢/kWh for wind farms qualifying in 2020. Meanwhile, wind farms qualifying in 2019 will still only get the reduced rate of 0.92¢.

Banks eye "boring" construction loans for Mexican CCGTs

President Andrés Manuel López Obrador's administration has increased state-owned utility CFE›s presence in the Mexican energy market, which had progressively decreased in the past 15 years.

The Obras Públicas Financiadas framework, whereby CFE retains ownership on the DBF projects including the gas-fired tenders announced in October 2019, has returned under López Obrador.

A flurry of tenders for CCGTs may be good news for construction contractors but the prevailing state-ownership model means project finance bankers will be left to scrap over "boring" construction loans rather than meaty project finance mandates.

Construction companies such as Grupo ACS are likely to be the main bidders. They may need construction loans from banks to fund the work but not long-term debt.

Cyprus, Greece and Israel sign on EastMed Pipeline

Cyprus, Greece and Israel have signed an agreement to build the EastMed Pipeline, a new €6 billion ($7 billion) pipeline that will transport natural gas from offshore fields in Israel and Cyprus to Italy, via Greece.

Public Gas Corporation of Greece (DEPA) and Italian company Edison will own, on a 50:50 basis, the asset's special purpose vehicle, IGI Poseidon.

Energean Oil & Gas has signed a letter of intent with DEPA for the sale of two billion cubic metres of natural gas annually, or a fifth of the pipeline's capacity, through the pipeline. Energean's gas supply will be from the Karish and Tanin fields it is investing $1.7 billion to develop in waters off the Israeli coast through a floating production storage and offloading (FPSO) unit.

AIIB calls for comments on draft digital strategy

Asian Infrastructure Investment Bank (AIIB) has called for comments on its draft vision and strategic response to Asia's rapidly evolving digital landscape.

"AIIB expects to go beyond its traditional financing role to [...] foster the adoption of technology in infrastructure through the demonstration of its benefits," an AIIB principal policy and strategy specialist told *IJGlobal*.

Comments are due 10 March.

Germany presents plan to phase out coal

Germany, the world's fourth largest consumer of coal, has agreed with four coal-producing states (Brandenburg, North Rhine-Westphalia, Saxony and Saxony-Anhalt) to phase out the use of coal by 2038 in return for €40 billion ($44.5 billion) of support.

Nearly 25 coal-fired power plants are due to close by 2022, with all but eight closed by 2030. The final date is expected to be assessed every three years.

The agreement also calls for the phasing out of nuclear power, making Germany's 2030 plan to have 65% of its energy being met by renewables far more pressing. The accord also prohibits open cast mining in the Hambach Forest.

Operators will receive €4.35 billion to close their coal-fired power plants during the next 15 years. RWE is set to receive 60% of the compensation package. It said, however, the government's offer does not cover €3.5 billion of "actual financial damage" the company will incur with the closures.

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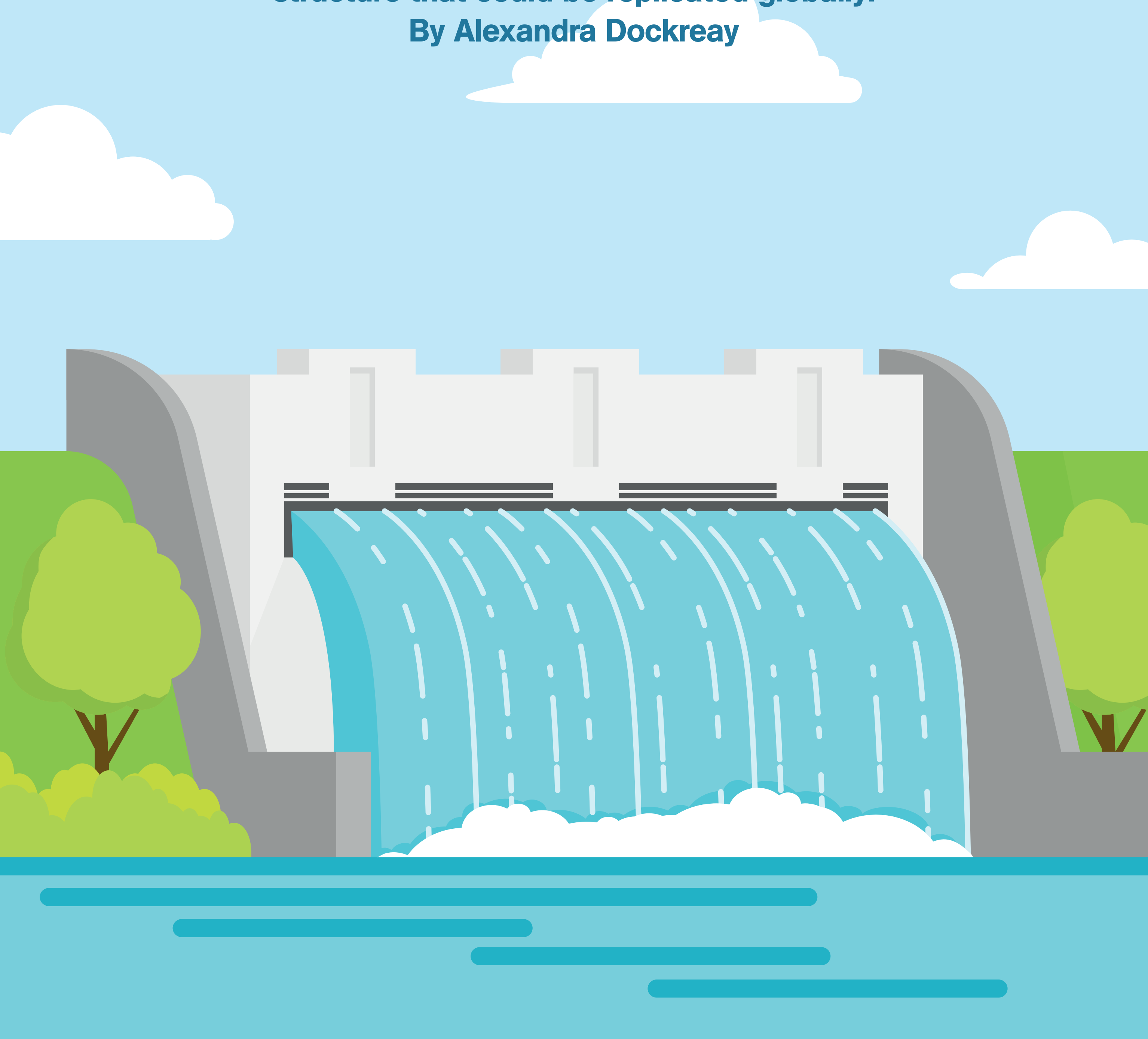
Making a splash

The Solomon Islands' first PPP, the Tina River Hydro project mobilised financial institutions from all corners of the world and pioneered an innovative new concessional finance structure that could be replicated globally.

By Alexandra Dockreay



Solomon Islands' 15MW Tina River Hydro high dam project was around 12 years in development, a saga not atypical for this technology.

The financing changed course after global oil prices tanked in 2014-2015. A new concessional finance structure emerged, where the government on-lends a single blended facility to the project company, complementing private sector equity. Something akin to this financed a thermal solar PPP in Morocco in 2013, but Tina River Hydro represents real global financial innovation and is the island nation's first PPP project.

Recovery era initiative

Solomon Islands Government, when it first engaged the World Bank to consider new energy generation solutions, was still emerging from a civil war that had devastated both lives and the physical state of the capital city of Honaria.

In 2003 the Governor-General issued a request for international assistance against the insurgents, and the subsequent gathering of troops from Australia, New Zealand, Fiji and Papua New Guinea quelled the violence. But rebellion erupted again in 2006, finally ceasing after the five-party Grand Coalition for Change took office that year.

The World Bank carried out an in-house renewable energy assessment study in 2006, a time when the primary renewables generation technology was hydropower.

In 2007, a pre-feasibility study identified the Tina River site as the most suitable to power Honiara.

"Then in 2008 government requested help from the World Bank as it was preparing feasibility studies, environmental & social impact assessments and a land acquisition and livelihood restoration plan," World Bank senior energy specialist Takafumi Kadono, based in Singapore, says. "World Bank assisted government to obtain funding from the European Investment Bank and Australian Government."

These studies and plans took from 2010 to 2017. The studies were protracted, given the consultants were contending with complex geological conditions with seismic activity. Site access shifted several times, and there was no existing hydrological and flora and fauna data.

Land acquisition in the Pacific islands is also remarkably demanding, as land is customarily owned by tribes but without land registers. Identifying the five tribes that own the project land, via extensive consultation, took around five years with the land then registered by 2015. Acknowledging the important relationship between the tribes and the land, the government has established Tina Core Land Co (TCLC), 50:50 owned by government and the tribes via cooperatives. TCLC leases land to the project company Tina River Hydropower Limited (THL).

Takafumi Kadono, World Bank

"We advised that the landowning tribes set up cooperatives for all members of the tribe, so women, children and the entire community have an equal share in compensation and royalties," says Kadono.

The cooperatives should benefit more than 4,000 people.

Seeking private partners

The International Finance Corporation (IFC) was engaged as transaction adviser to government during the long period of studies.

It launched a call for expressions of interest in 2014, tendering a 34.75-year PPP concession as a build, own, operate and transfer (BOOT) contract. A PPP was appropriate given Solomon Islands' moratorium then on state borrowing.

Hong Kong-based Shobana Ventakaraman, chief investment officer at the IFC, says: "We felt it was more important to set a high standard to get a sponsor that can actually implement the project's construction and operations, rather than try to prequalify the maximum number.

"This is a complex, high dam hydro facility, not a run-of-river, so the Government adopted stringent criteria. Subsequently, only two parties prequalified."

These were Australian utility Origin Energy and a Korean consortium of government entity Korea Water Resources Corp (K-water) and private enterprise Hyundai Engineering Co (HEC).

Origin Energy later exited the process, due to changing company policy, so procurement switched to follow the negotiated format in 2015.

"Therefore the bidding criteria, which were initially the EPC cost and rate of return etc., ended up being negotiated. The PPA put forward was also negotiated, but […] there were not drastic changes to the structure. The main time-consuming aspect, why it took two years, was the price negotiation and putting together the concessional finance package", says Ventakaraman.

A government guarantee covers the offtaker payment obligations, as is typical for most independent power producers (IPPs). The power purchase agreement (PPA) is a capacity payment-based take-or-pay contract.

The target price for the 30-year PPA was bobbing around, depending on the price of imported diesel. The advisers and parties decided a single target price would be beneficial, for example as potential debt and grant financiers needed to conduct due diligence on the project. The aim became to beat a price of $0.22 per kWh by around 2016-2017 (below the 2016 diesel generation tariff of $0.238 per kWh).

State power utility Solomon Islands Electricity Authority (Solomon Power) was initially less motivated to offtake from Tina River, being able to pass on price volatility to customers from its diesel generation portfolio. But by 2014 global oil prices were well above $100 per barrel and Tina River Hydro was looking more attractive to the utility.

However, amidst the PPA tariff negotiations with the Korean consortium, global oil market prices came thundering down. From a peak of $115 per barrel in June 2014 for Brent crude, the price crashed down to a 2015 low of $36.05 per barrel.

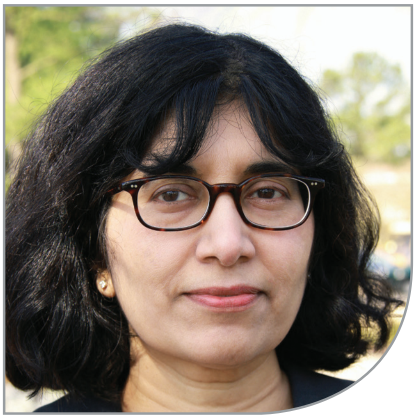
Minimising the levellised project cost was crucial.

IFIs rush in

Government transaction adviser IFC set out in 2014 to procure a project featuring private equity and traditional commercial financing. To raise project finance, the sponsor was talking to the private sector windows of the IFC, Asian Development Bank (ADB) and some export-import banks. The World Bank sovereign operation would issue a partial credit guarantee.

"In 2015 with the oil price shock, we re-looked at the strategy to make it more competitive. We looked at a blend of commercial and concessional finance. Interestingly we found there was a lot of support from DFIs, mobilised by the World Bank, to provide concessional finance. Government had the luxury of many options for concessional finance and therefore commercial finance took a smaller and smaller role," Ventakaraman says.

"Eventually it was decided that by having any meaningful amount of commercial finance, we would not get



Shobana Ventakaraman, IFC

significantly lower price than the lowest price of diesel generation."

The financing went fully concessional.

As part of Tina River Hydro's successful solution, the PPA tariff is roughly one-third lower than the cost of diesel at financial close, to the benefit of Solomon Power and its customers. It is well below the $0.22 per kWh target.

Honiara's reliance on diesel should drop from 97% to around 30%. Fred Conning, project manager in the project office in the Ministry of Mines, points also to the major climate benefits: "Net greenhouse gas emission reduction potential for the project is 49,500 tonnes of CO_2 equivalent per year and a total of 2.48 million over the 50-year life of the project."

The World Bank applied to its International Development Association (IDA) window for concessional finance, and channeled other sources of concessional finance including from the Australian Government and Green Climate Fund.

Concessional outruns commercial

The financing package sees concessional finance loans and grants totalling $208.93 million provided to the Solomon Islands Government directly and ring-fenced.

The government on-lent a $156 million senior, secured, amortising, 30-year loan to THL for the financing of the hydroelectric dam plant and its access road. THL also received a $45 million government subsidy.

The senior loan has a fixed-interest coupon (calculated by a weighted average of all the concessional loans plus an administrative margin), and a custom repayment profile passing on some of the concessional loan grace periods.

IJGlobal understands that the minimum debt service coverage ratio is 1.2x.

The government will spend leftover capital from the $208.93 million on transmission infrastructure costs.

This was the simplest solution, as each international financial institution (IFI) tends to have its own standard terms for concessional finance. For example some standard tenors exceed 30 years, but this is useful in reducing the levellised cost over Tina River Hydro's longer life.

Each DFI has various requirements of the project, for example on content requirements, environmental and social, and anti-bribery and corruption. All of those were stripped out and put into the project on-lending agreement, so THL has to comply.

THL has a notably high leverage: the debt-to-equity ratio is 95:5.

K-water and HEC invested $10.8 million equity, with full political risk insurance from World Bank Group's Multilateral Insurance Guarantee Agency (MIGA).

The total value of the concessional loans provided to government is $157.975 million.

Lenders on the concessional amortising loans

ADB	$18 million	32-year tenor	1% interest for eight-year amortisation grace period, 1.5% thereafter
Korea Export Import Bank's Economic Development Cooperation Fund	$31.6 million	40-year tenor	0.025% fixed interest, with a 15-year amortisation grace period
Green Climate Fund	$35 million	40-year tenor	0.25% fixed interest, with a 10-year amortisation grace period
Green Climate Fund	$35 million	20-year tenor	1.25% fixed interest, with a five-year amortisation grace period
IDA Credit	$23.375 million	40-year tenor	1.39% fixed interest with a 10-year amortisation grace period
Abu Dhabi Fund for Development	$15 million	20-year tenor	1% fixed interest, with a five-year amortisation grace period

Grant providers and their quantums

ADB	$12 million
Australia Pacific Islands Partnership Grant	$12.7 million
Green Climate Fund	$16 million
IDA	$10.225 million

Meanwhile, the total value of grants provided to Solomon Islands Government is $50.955 million.

The overall project cost is up to $240 million over 4.75 years of construction, with commissioning due August 2024.

High-cost geography

THL is the operations and maintenance (O&M) contractor, while HEC signed a turnkey engineering, procurement and construction (EPC) contract worth $165 million, for a 54-month construction period.

HEC's tender to select the equipment suppliers has yet to start.

The design features:

- a 72-metre high roller-compacted concrete dam
- three 5MW turbines in the powerhouse
- a 3.3km headrace tunnel
- a dam-created reservoir with a total storage volume of around 4.7 million cubic metres

The power capacity of the hydroelectric dam project is only 15MW, with a remarkably high levellised cost given that the developers must import virtually everything.

One might compare the cost with the 216MW Upper Trishuli 1 Hydro project in Nepal, though that is run-of-river, financed in 2019 with a debt and equity package of $647 million.

Or, the 670MW Nam Theun 1 dam hydropower project in Laos financed in 2018 with around $1 billion debt.

Further downstream

The advisers had looked to precedents around the world in devising their concessional loans and on-lending structure.

On available precedents, Ventakaraman says: "I think the most common is the blended finance, where a financier – not really commercial banks but a DFI (such as IFC) – blends their concessional and private finance and lends it.

"For the 1GW Nam Theun 2 hydro in Laos the government borrowed a concessional loan from the World Bank and some other DFIs, and injected funds into the project as government equity."

But really none of those seemed to fit what the Solomon Islands Government was trying to achieve on Tina River.

"The best model was Noor 1 in Morocco […] Its structure may almost be identical, although there was an additional ingredient of the government also being a project company shareholder through the funds borrowed from the DFIs," Ventakaraman explains.

> "I think there are possibilities of replication well beyond Solomon Islands or the Pacific, in places where there is good access to concessional finance... where a project may not be commercially viable on a fully private basis"

For the Noor Ouarzazate 1 thermal solar PPP project, the Moroccan government established an entity called Moroccan Agency for Sustainable Energy (Masen) to borrow concessional loans from IFIs and on-lend to the project company and take equity.

Masen received grants from the European Commission and German development bank KfW, while the lenders included the EIB, French Development Agency (AFD) and Clean Technology Fund.

While we might not expect further large IPPs in Solomon Islands, where the grids are too small, the hydro project has improved the flexibility of the Honiara grid for future potential solar and the nation has managed to sign off on its first PPP.

"I think there are possibilities of replication well beyond Solomon Islands or the Pacific, in places where there is good access to concessional finance, which usually means a climate friendly project displacing fossil fuels, where a project may not be commercially viable on a fully private basis," Ventakaraman says.

"This is a structure that can be used where it still makes sense to get the private sector in, both for upgrading expertise and private equity. There is no reason a financing couldn't also blend public and private debt."

She added that the structure could well be repeated in sectors other than power, in the Pacific and globally.

Advisers

IFC's work was funded by multi-donor trust fund DevCo and the Australian and New Zealand governments' Pacific Partnership.

The Energy Sector Management Assistance Program and the Global Infrastructure Facility supported the World Bank.

Key advisers to the sponsors included PwC Korea, which acted as model adviser, and Norton Rose Fulbright as mandated legal counsel. Stantec, meanwhile, served the sponsors' technical adviser on the project.

The advisory team to the Solomon Islands Government consisted of the IFC as lead transaction adviser, along with Ashurst as legal counsel on the financing agreements and Gide Loyrette Nouel as legal counsel on certain project agreements. Tonkin + Taylor acted as the government's technical adviser while INDECS was insurance adviser.

Solomon Power was advised by a team consisting of Entura as technical adviser, Chapman Tripp as legal counsel, Deloitte as model auditor and Cepa as financial adviser and model adviser.

IJInvestor Awards 2019

IJGlobal is delighted to announce the winners of the inaugural IJInvestor Awards – celebrating the achievements of fund managers, institutional investors and their advisers in the operational energy and infrastructure space during 2019.

The gala ceremony in November was held at the spectacular Banqueting House in London, marking the end of a vigorous judging process that saw a panel of independent industry experts select the first crop of award recipients.

In addition to the best transactions and company awards, the IJInvestor Awards 2019 introduced two individual awards – Outstanding Individual and Rising Star – won by Allianz Global Investors' Deborah Zurkow and Vauban Infrastructure Partners' Mounir Corm, respectively.

Each of the winners are profiled in the following pages.

IJInvestor's Outstanding Individual	Deborah Zurkow, Allianz Global Investors
Best Asset Performance	Groupe Coriance
Best Refinancing	Cerro Dominador
Best Restructuring	EVM Energia HoldCo
Best Utilities Acquisition	Proxiserve
Best Oil & Gas Acquisition	BridgeTex Pipeline Company
Best Transport Acquisition	Indigo Group
Best Telecoms Acquisition	TDC Group
Best Renewables Acquisition	Veja Mate Offshore Project
Best Social Infrastructure Acquisition	John Laing Infrastructure Fund
Best Investment Consultant	bfinance
Best Placement Agent	Campbell Lutyens
Best Legal Adviser	Linklaters
Best Debt Fund Manager	AMP Capital
Best Equity Fund Manager	EQT Partners
IJInvestor's Rising Star	Mounir Corm, Vauban Infrastructure Partners

Congratulations to all the winners!

IJInvestor's Outstanding Individual: Deborah Zurkow

IJInvestor catches up with Deborah Zurkow, AllianzGI's global head of investments, to talk infrastructure, women in finance and why it is worth taking a chance on €50 notes on the floor. **By Jon Whiteaker**

The inaugural winner of the IJInvestor Awards Outstanding Individual accolade is a woman widely credited as one of the driving forces behind the development of infrastructure as a distinct asset class in the eyes of institutional investors.

During her seven years at AllianzGI, Deborah Zurkow has led a team that has completed a succession of landmark debt transactions which have continually challenged market perceptions of what is possible.

Shortly after I met with her in AllianzGI's London office to discuss her career to date, it was announced that she will be promoted from global head of alternatives to take over from Andreas Utermann and become the investment manager's global head of investments.

Just when you think you know the whole story, Deborah writes a new chapter. To spend time with her is to witness someone who appears in perpetual motion – someone always moving forward. She speaks at speed and rarely wastes words.

When I ask her if she has any regrets, she replies after a short pause: "I am not someone who indulges in regrets. You are who you are because of where you have been." Her philosophy favours aspirations over recriminations and she says this is reflected in her management style.

Her personal office sits in the middle of her team – two glass sides pointing into the middle of the room. She is separate from her colleagues but also amongst them and on show.

Pride of place on her largest bookshelf are several oversized foam hands of the kind you would find being worn by spectators at a major sporting event. These foam hands have their pointing fingers cut-off. She explains that the amputations occurred at a recent staff off-site event – a visual metaphor on how team members must prioritise solutions over apportioning blame.

Deborah Zurkow

You can tell she is energised by the challenge of improving team cohesion and performance, and she clearly sees ways things can be further improved.

"Solutions come from everywhere. The more everyone is in this together, the more fun we have, the more we get done and the more opportunities there are for everyone to be entrepreneurial."

And that team is not just made up of client-facing investment professionals. She is also keen to champion the role of back-office staff, highlighting how important flawless execution is to any successful business.

"[When first joining Allianz] we had to work out how to turn a long-dated, unlisted, amortising piece of debt with construction draws into a Bloomberg ticket. So we spent a lot of time getting the mid- and back-office stuff sorted out."

Just one of countless professional hurdles Deborah has had to clear over the years.

How she got here

Deborah began her career at JP Morgan in New York. In 1994 she moved to Paris to work for bond insurer MBIA, after marrying her French husband.

With the period she refers to as her "procreation years" behind her, an opportunity came up to move to London in 2003. Having children who spoke English with a French accent had led her to want more of a shared cultural identity with them. While London wasn't home, it at least felt closer to it.

She spent a total of 18 years at MBIA. It was a time when monolines were rapidly expanding in Europe – at least they were until the financial crisis saw their credit ratings plummet and their business models undermined.

When an opportunity came up to join Allianz in 2012, it seemed like a logical and attractive step.

As Deborah explains that at MBIA her team "effectively advised credit committees in New York about taking the ultimate long-dated buy-and-hold risk on infrastructure projects. Advising investors about illiquid long-dated

Zurkow with *IJ* funds editor Viola Caon and editorial director Angus Leslie Melville

strategies is what we did."

Allianz had already started equity investments in infrastructure assets through its Allianz Capital Partners unit by this time, and debt seemed the logical next step for the insurance giant.

There was clearly a market opportunity. Institutional investors needed to find liability matching assets, given that sovereign debt had ceased providing the risk-free returns it had pre-crisis. Banks were having to scale back their lending activities and were overexposed to infrastructure.

Meanwhile, countless politicians around the world were talking up infrastructure investment as a way of reviving the global economy.

As Deborah says, it had all the latent factors for the creation of a new market.

Creating an asset class

With the benefit of hindsight, the way the market evolved seems inevitable now but that is not how it felt at the time.

My first encounters with Deborah were at *IJ* events where she would be passionately promoting institutional debt for infrastructure assets. Not all in attendance were convinced.

By this time she had moved to AllianzGI to head up its infrastructure debt team, taking with her the team from the MBIA subsidiary Trifinium Advisors that she had led.

"When the team and I first arrived at AllianzGI we knew we had a challenge as infrastructure was not recognised as an asset class in Europe. Real estate is an asset class, private equity is an asset class, but infrastructure?

"At that stage the capital requirements for real estate were much better than for private equity. Infrastructure was treated like private equity, so you would do better to buy a secondary strip mall in a secondary city than an essential infrastructure asset in continental Europe."

Investors needed to be convinced not just of the attractiveness of the risk/return profile of infrastructure assets but also that there would be a healthy pipeline of deals. AllianzGI convinced through action. Its first PPP deal in 2013 was the City of Music project – a new concert hall on an island on the Seine in Paris.

Debt on this initial deal was drawn post-construction, but its next deal, the L2/A507 ring road PPP in France, saw the investor take on what others thought was impossible: construction risk.

"When we started out there was a lot of discussion about how institutional investors could never take construction risk and shouldn't be allowed to. Even S&P called us a "shadow investor", though it never made sense for us to be the shadow as our investors have long-dated liabilities."

Deborah explains how she spent a lot of time explaining to investors why it was better to know what went into your soup, rather than buying ready-made soup.

While not the only major investor doing deals of this kind at that time, AllianzGI's investments were fundamental to changing perceptions in the market. It has continued to innovate ever since, investing in renewables, launching strategies for core and core-plus assets, expanding into North America, then Latin America and most recently Africa.

"We were very fortunate coming to AllianzGI because we had the dual strength of having a core committed shareholder, which happens to be one of the biggest core investors around."

She names Utermann, who she replaces as head of investments at AllianzGI, as the person who has had the biggest impact on her career.

"Where we have come from in seven years is testament to his management. He has always been very supportive and gave me the freedom to try and do new things.

"I am very grateful that I work for an organization where I can be all of who I am and am excited to have the opportunity to bring an entrepreneurial spirit to the wider investment platform in my new role."

Inspirations and motivations

Being entrepreneurial is a theme that comes up again and again in our conversation. But even as her role becomes more managerial, she is still motivated by the chance to innovate.

She demonstrates this with a joke: "Two economists are walking down the street and one says to the other – is that a €50 note on the floor? And the other one, being well trained in efficient capital markets theory, says – can't be. If it were someone would have already picked it up.

"My view is that there are still plenty of opportunities, particularly in private markets, to source €50 notes. There are opportunity costs, as it might turn out to be Monopoly money, but what gets me going is being able to innovate in the capital markets and create new or different cashflows for our investors."

And while her role has expanded to encompass multiple asset classes, she remains proud of the social impact of AllianzGI's infrastructure investments and says investors really value that too.

"It is nice to be able to give investors something tangible that gives back to the real economy. Maybe it is because I started on muni-bonds in the US that it is a logic I have already bought into – that you can invest in the real economy."

The positives to private investment in infrastructure are not always publicly acknowledged, however – our conversation occurs during a general election in the UK where there are threats from one of the leading parties to nationalise various infrastructure assets and businesses.

Deborah says she recognises this challenge and agrees that more needs to be done to highlight the benefits of private investment. She excitedly draws my attention to a poster campaign being undertaken with Allianz France which highlights its joint role in local economy financing via private debt and infrastructure, an initiative she is clearly very supportive of.

Another major motivation is a desire to create more opportunities for women in finance professions.

"If I had an ambition it would be that the line to the ladies' room [at an industry conference] is as long as the line to the men's room."

She believes that women need to confront unconscious bias and recognise their unique skills and use them to progress at work. She says women shouldn't worry about being accused of being 'too aggressive' and thinks too many women forget to bring the confidence shown in their personal lives into the workplace.

She recently became the chair of the Young Women in Finance Scholarship Programme launched by financial recruitment company One Search. This seeks to train children from school age in the basics of finance and financial modelling, providing mentors and training for entry level qualifications.

Deborah clearly wants to pass on to the next generation at least some of the passion and enthusiasm she has for her work, while finding ways to eliminate some of the barriers women have historically faced in the financial sector.

If you were looking for an example of how women can not only climb the corporate ladder but also inspire change in the field where they work, she is an ideal example.

"Isn't it cool though – how often do you get to be entrepreneurial in the capital markets?"

If you are Deborah Zurkow, the answer appears to be – impressively often.

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Best Asset Performance

Groupe Coriance

Since First State Investment acquired 100% of leading French district heating business Coriance Groupe from KKR in August 2016, its management team has delivered success through commercial performance, expansion and meeting various ESG targets.

The company generates the majority of its revenues from long-term public service delegation contracts which typically have durations between 20 and 30 years. The portfolio has an average remaining contract life of 16 years.

Coriance operates 32 concessions in France and Belgium. In France it is the fourth largest business of its kind with over 1GW of installed heat capacity and is a leader in green district heating with over 62% of its production coming from renewable energy sources. That is an increase of 8% since acquisition.

First State also has implemented a health and safety initiative which has reduced the frequency and severity of workplace accidents by 65% and 73%, respectively.

Expansion has come domestically, with six new concession wins in France, and internationally, through its first Belgian tender win in 2018: a 165GWh of heat per year project in Herstal which is 92% run off renewables.

At the time of the IJInvestor Awards, Coriance was also in exclusive negotiations for two further contracts, one of which is the fourth largest district heating network in France.

The business also acquired Neoen and CDC's biomass cogeneration facility in Commentry in France, the company's first bolt-on acquisition.

In April 2019 Coriance completed a refinancing of the €490 million ($545 million) long-term financing facilities used to acquire the business, reducing its financing costs.

Debt with a 14-year tenor from institutional investors reduced its all-in cost of debt while new bank facilities provide liquidity for further expansion.

Best Refinancing

Cerro Dominador

The Cerro Dominador project in Chile's Atacama Desert combines solar PV and concentrated solar power (CSP) technologies on a scale never seen before in Latin America, however sponsor EIG had to overcome several hurdles – including difficult debt negotiations – to guarantee completion of the project.

EIG entered the project as a financial sponsor, buying an initial 55% stake from its original sponsor Abengoa. The Spanish developer fully exited Cerro Dominador in 2016 due to financial difficulties, leaving EIG as sole owner.

Construction, which at the time was well-underway with the 100MW solar PV component already completed, ground to a halt.

But EIG persevered, bringing on board Acciona as its new construction partner and raising over $800 million to refinance existing bridge loans, support the PV plant's operations and fund the completion of the 110MW CSP unit.

The sponsor contacted banks to raise the financing, but convincing them to lend on a stalled pathfinder project proved challenging. During the final stages of the process one of the banks dropped out, leading to a second lender leaving the deal and a third reducing its ticket size.

EIG was forced to rethink the transaction and change it to a club deal. The strategy paid off, and on 17 May 2018 it closed on an $805.7 million debt package consisting of long-term debt, mini-perm, VAT and debt service facilities.

Korean institutional investors joined banks including Natixis, Deutsche Bank, Société Générale, ABN AMRO Bank, Commerzbank, Helaba, ICO, KfW IPEX-Bank, Santander and BTG Pactual on the financing, which also included a roughly $100 million mezz debt courtesy of Brookfield Asset Management.

EIG's landmark financing has received numerous awards and made a serious case for CSP as a technology that not only works but is bankable.

Best Restructuring

EMV Energia HoldCo

By restructuring a subsidiary of Energia Del Valle de Mexico (EVM) Energia to build the 850MW gas-fired power plant EVM II, the project sponsors – EVM and GE – were able to use hybrid financing to leverage lender demand while providing no equity themselves.

EVM II is located in Axapusco municipality some 60km north east of Mexico City. EVM owns a 60% stake in the new project while the remaining 40% is held by GE Energy Financial Services.

EVM and GE finalised long-term financing for the plant in October 2018 – raising $740 million at the time of financial close.

The hybrid financing comes in three forms: bonds' emission, a term loan and a letter of credit. By using multiple financing tools, the sponsors were able to meet the demands of each lender.

On the bank tranche, commercial banks – who sought more aggressive pricing – syndicated $125 million in loans. Bookrunners and lenders on the deal include Bancomext, BNP Paribas, Citi and SMBC.

An initial target for the private placement was to raise $400 million from institutional investors but due to strong appetite between $450 million and $500 million was raised in August 2018, according to a person close to the transaction.

This led to firms like BlackRock Global Infrastructure Debt Group making an investment in an EVM holding company, whose notes were supported by dividends from EVM I and from future revenues of EVM II once it is operational.

As the OpCo level bank financing was not enough, this HoldCo financing got the EVM II project construction funding across the finish line. It also allowed EVM to maintain its share in the EVM II project while raising the additional financing required to construct the project.

Best Utilities Acquisition

Proxiserve

The acquisition of 80% of French heating and metering business Proxiserve was one of the most competitive transactions in 2019 – with fierce bidding in the auction and a 3.6x oversubscribed pool of lenders offering to finance the acquisition.

At the time of the sale Proxiserve was owned by its management and minority financial investors, including French private equity fund manager Latour Capital with a 20% stake.

After a competitive bidding process launched in Q3 2018, Vauban Infrastructure Partners (at the time Mirova) and Asterion signed to acquire the asset in February 2019, each buying 40% of the business, while Latour Capital retaining its 20% stake.

The enterprise valuation of the deal was €720 million ($819 million). With a 2018 EBITDA value of €55 million, the firm was acquired at a 13x multiple.

The buyers invested through the Mirova's Core Infrastructure Fund II and Asterion Industrial Infra Fund I – the latter of which was the first investment from Asterion's debut fund.

Mirova and Asterion also raised a €335 million, seven-year loan and a €60 million revolving credit facility due 2025. The loans were rated B2 by Moody's.

The debt was arranged by four MLAs, including Bank of Ireland, Crédit Agricole CIB, CIC Bank and Natixis. They syndicated the debt to around 50 lenders, choosing from a pool that was 3.6x oversubscribed.

The acquisition financing used a hybrid financing solution resembling a leveraged buyout to accommodate Mirova's appetite for holding assets for around 20 years and the attractive market conditions of the asset. The terms of the loan also allow the buyers to receive equity dividends during the lifetime of the deal.

The deal and its financing was in part successful due to the partnership between co-shareholders and strong involvement from the company's management.

Best Oil & Gas Acquisition

BridgeTex Pipeline Company

This transaction saw OMERS Infrastructure join Magellan Midstream Partners and Plains All American Pipeline as a shareholder in the BridgeTex Pipeline Company, the owner of an operational 400,000 barrel-per-day crude oil pipeline connecting the Permian Basin to the Texas Gulf Coast.

The decision to bring in a new investor required careful structuring. Magellan and Plains, previously 50:50 equity partners in the BridgeTex pipeline, were looking to deleverage the business and fund new growth opportunities while maintaining their own strategic value to the company.

BridgeTex sources crude oil from Plains' Basin and Sunrise pipeline systems at Colorado City, delivering volumes into operator Magellan's East Houston terminal and East Houston crude oil distribution system with connection to refineries in Houston and Texas City, and to marine export through the Houston Ship Channel.

Bringing in OMERS, Ontario's municipal employees pension plan and a fellow long-term oriented investor, made sense.

The pension fund acquired a combined 50% stake in BridgeTex in a deal valued at $1.438 billion in August 2018.

It purchased 30% of its new shareholding from Plains and 20% from Magellan, leaving each midstream oil company with interests of 20% and 30%, respectively.

The acquisition was supported by a $500 million, seven-year commercial bond maturing on 28 September 2025 and a $200 million, 10-year commercial bond maturing on 30 September 2028.

The transaction closed on 1 October 2018, concluding the shake up in the shareholding structure of a well-run, large-scale infrastructure asset which is expected to continue to generate steady income in the long term.

Best Transport Acquisition

Indigo Group

Has the business of parking cars ever been this impressive? Indigo Group has combined technological innovation and international expansion with strong returns in recent years. It is this that led Vauban Infrastructure Partners, through the Core Infrastructure Fund II, and MEAG to acquire half of the business in 2019.

The transaction saw Ardian sell down its 50% stake to Vauban (35%) and MEAG (15%) for an undisclosed fee. Predica, one of the initial investors in the company, has retained its 50% stake.

The company operates in over 750 cities around the world with more than 20,000 staff across 10 countries. It manages over 5,600 car parks, more than 2.3 million parking spaces and 3,000km of on-street parking.

Parking represents 99% of the business but mobility and digital services is a growing segment in which Indigo is investing heavily. Its digital parking platform OPnGO has more than 180,000 active users, while its mobility sharing platform Indigo Wheel offers bicycles, scooters and cars across France.

Indigo operates a mix of short-term leases, long-term concessions and ownership contracts. It is operations in markets including France, Spain, Belgium, Brazil and the US.

The acquisition was entirely off-market and required Vauban to meet Ardian's expectations as a divestor, gain the confidence of continuing shareholder Predica, and bring in MEAG as a financial investor. It also structured a management package involving ordinary and free shares for more than 40 managers and a company collective investment fund for all other employees.

Vauban also raised an acquisition debt facility which was designed to match the transaction profile, with a security package, an acquisition term loan, and a short-term facility matching management package requirements.

Best Telecoms Acquisition

TDC Group

Macquarie Infrastructure Real Assets' (MIRA) acquisition of Denmark's largest telecoms company reinforced the strength of the Macquarie European Investment Fund (MEIF) platform in Europe, in particular the Nordics.

In February 2018, a MIRA-led consortium comprising MEIF5 and Danish pension funds PKA, PFA and ATP made an offer for 100% of the share capital of TDC Group.

TDC subsidiaries operate 4G mobile networks, pay TV and streaming services, landline telephone networks and broadband networks including fibre. It is also a challenger in fixed-line telecoms in Norway.

MIRA's consortium offered DKr40 billion ($6.59 billion) for the 100% interest, which equates to a 25.6% premium to the share price on 31 January 2018. The offer valued the business at a multiple of 8x 2017 EBITDA, a surprisingly low multiple for a telecoms business which have latterly attracted high teen multiples.

Following the recommendation of the offer by the board of directors, the consortium acquired 91% of the share capital of TDC on 4 May 2018. The manager successfully navigated the squeeze out process for the remaining 9%, which reached financial close on 4 June 2018. MEIF5's long-term hold position in TDC represents a 25% stake in the company.

In October 2018, TDC successfully completed the divestment of its Norwegian business, GET.

Early in the ownership period TDC also successfully completed the repricing of its €1.9 billion ($2.1 billion) term loan B.

The new owners have implemented a significant and ambitious transformation programme announced in 2018. TDC was split in two central operating units: the retail facing component of the business, now known as NuuDay, and the network side referred to as NetCo.

Best Renewables Acquisition

Veja Mate Offshore Project

The €2.3 billion ($2.6 billion) deal for an 80% stake in Veja Mate, a 402MW operational offshore wind farm in the German North Sea, served as a pathfinder for a series of major acquisitions in the German offshore market.

The sheer size of the transaction and that three of the four new shareholders are new to the market point to a growing investor appetite for the asset class as well as the maturity of the offshore wind market, particularly in Europe. The deal also shows how offshore wind assets can provide early investors with a full investment cycle.

A Highland Group-led consortium also including Siemens Project Ventures and Copenhagen Infrastructure Partners (CIP) bought the project from original sponsor BARD Holding in 2014 for €1.3 billion ($1.7 billion at the time).

This consortium brought Veja Mate to financial close on €1.9 billion syndicated debt one year later, paving the way for the project entering commercial operations in 2018.

With the asset financed and operational, Highland Group's consortium in early 2019 completed the sale of 80% of the asset to a team of Commerz Real, Ingka Group, wpd invest and KGAL Group.

The deal allowed two of the existing shareholders – Highland Group and CIP – to fully exit the project, while the third reduced its stake.

The new ownership structure is Commerz Real (27%), Ingka Group (25%), wpd invest (21%), Siemens Financial Services (20%) and KGAL Group (7%). wpd invest is the only new investor with prior experience in the offshore wind space, having invested in a 10% stake in the Gemini project off the Dutch coast earlier in 2018.

At the time of the sale, Veja Mate had eight years left of a feed-in tariff (FiT) subsidy set at €194 per MWh, after which the FiT falls to €154 per MWh for a remaining 4.7 years.

Best Social Infrastructure Acquisition

John Laing Infrastructure Fund

A seminal deal of 2018, Dalmore Capital and Equitix's acquisition of the John Laing Infrastructure Fund (JLIF) was first ever take-private of a FTSE 250 infrastructure investment vehicle with a premium listing on the London Stock Exchange. It also provided the buyers with a raft of new social infrastructure and transport assets.

JLIF was established in 2010 with a mandate to invest in equity and subordinated debt in operational PFI/PPP projects, and benefited from a right of first refusal arrangement with John Laing Group, its investment adviser.

At the time of the acquisition, JLIF held 65 investments across six countries and had enjoyed a strong history of share price and NAV growth, peaking at 140.2p in March 2017. However, a number of factors including Carillion's collapse and political uncertainty at home and abroad led to a significant discount to NAV.

Dalmore initially identified JLIF as a potential takeover target in 2017 and later invited Equitix into the deal as a co-sponsor to help it raise the nearly £1.5 billion ($1.8 billion) required for the acquisition. A number of UK-based institutional investors, as well as several South Korean backers, were also invited to participate on the deal.

The fund managers created a bidco, Jura Acquisitions, to acquire all of JLIF's outstanding shares through a scheme of arrangement. Dalmore is thought to have contributed funds from Dalmore Capital 3 while Equitix invested through its Fund V. Lloyds and NatWest, meanwhile, provided roughly £1 billion acquisition bridge debt which has a one-year tenor with a 12-month extension.

Following negotiations JLIF's board on 16 July endorsed an offer of 142.5p per share. The deal garnered enough shareholder support (75%) on 24 September, and JLIF's listing was consequently cancelled on 1 October.

Best Investment Consultant

bfinance

Praised for demonstrating an ability to best fit the bill for working as an intermediary helping LPs find the most appropriate infrastructure funds to invest in, bfinance was recognised as Best Investment Consultant of the Year.

During the judging period bfinance also succeeded in bringing new types of clients into infrastructure, such as corporations investing off balance sheet, and in demonstrating to them how closed-ended structures can suit their needs as well as open-ended funds.

The financial year of 2019 also saw bfinance start advising on direct investing. Having historically supported investors in deploying with external asset managers, the consultancy firm expanded its expertise into direct infrastructure investing advisory.

In reflection of one of the market's emerging trends, bfinance also focused on impact investing and environmental, social and governance (ESG) infrastructure, supporting investors' specific priorities and needs in the area of sustainable and responsible investment.

"bfinance's highly tailored, no-buy-list approach to manager selection is hugely beneficial to our clients in impact and ESG investing due to the very customised nature of requirements," the firm said.

"We have also sought to educate the market on key changes within the renewable infrastructure sector as subsidies decline and regulatory frameworks change."

The growth in scope did not stop at sector-level, but also pushed bfinance to explore new geographies.

As well as the UK and Europe, bfinance now supports clients across Australia, Asia and North America on infrastructure investment strategies.

Best Placement Agent

Campbell Lutyens

With 17 mandates across the firm and a total volume of transactions in excess of $10 billion for the period, Campbell Lutyens picked up the IJInvestor Award for Best Placement Agent.

Among its strongest success stories on the fundraising advisory front are Stonepeak Infrastructure Partners III – which closed at $7.2 billion in July 2018 – and Infracapital Partners III, closed at £1.85 billion ($2.4 billion) in May 2018.

Testament to its long-standing presence in the industry, French fund manager Meridiam chose Campbell Lutyens as placement agent on the re-opening of the Meridiam Infrastructure Africa Fund. A first foray for the firm in the region, the fund closed at €546 million ($601 million), exceeding the original hard cap of €510 million.

As well as bridging the gap between fund managers and LPs during fundraising, Campbell Lutyens has over the years built an expertise in the secondaries market.

In a transaction dubbed "Project Springbank", Oaktree Capital Management was advised by the firm on "one of the largest single-asset continuation fund transactions to date and the first single asset infrastructure transaction completed by Campbell Lutyens".

Oaktree was also looking to provide a liquidity solution for LPs in Highstar III, a $3.5 billion infrastructure fund raised in 2007. The manager was looking to grow this platform further through a GP-led transaction on Highstar III's lone remaining asset: Ports America.

Campbell Lutyens ran a sale process for Ports America, which was ultimately transferred into a new fund managed by the existing Oaktree team.

As part of the transaction existing LPs were given the option to roll into the new fund or sell their exposure to Highstar III, culminating in a successful transaction across the LP base representing $1.3 billion of NAV.

Best Legal Adviser

Linklaters

Linklaters was recognised as Best Legal Adviser of the Year as it runs a market leading M&A practice having advised a wide range of fund managers and institutional investors across sectors and regions over the judging period.

During this time, Linklaters advised on 24 deals involving financial investors globally with a disclosable value of £16 billion ($20.9 billion). The team has expertise across all elements of the financial investor life-cycle and understands the drivers for successful fund deal execution.

It acts for a broad cross-section of investors including private equity houses, sovereign wealth funds and pension funds from across the globe. Among its most outstanding deals is the Greenko acquisition of ReNew Power and Hero Future Energies, two of the largest portfolio acquisitions in India.

The deal was terminated before completion due to "various contentious factors including non-satisfaction of CPs and potential licensing and regulatory issues," Linklaters said. The parties managed to agree a revised deal based on a revised locked box mechanism, a reduced purchase price (now around $900 million), and a pre-sale carve out of the pipeline assets which was simultaneously signed and closed on 4 October 2018.

Another deal that proves Linklaters deep knowledge of the institutional M&A market is the acquisition of Altice's French fibre business. Linklaters advised the winning consortium comprising Allianz, OMERS and AXA on the deal to buy a 49.99% stake in SFR FttH, a company to be formed by Altice France to hold and further develop its existing fibre to the home (FttH) business in France.

SFR FttH is now a newly-incorporated company comprising the five million FttH homes in medium and low density areas awarded to Altice France to date, and is the largest alternative FttH infrastructure wholesale operator in France.

Best Debt Fund Manager

AMP Capital

With ESG, renewables and digital infrastructure as its watchwords, AMP Capital was awarded Best Debt Fund Manager of the Year.

Throughout 2019, the Australian manager has been busy both fundraising and making significant deployment in investments globally. Telecoms and water and waste management featured as the sectors where it closed some of its most outstanding deals for the period.

In July 2018, AMP Capital and CDPQ invested in towers and telecoms company Tillman Infrastructure.

AMP Capital and CDPQ structured, arranged and provided a $500 million senior secured, delayed-draw term facility to support the build out of Tillman's portfolio. The facility includes an up to $500 million accordion, which could bring the total investment amount to $1 billion.

In another interesting transaction, AMP Capital in November 2018 announced a $190 million term loan to Synagro, a US provider of residual management solutions.

Andrew Jones, global head of infrastructure debt, said: "Being named Debt Fund Manager of the Year at the *IJInvestor* Awards is a crowning achievement in what has been an exceptional year for AMP Capital's infrastructure debt business.

"AMP Capital has been investing in infrastructure debt since 2001, and since the start of the IDF series, we've seen investor interest in mezzanine debt grow continuously – while our strategy continued to deliver expected returns throughout the cycle, demonstrating the stability of the asset class. In 2019, we saw investor demand reach a new peak, as we welcomed commitments from 86 investors in under a year. We also found the market offered attractive opportunities for deployment, and we invested more than $2 billion into 10 investments during the year."

Best Equity Fund Manager

EQT Partners

Credited with having created a new investment model over the years and having attracted large capital commitments as well as carving out a space in a crowded and competitive market, EQT Partners received the Best Equity Fund Manager of the Year.

"EQT Infrastructure is happy and proud to have won the Best Equity Fund Manager category in the IJInvestor Awards 2019. As we approach 2020, EQT is looking forward to continuing the development of the existing portfolio and capturing new investment opportunities by applying EQT's value-add approach to the Infrastructure space," the firm said.

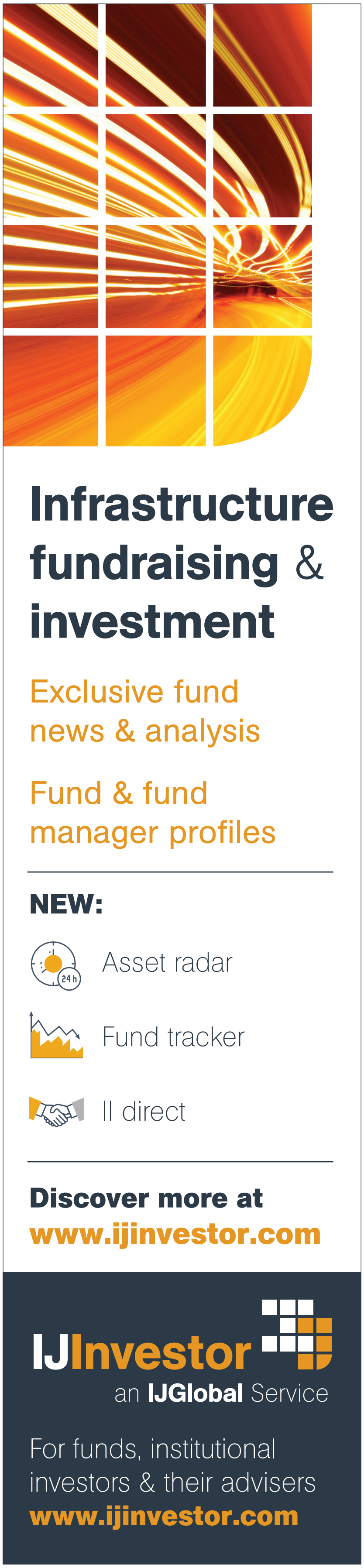
Among the achievements of the year, the closing of EQT Infrastructure IV at €9 billion ($10 billion) was a stand-out. The fund was raised in just six months and received demand of around €20 billion.

Known for its entrepreneurial approach to infrastructure investing, its core-plus focus and ability to make add-on acquisitions, EQT closed a high number of deals in the judging period.

Among them, the acquisition of Swedish fibre-optic network operator IP-Only which it bought for an enterprise value of around $2 billion.

The manager also closed its first investment in France with the acquisition of drinking water and wastewater management company SAUR Group. After acquiring it, EQT has worked on the asset by making it more international acquired water utility companies in the UK as it plans more deals like this in the future.

In line with its pioneering attitude, EQT Infrastructure acquired Kodiak Gas Services in February 2019, the fastest-growing and largest privately held contract compression business providing critical compression equipment in the US. The deal has been praised for targeting a growing sub-sector within the oil and gas infrastructure space.



IJInvestor's Rising Star: Mounir Corm

The inaugural Rising Star Award recipient is a remarkably modest individual despite his success. By Viola Caon

Talking to Mounir Corm, one immediately realises that you are dealing with someone whose interests and skills reach far beyond the financial universe.

His multi-faceted intellectual formation and curiosity seem to be the main drivers that took him to be the deputy head of infrastructure funds at Mirova at just 27 years of age, soon-to-be deputy CEO of Vauban Infrastructure Partners in 2019 and the winner of the IJInvestor Awards Rising Star trophy presented on the night by One Search senior consultant Liam Dunne.

It is not easy to find someone who, in their mid-30s, has witnessed the start of infrastructure being treated as an asset class and followed step-by-step its evolution from a predominantly greenfield play to a more complex and expanding brownfield space.

Another thing that is soon clear about Mounir is that he is a patient team player who plays a long-term game. When he started at Natixis in 2008, the firm's infrastructure business had only €200 million (roughly $290 million at the time) in assets under management and three assets in its portfolio. Today its AUM amounts to around €3 billion invested in 50 assets across Europe.

But he is quick not to credit himself alone for the results. "The key turning point for the firm was when Gwenola Chambon joined in 2010. Under her leadership, we rebuilt the team and grew the business," he says.

Mounir Corm

From greenfield to brownfield

Having graduated in public affairs at Sciences-Po Paris, Mounir became intrigued by the intersections between corporate life and aspects of public interest and obtained a master in business at HEC Paris.

He started his career at PwC in 2007 advising the French government on the country's first greenfield PPPs, including the Commissariat de Police, Cergy-Pontoise Hospital and others. The following year, he joined Natixis to work on its first equity infrastructure fund – FIDEPP.

In the years up to 2012 – when Mirova was created as Natixis' infrastructure and renewables specialist division – Mounir worked on a number of significant greenfield transactions that helped him develop the skillset that would prove essential to his track record and that of the firm.

One of these transactions was the refurbishment of the Stade Vélodrome in Marseilles which was "a very complex operation". He says: "We were negotiating with various stakeholders – industrial partners, the city, the Football Club, real estate developers, etc. – to essentially rebuild the stadium and launch commercial operations while the football club was still living in it."

Being able to work hand-in-hand with industrial partners and sponsors was going to prove essential in the years thereafter. Following the European debt crisis in 2010, it became clear that Natixis' remit in infrastructure equity had to expand beyond greenfield. It was right at that time that Chambon joined the group from Galaxy Fund and made Mounir her number two.

In 2012, the infrastructure team was transferred to newly-established Mirova and in 2014 the infrastructure team launched its first brownfield fund Mirova Core Infrastructure Fund (MCIF). The fund closed in the summer of 2016 at €700 million plus €200 million in co-investments, nearly double the original €500 million target.

But it wasn't an easy result to achieve. "With interest rates declining, investors were starting to look beyond fixed income to get the returns they sought without taking on too much risk. At the time, infrastructure equity was still perceived as very similar to private equity. Instead, we worked very hard to promote it as a long-term, cash yield which was close to fixed income, but with higher returns," Mounir recalls.

And so "one of the most challenging and exciting times in my career" began, when Mounir strongly contributed in

Corm with *IJ* funds editor Viola Caon and One Search's Liam Dunne

Mirova's expansion into continental Europe brownfield PPPs.

From the €900 million refinancing of the A28 toll road between Rouen and Alençon, Mirova ventured into other European countries. Among others, Mounir was instrumental in the acquisition of Metro de Malaga in Spain, Udine District Heating in Italy and OsloFjord in Norway.

"The A28 refi is a very good example of where our infrastructure team's expertise lies. Everybody told us it was an impossible asset to refinance but after two years of hard work we managed to refinance an index-linked, wrapped and listed bond structure with a long-term amortizing private placement," Mounir says.

Taking a stance on the market is another characteristic of both Mounir and Mirova's approach to infrastructure investing.

The acquisition of a 35% stake in Indigo Group in 2019 is also testament to that. "Some people in the industry are sceptical about car parks, quoting declining traffic and car sharing in large city centres. However, we believe this is a short-sighted view as car park is part of urban mobility and is mostly a regional, long-term, concession-based sector which is set to continue to play a key role in local mobility," he says.

A choral view

Mounir Corm would not be who and where he is today without the other two great passions of his life: international affairs and music.

Born in Lebanon, he arrived in France after fleeing the civil war at a very young age. Since then, Mounir has kept a close eye on his country of origin and has grown that attachment into a keen interest in its political system. In 2011, he published *Pour une troisième République libanaise* a study of the Lebanese constitution as it emerged from the Taif Agreement in 1989 that ended the civil war.

Published around the time of the Arab Spring, Mounir's thesis joined that of the local civil society that advocates for a secular state in Lebanon.

Keeping his interests varied is what makes him excel at his job. "I always try to work with strong conviction and to remain intellectually curious. I love that infrastructure is not merely a financial activity but has a much wider network of social and industrial implications," he says.

From the way he talks about it, it sounds like this wide-view approach is what he loves about classic music and orchestras. To be precise, Mounir does not simply love classical music. He is taking a master in orchestra direction, being already a trained pianist and cellist.

Asked whom his inspirational role model for is, he says: "It is indubitable that I learnt a lot from Gwenola. I am very thankful for having had the chance to work with someone who supported me and allowed me to grow. Beyond her, I would say that orchestra professionals are role model for me as they have to combine strong individual skills with high-level team work in order to deliver a common objective."

The ability to keep a panoramic view overall is essential to the role of a fund manager, in Mounir's opinion. "Fund managers face challenges every day at every level of their job. Anything can happen every day at asset level, but that is not the end of the story. A good fund manager needs to put all of their efforts in fundraising, stay on top of capital deployment and remain ahead of the curve on market trends in order to generate future deal flow."

With this in mind, Mounir, alongside co-founder and CEO Chambon, is about to embark on the next chapter of his infrastructure career: the launch of Vauban Infrastructure Partners. While remaining a Natixis affiliate, Vauban will work independently to build on Mirova's infrastructure team legacy.

"This is why I like to say that Vauban is the true winner of the IJInvestor Rising Star award," he says.

Given his track record so far, hopes are high for the future.

Company shortlists

IJGlobal Awards 2019

Europe and Africa

Sponsor
Equitix
Macquarie
Marguerite

MLA
Garanti Bank
Lloyds Bank
MUFG Bank
Natixis
SMBC Group
Société Générale

Bond Arranger
Crédit Agricole
JP Morgan
SMBC Group

Financial Adviser
Deloitte
Elgar Middleton
HSBC
Macquarie
Rothschild & Co
Société Générale

Legal Adviser
Allen & Overy
Ashurst
Clifford Chance
Herbert Smith Freehills
Linklaters
Norton Rose Fulbright

Technical Adviser
Arup
BTY Group
DNV GL

Model Auditor
BDO LLP
Mazars

Asia Pacific

Sponsor
Macquarie
Pacific Partnerships
RATCH Group
wpd

MLA
BNP Paribas
DBS Bank
HSBC
MUFG Bank
Société Générale

Bond Arranger
Citigroup
DBS Bank
HSBC

DFI
Asian Infrastructure Investment Bank
Asian Development Bank
IFC

Financial Adviser
Citigroup
DBS Bank
HSBC
KPMG
MUFG Bank
SMBC Group

Legal Adviser
Allen & Overy
Clifford Chance
Herbert Smith Freehills
Linklaters
Milbank
Norton Rose Fulbright

MENA

Sponsor
ACWA Power
Bapco
EDF

MLA
BNP Paribas
Natixis
SMBC Group
Société Générale
Standard Chartered

Financial Adviser
HSBC
KPMG
SMBC Group
Synergy Consulting

Legal Adviser
Allen & Overy
Ashurst
Clifford Chance
Milbank
Pinsent Masons
Shearman & Sterling

Model Auditor
BDO LLP
Mazars

North America

Sponsor
AES Corp
Fengate Asset Management
Plenary Group

MLA
HSBC
ICBC
MUFG Bank
Nomura
SMBC Group
Société Générale

Bond Arranger
Citigroup
MUFG Bank
SMBC Group

Financial Adviser
CIBC
CohnReznick Capital
Project Finance Advisors
Société Générale

Legal Adviser
Akin Gump Strauss Hauer & Feld
Latham & Watkins
McCarthy Tétrault
Milbank
Norton Rose Fulbright
Winston & Strawn

Corporate Trust
BNY Mellon
Deutsche Bank
Wilmington Trust

Technical Adviser
Arup
BTY Group
DNV GL
Leidos

Model Auditor
BDO LLP
Mazars

Latin America

Sponsor
AES Corp
Enel Group
ENGIE
Mainstream Renewable Power

MLA
MUFG Bank
Natixis
SMBC Group
Société Générale

Bond Arranger
Citigroup
Goldman Sachs
MUFG Bank
SMBC Group

Financial Adviser
Astris Finance
BTG Pactual
SMBC Group

Legal Adviser (Local)
Garrigues
Mattos Filho
Mijares, Angoitia, Cortés y Fuentes
Pinheiro Neto Advogados
PPU Legal

Legal Adviser (International)
Clifford Chance
Milbank
Norton Rose Fulbright
Paul Hastings
White & Case
Winston & Strawn
Corporate Trust

Deutsche Bank
BNY Mellon

Technical Adviser
Arup
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Europe

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- Brunsbuttel LNG Terminal
- Espoo Schools
- Sofia Offshore Wind
- Seagreen Alpha and Bravo Offshore Wind
- Port of Gdynia
- Nord Stream 2 Gas Pipeline
- Marl CCGT

Closed deal values by sector

Oil & Gas: $27.48 billion

Transport: $22.86 billion

Renewables: $15.85 billion

Telecoms: $9.55 billion

Power: $8.29 billion

Social & Defence: $5.15 billion

Mining: $875 million

Countries with highest closed deal values

United Kingdom	$21.20 billion	43
Spain	$12.65 billion	35
Norway	$11.55 billion	9
Italy	$7.80 billion	22
Germany	$7.67 billion	24
France	$6.73 billion	13
Turkey	$5.62 billion	6
Netherlands	$3.71 billion	9
Belgium	$3.30 billion	2
Portugal	$1.57 billion	4
Russia	$1.34 billion	6
Belgium, France, Germany, Portugal, Spain	$1.20 billion	1
Luxembourg	$1.09 billion	3
Germany, Netherlands, United Kingdom	$938 million	1
Switzerland	$770 million	1
Germany, Netherlands	$653 million	1
Hungary	$625 million	1
Ireland, Netherlands	$494 million	1
Ireland	$467 million	8
Serbia	$318 million	1
Czech Republic	$308 million	1
Sweden	$295 million	7
Poland	$202 million	7
Finland	$66 million	3
Denmark	$28 million	1
Georgia	$14 million	1

Transactions that reached financial close

- **09 Sep** Sale of Cignal
- **29 Sep** Sale of Farnborough Airport
- **08 Oct** Sale of 49.9% in Tunels de Barcelona i
- **12 Nov** Sale of Chevron's UK Central North Sea
- **25 Nov** Silvertown Tunnel PPP
- **06 Dec** York University Heslington Campus

Source: *IJGlobal*, from 1 September 2019 – 31 December 2019

DEAL ANALYSIS: The sponsor concurrently raised construction debt and sold down equity to finance this project. By Elliot Hayes & Sophie Mellor

Neart na Gaoithe, UK

A decade of legal wrangling and subsidy challenges passed between development rights being awarded to Mainstream Renewable Power, the project's original sponsor, and EDF Renewables finally bringing it across the finish line.

The Crown Estate in 2009 awarded Mainstream the exclusive right to develop Neart na Gaoithe – at the time a £1.1 billion ($1.4 billion), 360MW project – following a competitive bidding process.

In 2012 Mainstream sought permission to scale up the project to 450MW, causing costs to rise to £1.4 billion, with the intention of selling down equity in the project for a 2013 financial close.

Subsidy saga

The UK Government in December 2013 qualified Neart na Gaoithe as one of the first projects eligible to apply for a Contract for Difference (CfD) subsidy through the renewables support scheme.

But the project failed to win early-stage state support in early 2014, and changed course to instead apply for 20-year support under the outgoing Renewables Obligation scheme.

The government then turned back on its decision and in March 2015 awarded the Scottish project a 15-year CfD at an inflation-linked strike price of £114.39 per MWh.

But, like the swing of a metronome, the government stripped the subsidy from the project in March 2016, citing the failure of the sponsor to meet deadlines to arrange the financing for the project.

Mainstream fought back and a tribunal investigation ruled it is favour, overturning the government's decision and reinstating the CfD, finally concluding the saga in March 2017.

Equity processes

During this time Neart na Gaoithe, alongside 2.3GW of other offshore wind projects, lost its planning permission as the Scottish courts ruled that it presented a risk to wildlife. The legal challenge brought by an environmental group was appealed in August 2016 and overturned in July 2017.

Mainstream also attempted a sale of the project in 2016 but nothing came of this process.

It mandated KPMG in 2017 to run a new sale. EDF emerged as the victor, acquiring the project for €600 million ($718 million) in May 2018.

The new owner opened up the project to investors just five months later, also seeking out new debt to leverage its stake in the project in early 2019.

It consequently achieved both, signing a debt package with 25 financial institutions in August that year and agreeing the sale of a 50% stake in the project to Irish utility ESB.

Financing

EDF signed on a £1.6 billion project finance debt package on 26 November 2019. Its equity investment of around £400 million was supported by a primary senior debt facility and an EKF-covered tranche.

A total of 24 commercial banks participated on the deal: Bank of China; Barclays; BNP Paribas; CaixaBank; CIC; Crédit Agricole; Commerzbank; DZ Bank; Helaba; ING; KfW IPEX-Bank; LBBW; Lloyds; Mizuho; MUFG Bank; NatWest; Norinchukin; OCBC; Santander; SEB; Shinsei; Siemens Bank; SMBC; and Société Générale.

Pricing on the senior debt is thought to start at Libor +130bp, stepping up to 140bp. It has a tenor of 15 years plus construction, and the debt package has a DCSR of 1.4x.

ESB is buying its 50% stake with equity provided by the Government of Ireland. It is understood that the new shareholder paid a high premium, around half the price of the entire project costs.

Offshore construction is scheduled to start in June 2020 with full commissioning slated for 2023.

Advisers

Advisers to EDF Renewables included Société Générale (financial), Linklaters (legal), Shepherd and Wedderburn (Scottish legal) and BDO (model auditor).

The team advising the lenders comprised Clifford Chance (legal), Burness Paul (Scottish legal), Wood (technical), Benatar (insurance) and Baringa (market).

ESB was advised by KPMG (financial), CMS (legal), K2 Management (technical) and Nomura (M&A).

Timeline

16 February 2009	Mainstream awarded the project
26 February 2015	CfD subsidy awarded
21 March 2017	CfD reinstated, having been dropped by the UK government on 29 March 2016
4 May 2018	Mainstream agrees 100% equity sale to EDF Renewables
26 November 2019	Financial close, sale of 50% equity to ESB

DEAL ANALYSIS: To say this road PPP overcame a few hurdles to reach financial close would be the understatement of the century. By Eliza Punshi

Silvertown Tunnel, UK

The first major road investment in East London in three decades, the Silvertown Tunnel survived political and environmental objections, planning delays, the scrapping of the PF2 model, and finally – in the final furlong – an appeal from the losing bidder.

Nationally significant

The twin-bore road tunnel will serve as a crossing between Silvertown in the north of the River Thames and the Greenwich Peninsula in the south, running alongside the 122-year-old Blackwell Tunnel.

The UK's first road tunnel to have dedicated bus lanes, construction for the Silvertown Tunnel began within days of financial close and is slated for operations in 2025.

Procurement

Even before the project had launched, Silvertown Tunnel attracted plenty of negative attention from environmentalists and then-prospective London Mayor, Sadiq Khan.

At around the same time as the tender launch in October 2016, Khan launched a six-month public examination, proposing to make the project greener and more public transport-focused.

Bidders for the project were shortlisted in March 2017, and included: RiverLinx, a consortium of Cintra, Kier, BAM PPP PGGM, Macquarie, Aberdeen European Infrastructure GP II and SK E&C; Silver Thames Connect (STC), a team of Hochtief, John Laing and Iridium; and a consortium of Skanska, Strabag and Meridiam.

The procurement process was held up when the Department for Transport (DfT) pushed back on the development consent order (DCO) application submitted in March 2016 to further review the project's effect on air quality.

The DCO was eventually granted in May 2018, by which point the Skanska/Strabag team had dropped out, citing an unfavourable risk profile.

RiverLinx beat the STC consortium to win the contract one year later; a decision that did not go unchallenged.

In August 2019, when RiverLinx was moments away from reaching financial close on Silvertown Tunnel, the reserve bidder appealed Transport for London's (TfL) decision, suspending its right to award the contract to the RiverLinx consortium.

At the time, sources feared the legal battle would further delay the project by up to a year. But the injunction against TfL was lifted in October, allowing the authority to move towards financial close with its preferred bidder.

Financing

RiverLinx brought the £1.2 billion ($1.55 billion) road tunnel to financial close on 21 November 2019.

The project has a gearing of 91%, *IJGlobal* understands. A total of 14 lenders provided the debt, with RBC providing interest rate swaps.

A £450 million, 29-year senior loan, which priced at Libor +150-170bp, was provided by Crédit Agricole, ICO, Korea Development Bank, KEB Hana, Norinchukin Bank and Shinsei Bank.

Crédit Agricole, DZ Bank, SMBC and Woori Bank provided a £100 million equity bridge loan, priced at 110bp.

KEXIM provided a £175 million direct loan with a 29-year term that priced at 150-170bp to match the senior debt.

A £100 million private placement was provided by Aviva and Samsung Life over a tenor of 29 years. The facility priced at Gilts +150-170bp.

The transaction saw, for the first time, South Korea's K-SURE cover a major European PPP. The ECA wrapped a £375 million facility priced at 80-100bp and arranged over 18 years. It was taken by Crédit Agricole, KfW IPEX-Bank and Norinchukin Bank.

Meanwhile, the equity breakdown among the project sponsors is: Macquarie Capital (22.5%); Cintra (22.5%); Aberdeen Standard Investments (22.5%); BAM PPP PGGM (22.5%); and SK E&C (10%).

Advisers

The RiverLinx consortium was advised by Macquarie Capital (financial), Allen & Overy (legal), Hogan Lovells (lenders' legal), Arcadis (lenders' technical), and Arup and Cowi (civil engineering).

TfL was advised by a team including KPMG (financial), Ashurst (legal), Pinsent Masons (legal), and Atkins (technical).

Timeline

Tender launch	Qualification documents in	Bidders shortlisted	DCO granted	Financial close
10 October 2016	**14 December 2016**	**15 March 2017**	**10 May 2018**	**21 November 2019**

DEAL ANALYSIS: The first offshore wind farm in France to cross the finish line was a long time coming. By Elliot Hayes

Saint Nazaire, France

Many years after most of its European neighbours, France finally brought its first offshore wind farm to financial close towards the end of last year.

Project sponsor Eolien Maritime France (EMF), a 50:50 joint venture between EDF Renewables and Enbridge, overcame permitting delays, legal challenges and retroactive subsidy support changes to raise a €2.3 billion ($2.5 billion) debt package to fully fund the construction of the 480MW Saint Nazaire offshore wind farm.

Procurement

Located 12km off the west coast in the Bay of Biscay, Saint Nazaire was awarded to a consortium of EDF and Ørsted during France's 2GW first offshore wind auction back in 2012. But little progress had been made by May 2016 when Ørsted sold its 50% interest in EMF to Enbridge.

Shortly after, EMF confirmed that local authorities had finally granted the construction permit to the project. However, the award was followed by a four month appeal window during which a number of parties appealed the planning decision in local courts.

In June 2017, French courts confirmed that the appeals had been rejected, stating that the planned offshore wind project posed no serious risk to marine, fauna, birds and fishing channels. A final appeal against the project's operating permit from environmental group Prosimar and residents group GRSB was turned down by France's Supreme Administrative Court in June 2019.

Saint Nazaire suffered one more blow when the government dramatically cut subsidiaries and feed-in tariffs to €150/MWh from €200/MWh, saving the state a total of €15 billion.

Regardless, EMF made the final investment decision for the project, signing the financing documents on 5 August 2019 and paving the way for financial close the following month.

Financing

The sponsor financed the project with no upfront equity, raising €2.3 billion debt from BNP Paribas, MUFG Bank and Société Générale.

The debt financing comprises: €1.5 billion in term loans; a €100 million standby facility; a €450 million equity bridge loan; and €450 million in smaller tranches, including a letter of credit facility, a VAT facility and a revolving working capital facility.

The tenor of the term loans is understood to be around 20 years, with the pricing on the debt coming in at Euribor +140-160bp.

All three lenders also served as underwriters and bookrunners. Syndication is underway.

EIB was thought to also be mulling a loan for the project, however sources indicated that the lender pulled out during the summer.

Construction

Construction started on 20 September 2019, just days after EMF closed on the financing. The sponsor is working towards a commission deadline of 2022.

Once completed, Saint Nazaire offshore wind farm will benefit from a 20-year power purchase agreement with EDF.

It will feature 80x GE 150-6MW turbines which will be built by General Electric in Saint Nazaire. The turbines will have a hub height of 109 metres and the blades will have a diameter of 150.8 metres.

Grid connection will be undertaken by the French transmission system operator RTE, and a project-life grid connection agreement is already in place.

In late August 2019 EMF selected DEME and Eiffage Metal for the engineering, procurement, construction and installation contract for the wind farm.

Advisers

Advisers to the sponsors included Clifford Chance (legal counsel), BCTG Avocats (legal counsel on regulatory matters), BNP Paribas (financial adviser) and Noveo Finance (hedge consultant).

The lenders were advised by Linklaters (legal counsel), Mott MacDonald (technical adviser), Marsh (insurance adviser), PwC (tax and accounting adviser), and DWPF (model auditor).

Enbridge also mandated Assess Corporate Finance as its financial adviser with Jeantet as legal counsel.

Timeline

19 May 2016 – Enbridge acquires interest in EMF

7 June 2019 – Final legal challenge turned down

5 August 2019 – Financing documents sign

6 September 2019 – Financial close

20 September 2019 – Construction starts

Middle East & Africa

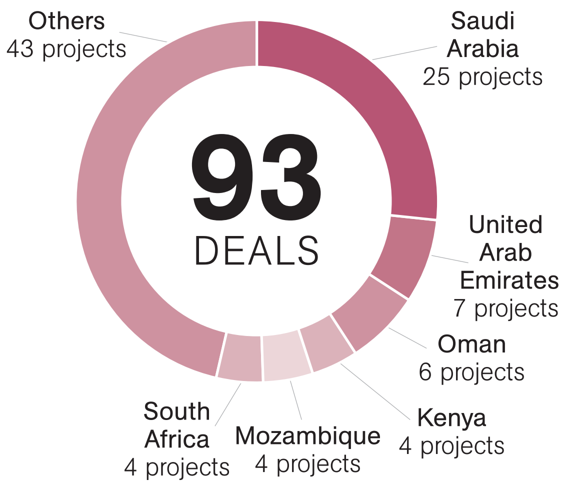
INSIDE

Taweelah desalination, UAE

Facility D IWPP expansion, Qatar

Umm al Quwain desalination, UAE

Pipeline & procurement deals



Closed deal values by sector

Oil & Gas: $9.49 billion

Water: $1.69 billion

Transport: $1.09 billion

Power: $876 million

Mining: $150 million

Projects with recent tender updates

- Al Dhafra Solar PV
- Al Faisaliyah Solar PV
- Ethio Telecom Privatisation
- Benga Coal-Fired
- Fernao Dias Deepwater Port
- Khemisset Potash Mine
- KNH Private Hospital
- Makhado Coal Mine

Closed deals by country

Mozambique	$4.13 billion	3
Saudi Arabia	$2.88 billion	2
United Arab Emirates	$1.80 billion	2
Ghana	$1.03 billion	3
Mauritania, Senegal	$700 million	1
Egypt, Israel	$518 million	1
Qatar	$488 million	1
Tunisia	$320 million	1
Mauritania	$310 million	1
Israel	$286 million	1
Kenya	$283 million	1
Morocco	$274 million	1
Malawi	$212 million	1
Egypt	$201 million	1
Gabon	$100 million	2

Transactions that reached financial close

- **18 Sep** Sale of 50% in SASREF Oil Refinery
- **25 Sep** Port of Nouakchott
- **17 Oct** Taweelah Desalination Plant
- **27 Oct** Malawi M1 Road Rehab
- **26 Nov** Sale of AES Corp's Jordanian Power Portfolio
- **09 Dec** Mozambique Electricity Network Upgrade

Source: *IJGlobal*, from 1 September 2019 – 31 December 2019

DEAL ANALYSIS: Not only set to be the world's largest independent water producer, this project also attracted a record-low tariff bid. By James Hebert

Taweelah IWP, UAE

ACWA Power reached financial close on the $1.2 billion Taweelah independent water producer (IWP), a 909,200 cubic metres per day (m3pd) reverse-osmosis desalination facility roughly 45km north of the city of Abu Dhabi, a little over two years after Abu Dhabi Water & Electricity Authority (ADWEA) started to scope out the project, and well under a year after the IWP was awarded.

Yet another example of the speedy procurement and financing of a water project in the region, Taweelah also saw a record-low tariff bid from the eventual preferred bidder – an offer that was brought even lower in the lead-up to financial close.

Procurement

ADWEA, which has since been folded into Abu Dhabi's Department of Energy (DoE), requested in September 2017 permission from the Emirate's Executive Council to carry out feasibility studies for the project.

Three months later, in December, it had mandated an Alderbrook-led advisory team with the view of releasing a request for proposals (RFP) for the project in H1 2018.

Expressions of interest (EOIs) were invited in early January 2018, and the request for qualifications (RFQ) followed only a month later.

ADWEA named 11 unconditional prequalified bidding groups on in May. They were: Acciona with PAL; ACWA Power; Cobra and Samsung; Engie and Marubeni; FCC Aqualia; Hyflux and China Harbour; JGC; Mitsubishi Corp; Suez; Sumitomo Corp, Malakoff International and Veolia; and Valoriza.

Seven teams are understood to have gone on to submit proposals by the RFP deadline in October: ACWA Power; Engie with Marubeni; Sojitz Corp; Suez; Sumitomo Corp, Malakoff International and Veolia; UTICO; and Valoriza.

ACWA Power submitted the lowest bid to DBFOM the project – at Dh8.26 ($2.24915) per one thousand imperial gallons (ptg). The Saudi developer was ultimately named preferred bidder on 29 January 2019, taking a 40% stake in the project company.

The Abu Dhabi government owns the remaining 60% through the DoE.

Financing

The Taweelah desal was financed at a debt-to-equity ratio of 65:35.

A club of six banks provided a $775 million soft mini-perm debt package with a maximum tenor of 15 years.

Lenders on the deal included regional and international financial instutions: Boubyan Bank, Emirates NBD, Mizuho Bank, Natixis, Norinchukin Bank, and Siemens Bank.

The debt, which signed on 3 October 2019, is structured with cash sweeps and aggressive step-ups to encourage refinancing. Pricing starts at Libor +90bp, rising to 210bp in year seven and 240bp in year 13.

Government reforms in 2018 saw Abu Dhabi Water & Electricity Co (ADWEC) replaced by Emirates Water & Electricity Corp (EWEC) as the offtaker of desalinated water in the Emirate and supplier of water for distribution companies.

Thus ACWA Power in May 2019 signed the 30-year water purchase agreement (WPA) with EWEC at the tariff that won it the project.

However, as part of the conditions precedent prior to the deal closing on 16 October, interest rate swaps lowered the agreed Dh8.26 ptg tariff to Dh7.80 ptg.

EWEC's obligations under the offtake agreement are backed by the Abu Dhabi government.

Additionally, a 400MW on-site solar PV project is expected to reduce the amount of energy to be supplied to the desal facility by the DoE.

Shortly after signing the WPA in May, ACWA Power mandated a joint venture between Spain's Abengoa and Power China, through its Sepco III subsidiary, as EPC contractor.

Taweelah IWP is expected to start commercial operations in October 2022.

Advisers

Hogan Lovell acted as legal counsel to ACWA Power, while Abu Dhabi's DoE was advised by a team consisting of Alderbrook (financial), White & Case (legal) and ILF Consulting Engineers (technical).

Timeline

EOI issued – **18 January 2018**

Prequalifications issued – **31 May 2018**

ACWA Power named PB – **29 January 2019**

Debt package signs – **3 October 2019**

Financial close – **16 October 2019**

DEAL ANALYSIS: This transaction helps Kahramaa meet the country's increasing water and electricity demands. By James Hebert

Facility D IWPP expansion

One of the main motivations for Qatar General Electricity & Water Corp (Kahramaa) to sign off on the $486.25 million deal to expand the water output of the Facility D independent water and power producer (IWPP) by 280,000 cubic metres per day (m^3pd) is thought to have been the slow procurement of Facility E.

As one source told *IJGlobal*, expanding Facility D's desalination capacity will "bridge the time gap" until the 600,000 m^3pd, 2.4GW Facility E – a follow on project to Facility D – eventually becomes operational.

The existing Facility D IWPP meets around 30% of Qatar's total electricity needs and 40% of its fresh water needs. The expanded site will make sure that the country's energy and water demands continue to be met into the 2020s – tasks that had otherwise been primary objectives of Facility E.

Facility D as plan B for Facility E

The Facility D IWPP was the first desalination project in Qatar to use reverse-osmosis technology on a large scale. Under the terms of the original 25-year arrangement, the project was contracted to supply Qatar state-owned Kahramaa with 2,520MW of energy and 620,000 m^3pd of desalinated water.

The original project reached financial close on 11 April 2016. Total costs were $3 billion and the deal was highly leveraged at a debt-to-equity ratio of 85:15.

Shareholders in the project's special purpose vehicle – Umm Al Houl Power (UHP) – are: Kahramaa with a 60% stake; the K1 Consortium, consisting of Japan's Mitsubishi (66.6%) and TEPCO (33.3%), with a combined 30% shareholding; Qatar Petroleum with a 5% stake; and Qatar Foundation holding the remaining 5% interest.

Shortly after financial close on Facility D, Kahramaa invited advisory bids for the Facility E IWPP, appointing a team of EY, DLA Piper and Pöyry by February 2017.

RFQ documents were issued to potential developers by the summer of that year, but procurement was slow to progress beyond this point with some industry insiders in November 2018 fearing that the project had been "kicked into the long grass".

Facility D, meanwhile, had started partial commercial operations in 2017 and was fully up and running by May 2018. The following May, Kahramaa signed an agreement with UHP to expand Facility D to compensate for the delays facing Facility E.

Financing

The expansion project was publicly announced with the signing of an amended power and water purchase agreement (PWPA) on 9 May 2019 to bring the tenor of the new debt in line with the offtake period: a term of 25 years starting at the conclusion of the construction phase.

The water tariff, meanwhile, remained unchanged. It is understood to be among the lowest in the region, possibly around $0.90 ptg.

The sponsors achieved a debt-to-equity spilt of 80:20 on the new project, providing $100 million equity which was rounded out by a $387.8 million, 26-year debt package.

The debt, which signed on 18 November 2019, was provided by Japan Bank for International Cooperation (JBIC) ($194 million), KfW IPEX-Bank ($32.3 million), Mizuho Bank ($32.3 million), MUFG Bank ($32.3 million), Norinchukin Bank ($32.3 million), SMBC ($32.3 million) and Sumitomo Mitsui Trust Bank ($32.3 million).

Similarly to the initial financing from 2016, the pricing on the fully-amortising debt is Libor +175bp.

The sponsors reached financial close on the project on 28 November 2019, a source told *IJGlobal*.

Construction is expected to be complete by 2021.

The EPC contractors from the original construction returned for the expansion project, with Samsung as main contractor and Acciona as supplier and sub-contractor.

Advisers

The sponsors were advised by Synergy Consulting (financial), Simmons & Simmons (legal) and BDO (model auditor) while Shearman & Sterling (legal) and Lummus Consulting International (technical) advised the lenders.

Timeline

- **11 April 2016** – Financial close on original project
- **May 2018** – Original project fully operational
- **9 May 2019** – Amended PWPA signs
- **18 November 2019** – Debt for the expansion project signs
- **28 November 2019** – Financial close on the expansion project

DEAL ANALYSIS: The risk profile of this desal required FEWA to take equity in the project and an offtake guarantee from the federal government. By James Hebert

Umm al Quwain IWP, UAE

ACWA Power reached financial close on the $800 million Umm al Quwain independent water producer (IWP) on 17 November 2019, a little over a month after the Saudi Arabian developer successfully crossed the finish line with the Taweelah IWP.

Interestingly, unlike the 909,200 cubic metres per day (m^3pd) Taweelah, which utilised a soft mini-perm structure like most recent ACWA Power projects, Umm al Quwain achieved long-term debt financing with a tenor of nearly 25 years inclusive of construction.

The 682,000 m^3pd Umm al Quwain is also notable for being among the first transactions in the UAE to benefit from a federal sovereign offtake guarantee rather than a guarantee from any of the local Emirati governments.

Procurement

The UAE's Federal Electricity and Water Authority (FEWA) launched the tender for Umm al Quwain on 7 April 2016, initially envisioning a 205,000 m^3pd desalination project located around 20km north of Umm Al Quwain city on the Arabian Gulf coast.

FEWA issued RFP documents to 14 companies on 21 November of that year, having issued the RFQ in May, but procurement hit a snag as potential lenders were reluctant to participate in the project.

At the time, a source said that the lack of a government guarantee on the water purchase agreement (WPA) with FEWA was making the $275 million Umm al Quwain difficult to bank.

In response, FEWA amended the project structure to reduce its risk profile, adding a federal guarantee covering its obligations under the offtake agreement as well as agreeing to take a 20% equity stake in the project company.

FEWA's remedies appear to have sufficiently calmed the sponsors and lenders circling the deal, allowing the procurement process to move forward.

Three bidding teams put in tariff proposals by the 13 February 2018 RFP submission deadline, though one team is understood to have been disqualified because it did not include a bid bond.

The three consortia to submit bids, and their proposed tariffs, are: ACWA Power and Tecton with a bid of $0.9158 ptg; Abdul Latiff Jameel and Almar with a bid of $1.0275 ptg; and Acciona with a non-compliant bid.

ACWA Power's consortium was subsequently named preferred bidder for the design, build, finance and operate concession on 14 June, its winning bid supported by around $240 million debt provided by Standard Chartered, MUFG Bank and United National Bank.

At the time of the consortium signing the 25-year WPA with FEWA on 10 July 2019, however, Tecton had been replaced by MDC Power Holding, a subsidiary of Abu Dhabi's Mubadala. The resulting shareholding structure comprised ACWA Power (40%), MDC (40%) and FEWA (20%).

Umm al Quwain's planned capacity had also increased greatly by this time – from 205,000 m^3pd to 682,000 m^3pd – while the overall project costs had ballooned to roughly $900 million.

Financing

The sponsors achieved a debt-to-equity ratio of around 85:15, with the $680 million debt package signing on 7 November 2019.

ACWA Power's consortium drew down on the equity bridge loan two days before financial close – on 5 November – a source told *IJGlobal*. Senior debt does not need to be drawn until March this year.

A seven-strong club of local, regional and international banks provided the senior debt. The lenders are Standard Chartered (lead bank), First Abu Dhabi Bank, Korea Development Bank, MUFG, Samba Bank, Siemens Bank and SMBC.

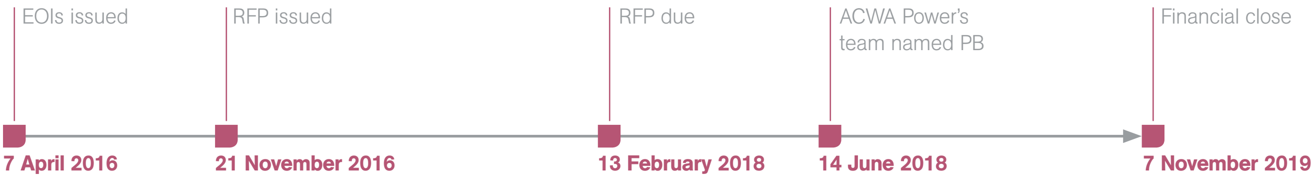
The tenor of the debt is 24.5 years including construction, and priced at around Libor +200bp.

Construction on Umm al Quwain is expected to start in H1 2020 and targeting a commercial operation date (COD) in Q1 2021.

Advisers

FEWA's advisory team for the project included Al Maqtari Auditing (financial), Watson Farley & Williams (legal) and ILF Consulting Engineers (technical).

Timeline



North America

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- New investors catch Caribbean trade winds
- Steering solar equipment into safe harbours
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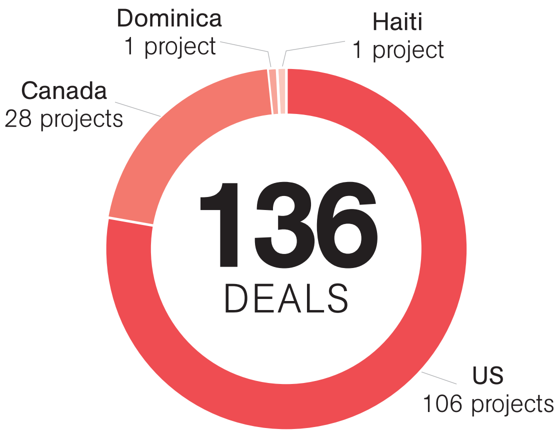
Pipeline & procurement deals



Projects with recent tender updates

- Sale of Zayo
- Cameron LNG Phase II
- M2 Gas-Fired
- Mayflower Wind Energy Offshore Wind
- Miami-Dade Civil and Probate Courthouse
- Prairie Hill Wind
- Palen Solar Facility
- Stamford School Bundle

Closed deal values by sector

- **Oil & Gas:** $25.04 billion
- **Renewables:** $13.97 billion
- **Power:** $13.03 billion
- **Mining:** $4.20 billion
- **Telecoms:** $2.94 billion
- **Transport:** $2.63 billion

Closed deals by country

United States	$42.07 billion	124
Canada	$21.36 billion	31
Canada, United States	$1.25 billion	2
Saint Martin	$129 million	1

Transactions that reached financial close

- **30 Sep** Isabella Wind
- **29 Oct** Wataynikaneyap Transmission Line
- **30 Oct** EPIC Olefins Ethylene Pipeline
- **26 Nov** Sale of 50% in Utopia Gas Pipeline
- **04 Dec** Sale of Volney-Marcy Transmission Line
- **11 Dec** Sale of Third Coast Midstream's Natural Gas Assets

Source: *IJGlobal*, from 1 September 2019 – 31 December 2019

NEWS ANALYSIS: Ample investment opportunities are attracting new infrastructure investors to the region. By Jon Whiteaker

Catching the trade winds

The demand for infrastructure investment in the Caribbean region is significant, even before you consider the pressing need for greater climate resilience due to extreme weather events.

Thankfully a growing community of investors is targeting the region and Caribbean governments are employing more innovative financing models to deliver infrastructure development.

Ahead of the 4th annual **Caribbean Infrastructure Forum** (CARIF) in Kingston, Jamaica, on 21-22 January, *IJGlobal* spoke to leading market participants about the challenges facing the region.

Adam Carter, managing director and head of investment banking at CIBC First Caribbean, sees increasing investor interest in the region as part of a global trend.

Carter said: "There is tremendous interest worldwide for infrastructure assets. The rate of return and competitiveness of these assets means they are trading at all-time highs. Investors are looking outside of G8 or developed countries and entering emerging markets, and we see that across the Caribbean.

"DFIs and multilaterals were previously predominant players in this market. Now institutions, like ourselves, have dedicated infrastructure desks going after these projects both on a bilateral basis and through helping to access the wider Caribbean market through syndicated loans as well as capital markets both private and public."

A diverse pool

An increasingly diverse pool of investors is finding a variety of opportunities, due to governments approaching infrastructure in different ways, according to Lori Rockhead, director and sector lead for infrastructure, government and healthcare at KPMG.

Rockhead said: "We have a spectrum in the region. Cayman Islands has a government surplus and is in the position to be able to finance its own projects, while in contrast there are many countries which have very high debt-to-GDP ratios."

Jamaica, the host country for this year's CARIF event, has successfully tapped various pools of capital for recent projects.

"Commercial banks and private sector partners are developing a greater appetite, and the government has also been looking at the stock market. Jamaica has the highest performing stock market in the world. One of the reasons for that is that the government has seen the stock market as a way of privatising assets"

Diane Edwards, president of JAMPRO, the Jamaican government's investment and export promotion agency, says IDB Invest, the World Bank, and the Caribbean Development Bank are increasingly active in the country. She also highlights the £300 million ($392 million) infrastructure programme set up by the UK Government.

"Commercial banks and private sector partners are developing a greater appetite, and the government has also been looking at the stock market," Edwards said.

"Jamaica has the highest performing stock market in the world. One of the reasons for that is that the government has seen the stock market as a way of privatising assets."

In May 2019 the Wigton wind farm, which was originally financed by the IFC and OPIC in 2015, was privatised on the Jamaican stock market. Around 32,000 investors took part in the IPO, 38% were new investors on the country's stock market.

Another project in the country which demonstrates high investor appetite is the 51.5MW Paradise Park solar farm in Westmoreland, Jamaica, which commenced operations in October 2019. Neoen of France and MPC Capital of Germany are two of the sponsors of the project and European development banks Proparco and FMO provided its debt financing.

MPC Capital has been expanding in the region more generally through its MPC Caribbean Clean Energy Fund. In May 2019 it entered Barbados via a 5MW distributed generation solar PV project in partnership with Guinea Estates.

Edwards also says that Chinese investment is becoming increasingly common in Jamaica, with Chinese institutions responsible for the construction of the North-South Highway and now overseeing the development of the Southern Coastal Highway.

The government had to create a unique funding structure for these road developments. As the expected toll revenues were not enough to meet the Chinese investors' target rate of return, they instead accepted land as compensation.

Rockhead commented: "One of the great things about Chinese investors is that

Diane Edwards, JAMPRO

culturally they are very oriented to looking at the long term and less about what they are going to earn today."

Drink to your health

Two traditional infrastructure sectors attracting a lot of attention in the region are water and healthcare.

Proparco and Vinci have undertaken a number of water developments in Jamaica, including the Port Antonio Sewerage and Drainage project.

Edwards says that there are huge opportunities for investment in this area – existing reservoirs in Kingston are very old, with the most recent one being built in the 1940s.

"Urbanisation has completely outpaced our ability to supply clean water. There are some very big projects in water treatment and distribution which will come online in 2020 and this sector, along with storm water infrastructure, will continue to be very active."

Healthcare too has seen large investments. The Cayman Health City is an example of an island targeting so called health tourism. The facilities have been paid for by Indian investors and provide world class care.

Other islands, such as Turks and Caicos have undertaken PPPs to deliver new hospitals, and Jamaica is due to bring two new hospital projects to market in 2020, according to Edwards.

As well as health tourism, Rockhead sees other trends pushing investment into the health sector.

"KPMG has noticed that almost every jurisdiction in the region is looking towards universal healthcare, as part of the UN's long-term sustainability goals. It tends to be a political priority."

Most islands need to invest both in new facilities as well as improving services. Many of the region's islands have aging populations, which will create more pressures. Rockhead anticipates technology being used to try and keep patients in their homes due to the high costs of hospital care.

Sustainable futures

Significant investment is also going into renewables across the region, as governments seek to meet very aggressive renewable energy targets. Jamaica, for example, is targeting 50% of generation from renewable sources by 2030, while Barbados is aiming for 100% renewables by 2030.

The motivations for being so aggressive are clear but the Caribbean also has some natural advantages.

Carter explains: "Every Island has ambitions to be energy, or rather fuel, independent. Almost every island, with the exception of Trinidad, has very high fuel costs. Unlike in the rest of the world where you need government subsidies and incentives to finance renewable energy projects, that is not the case in this region."

With solar now at grid parity, cost is no longer a block on development.

Investor still need visibility of the potential pipeline in any market, however,

Adam Carter, CIBC First Caribbean

Lori Rockhead, KPMG

making integrated resource plans, which have become increasingly common in the region, very valuable.

Edwards says that Jamaica's IRP is due to be released imminently.

Insurance is a challenge for renewables and beyond, according to Rockhead, who said: "We are seeing a growing challenge in the cost of insuring large-scale renewable energy projects in the region due to extreme weather events.

"Insurance as a risk management tool is under-deployed in the region."

The ability of an island to recover after a hurricane or major storm is largely dependent on its level of insurance but obviously as storm frequency increases so do premiums.

Projects that are demand based are also exposed to wider economic slowdowns as a consequence of major storms, and these projects are becoming more common.

CIBC First Caribbean only targets demand or volume risk projects, meaning they do not have to rely on the ability of governments to pay their bills. These projects are increasingly attractive to governments too as they lessen government debt burdens.

Greater climate resilience is clearly needed. Jamaica is undertaking the reinforcement of roads exposed to the coast and at sea level for example, and many other similar projects are being undertaken across the islands.

The high levels of investor interest in the Caribbean is good news but much work remains to be done.

DATA ANALYSIS: The cancellation of the Mobile River Bridge P3 shows the limitations of federal efforts to increase infra spending. By Sophia Radeva

Rebuilding America

In a global environment of low or negative bond yields, investment in infrastructure assets seems like a no-brainer, given their stable long-term cash flows which are not impacted by inflation and have little correlation with other asset classes.

The US is one country where the logic of major infrastructure spending seems irrefutable. Not only could state and city level governments borrow at record-low interest rates to fund these schemes, but much of the country's social and transport infrastructure is in dire need of repair, upgrading or replacement.

Federal authorities have established a number of funding programmes to stimulate infrastructure investment in recent years. Established in 2015, originally under the name Fixing America's Surface Transportation (FAST), the Infrastructure for Rebuilding America (INFRA) programme is one of these flagship funding plans.

The latest list of grant recipients were announced in July 2019, providing almost $860 million to 20 transport infrastructure project. Out of the total funding, $125 million was provided to just one project: Mobile River Bridge P3 in Alabama. That the project was scrapped shortly after demonstrates just how difficult it is for the federal authorities to drive infrastructure development.

IJGlobal data shows the south of the country, with an emphasis on Maryland, Florida, West Virginia, will receive the most funding under the 2019 INFRA programme. These areas also require significant improvements in rural infrastructure.

The heavy grant allocation is not intended to fund entire projects but facilitate even greater amounts of sorely needed private investment.

Passing grade

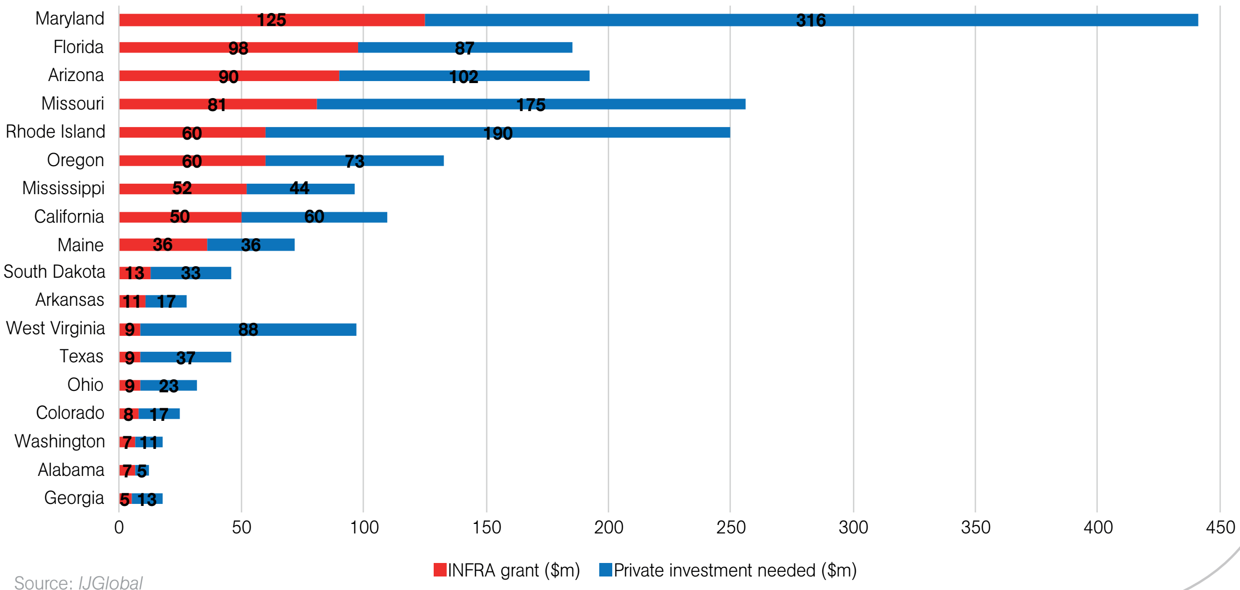
According to the 2017 report card by the American Society of Civil Engineers (ASCE), infrastructure in the US barely gets a passing grade with a mark of D+, with roads and airports given a devastating D.

A lack of funding has resulted in the deterioration of US aviation infrastructure over the last 30 years despite federal programmes designed to reverse this decline. On 27 September, US Department of Transport awarded $986 million in grants to 354 airports in 44 states, as part of the Federal Aviation Administration Airport Improvement Program.

Some areas of US infrastructure have seen improvements, with ASCE awarding rail a grade B in 2017 compared to the C- in 2005. The improvement is in part thanks to over $6 billion in loans executed since 2002 under the Railroad Rehabilitation & Improvement Financing (RRIF) programme. In 2015 the scheme attracted $27.1 billion in private investment for freight rail alone.

However, despite the improvements in some areas, ASCE says the country needs to spend an extra $2.1 trillion by 2025 to prevent infrastructure in the country getting worse.

2019 INFRA grants to transport projects by state



Source: *IJGlobal*

NEWS ANALYSIS: US sponsors rushed to close on their solar equipment safe harbor loans before the phasing out of the ITC. By Taryana Odayar

Safe harbors ahoy!

Many solar equipment safe harbor deals in the works since early 2019 reached financial close towards the end of the year, with developers such as Cypress Creek Renewables, Sunnova, Recurrent Energy, Invenergy, 7X Energy, Sunrun and Greenbacker Renewable Energy all securing deals.

The developers were expected to use the loans to finance the purchase of solar modules and other equipment to safe harbor US projects for the solar investment tax credit (ITC), in preparation for the step-down in the incentive at the end of 2019 from 30% to 26%.

A further reduction to 22% is scheduled for 2021 and the tax credits will disappear entirely for grid-scale projects in 2022.

Recurrent Energy was one of the first solar developers to cross the finish line, signing its roughly $182 million dual-tranche, three-year debt package with a club of banks back in September 2019.

The developer expects the modules purchased with the proceeds of the loan to safe harbor projects with a combined capacity of 1,544MWdc.

NordLB and Rabobank acted as coordinating lead arrangers on the $124 million senior tranche, while Nomura led and underwrote the $57.5 million junior tranche. The senior loan closed on 5 September and the junior loan followed on 18 September.

The reason for the dual-tranche structure could not be confirmed, but a project finance banker away from the deal said it was likely just a reflection of the different yield and risk appetites of the arrangers.

Gathering pace

Invenergy was also said by several deal watchers to have been in the market with a safe harbor loan.

The bank club for this transaction, which will finance bifacial solar modules, also included Rabobank and NordLB, said one project finance banker.

Invenergy began working on the structure in March and details circulating in August included a proposed size of about $200 million, a tenor of 3.5 years and pricing just north of 300bp, says the banker, who adds that the deal was expected to include a corporate guarantee.

"Overall, bankers say more than half a dozen of these deals likely closed by year-end 2019... There are a lot more safe harbor loans in the market than people think"

Another banker said in November that the deal had closed, without providing further details.

Tip of the iceberg

A number of deals have so far been announced publicly, including:

- a $95 million revolver and $55 million convertible note offering for Sunnova
- a $125 million loan from CarVal Investors for Cypress Creek
- a $100 million loan from Forethought Life Insurance Co for 7X Energy
- a joint venture agreement between small-scale solar developer SunPower and Hannon Armstrong
- a $4 million revolver from Greenbacker Renewable Energy to Encore Renewable Energy
- a non-recourse debt financing for Sunrun

The last transaction known to have closed was Sunnova's $150 million financing, a chunk of which will go towards purchasing solar equipment that can be safe harbored for the full 30% ITC.

The transaction closed on 30 December, almost the last possible moment.

The company planned to draw the entire $95 million revolver by the end of December – just one day later – to fund equipment purchase, with a maximum facility size of about $138 million, subject to lender consent.

The lenders include Credit Suisse and LibreMax Capital.

The convertible notes, which were placed privately with investors, provide for the issuance of $55 million in corporate level debt, with an option to increase to $75 million if all parties consent.

Funds managed by Magnetar Capital and Tortoise Capital Advisors purchased the convertible notes.

The Cypress Creek deal, meanwhile, closed just before Christmas, with the developer using the $125 million from CarVal Investors to qualify equipment for the ITC at 30%. Norton Rose Fulbright advised Cypress Creek on the transaction.

Overall, bankers say more than half a dozen of these deals likely closed by year-end 2019.

"There are a lot more safe harbor loans in the market than people think," said a project finance banker who worked on some of the deals.

The transactions vary widely in structure. For instance, residential solar company Sunrun opted for non-recourse debt in the form of a multi-year revolving credit facility, which would allow it to safe harbor panel installations totaling 500MW of capacity with just $25 million of equity.

The strategy saw the company amend its $250 million syndicated working capital facility, extending the maturity from April 2020 to April 2022 while keeping the size and pricing (325bp) the same.

The amendment also increased the coverage ratio from 3 times to 3.5 times and the minimum required quarter-end unencumbered cash balance was raised from $30 million to $35 million.

The Greenbacker Renewable Energy deal was different again. In this case, the investor provided a revolving credit facility to a developer, Encore Renewable Energy, from which it intends to buy the resultant solar portfolio.

Encore used the $4 million borrowed from Greenbacker to procure ITC-qualified modules for the 27.7MWdc portfolio, which is located in Vermont, drawing on the loan as needed. The developer will repay Greenbacker with the proceeds of the sales of equity in the projects.

Rather than using project-level construction debt, Encore will receive milestone payments from Greenbacker as the projects hit their commercial operations dates.

However, the safe harbor loan product, in its many forms, was not suited to every sponsor or every lender, say deal watchers.

Some bankers simply did not think they are worth the effort, given the business that is available elsewhere.

"I didn't have the time or patience to do these deals," said one, who thinks the safe harbor transactions make sense fundamentally but nevertheless passed on those that crossed his desk. "I guess I missed the boat."

"I've had other opportunities on my plate, and these deals would require me to 'educate' the bank," the banker explains.

Wide price range

Because the deals are highly bespoke, structures and pricing are understood to vary widely, in ways that will appeal to a broad range of lenders – not just banks and insurers.

"I was hearing from private credit funds that were looking for opportunities to make safe harbor loans," said a fourth project finance banker.

"If Nord and Nomura are doing them, I'm guessing they are pricing tighter than the credit funds were hoping for."

Pricing could be anywhere from Libor +150bp to 13%, suggested David Burton, a partner at Norton Rose Fulbright in New York, who led the Cypress Creek deal.

> "I was hearing from private credit funds that were looking for opportunities to make safe harbor loans. If Nord and Nomura are doing them, I'm guessing they are pricing tighter than the credit funds were hoping for"

He points out that the risk – and therefore the return – depends largely on two key factors.

Firstly, it depends on whether the collateral for the loan comprises just the safe harbor equipment or also project contract rights, and secondly it also depends on the nature of the sponsor.

"If the collateral includes project contract rights, then the lender has a better chance of stepping into the shoes of the borrower's safe harbor status in a foreclosure scenario," Burton explains.

"The safe harbor status will make the safe harbored equipment more valuable to the lender in a foreclosure scenario, because the party that buys it from the lender can likely step into the safe harbor status, so long as the lender also sells project contracts for the project that the equipment will be used in."

Panels or inverters?

Safe harbored equipment needs to account for 5% of the cost of a solar project for the entire project to qualify for the full 30% ITC, but the equipment does not have to be solar panels, and as pressure built to procure equipment before the end of 2019, shortages of solar modules caused price rises, prompting developers like 7X to safe harbor inverters instead.

"We chose to safe harbor the Freesun inverter by Power Electronics to avoid the price volatility around modules and because we liked the storage readiness aspect of the inverter allowing us to add storage easily to our projects," said Clay Butler, president and CEO at 7X.

7X Energy's deal will fund its acquisition of inverters worth $100 million from Power Electronics. The lender, Forethought, is a subsidiary of Global Atlantic Financial Group.

The developer says that the deal will enable it to qualify solar projects totaling more than 2GW for the full ITC, as long as the projects are placed in service by 2023.

Law firm Winston & Strawn advised 7X on the loan, while Mayer Brown advised Global Atlantic.

SunPower says its deal with frequent collaborator Hannon Armstrong will safe harbor solar panels with a total capacity of 200MW, allowing the company to preserve the 30% ITC for customers that sign up for commercial power purchase agreements or residential solar leases through the middle of 2022.

Other sponsors that have been named in relation to the safe harbor loans include private equity shop D.E. Shaw Renewable Investments and residential solar company Sunrun.

KeyBank Capital Markets was also among the active lenders, while TD Securities was involved as a financial adviser on at least one deal, say deal watchers.

Latin America

INSIDE

Puerta de Hierro – Palmar de Varela 4G road, Colombia

BNDES - dominant no more?

Calling all institutionals with a taste for risk

Pipeline & procurement deals

Projects with recent tender updates

- Alpha Wind
- Barcarena CCGT
- BR-364/365 Road Section
- Ceara Solar PV
- Mexico City International Airport Terminal 3
- La Loma – Sogamoso Transmission Line
- Piracicaba – Panorama Toll Road Expansion
- Viru Viru Airport

Closed deal values by sector

Power: $8.80 billion

Oil & Gas: $4.44 billion

Transport: $2.73 billion

Renewables: $2.31 billion

Mining: $700 million

Water: $32 million

Closed deals by country

Brazil	$6.55 billion	17
Mexico	$5.11 billion	13
Chile	$3.29 billion	13
Colombia	$1.15 billion	6
El Salvador	$877 million	1
Uruguay	$834 million	3
Peru	$829 million	6
Argentina	$760 million	4
Paraguay	$658 million	1
Guatemala	$56 million	1

Transactions that reached financial close

- **11 Sep** Vientos Neuquinos I Wind
- **24 Oct** Ferrocarril Central Railway
- **27 Oct** Privatisation of Bauna Offshore Field
- **04 Nov** Condor Renewables Portfolio
- **13 Nov** Puerta de Hierro – Palmar de Varela Highway
- **23 Dec** Acajutla Gas-Fired and LNG Terminal

Source: *IJGlobal*, from 1 September 2019 – 31 December 2019

DEAL ANALYSIS: The sponsor raised enough cash to fund construction of this 4G road, but long-term financing is still uncertain. By Juliana Ennes

Puerta de Hierro-Palmar de Varela

The latest project to reach financial close under Colombia's massive fourth generation (4G) road programme, the Puerta de Hierro – Palmar de Varela and Carreto – Cruz del Viso toll road crossed the finish line at a time when the Colombian government is pushing hard to move on the more troubled of the 4G projects ahead of the next generation of road concessions.

The road to financial close has been far from smooth, however, with sponsor Sacyr taking the government to court in an attempt to terminate the concession before securing just enough short-term financing to complete construction.

Project

Colombia's National Infrastructure Agency (ANI) in May 2015 named Sacyr Concesiones preferred bidder for the road concession – the first to be awarded under the second wave of 4G projects. Sacyr set up a special purpose vehicle, Vial Montes de María, to undertake the concession.

The project includes studies, design, financing, environmental and social management, improvement, construction, operation and maintenance of a 202km road corridor connecting Puerta de Hierro (Sucre), Palmar de Varela (Atlantico) and Carreto (Magdelena), and Cruz del Viso (Bolivar).

The scope of work comprises the operation and maintenance of a 197.78km section, including 164.59km of improvements to existing roads, in addition to the construction of a 5.2km variant road in the municipality of El Carmen de Bolívar.

Colombia's government deems the project to be crucial elements in its efforts to improve connectivity between the Caribbean coast and the interior of the country. It is also designed to reduce travel times, cost and to improve road safety.

Dispute

In 2017, before construction work could start, Sacyr entered into a judicial battle with the Colombian government in an attempt to terminate the concession contract. The Spanish company said at the time that the soil where the road would be developed was unstable, and the presence of expansive clays would make construction much more difficult and expensive than expected.

One year later an arbitration tribunal ruled in the government's favour, deciding that Sacyr would have to assume any extra construction costs. The court determined that the concessionaire should honour the original contract and move forward with the project.

Financing

Sacyr financed the road in three transactions, with the final deal closing in November 2019.

The sponsor secured the first round of funding in 2018, closing on a $50 million bridge loan in August to finance the jump-started building works.

This bridge loan was provided by Banco Pichincha, BTG Pactual, and Corporación Interamericana para el Financiamiento de Infraestructura (CIFI).

Uria Menendez and PPU acted as legal advisers to the lenders.

One year later, in August 2019, the sponsor signed an extension of the $50 million bridge loan with BTG Pactual, CIFI, and Nomura Corporate Funding Americas.

Uria Menendez and PPU reprised their roles as legal advisers to the lenders, while Sacyr was advised by law firms Posse Herrera Ruiz and Cuatrecasas.

The third and final deal was for a $185 million short-term debt package provided by BTG Pactual Chile, and Santander.

Although Sacyr has secured all the cash necessary to complete construction, the long-term financial situation of the project is still uncertain.

The financing provided by BTG Pactual and Santander consists of a one-year mini-perm which matures at expected COD, in early 2021. At this point, the concessionaire will need to refinance the project and raise enough capital to fund the second phase of the project comprising O&M obligations.

The mini-perm debt will be used to repay the bridge loan and fund the remaining construction works. Total investment is expected at around $250 million.

Infrata served as technical, social and environmental adviser to BTG Pactual and Santander. ■

Timeline

PB announced	Construction starts	Judicial process starts	Judicial process ends	Financial close
19 May 2015	**9 February 2018**	**15 May 2017**	**13 July 2018**	**13 November 2019**

NEWS ANALYSIS: Appetite for issuing infrastructure debentures in Brazil seem set to continue to rise. By Juliana Ennes

BNDES – dominant no more?

Developers in Brazil are increasingly looking to refinance debt from institutions such as the national development bank BNDES and regional development bank BNB, with project bonds.

The main drivers for this trend are: Brazil's macroeconomic situation, with lower central bank interest rates; policy measures, including the end of subsidized interest rates at BNDES; governance initiatives, such as the implementation of early-repayment rules at BNDES; and tax incentives under which individuals buying infrastructure debentures receive tax benefits.

According to Marcelo Girão Carneiro, head of project finance at Itaú BBA, loans from development banks and multilaterals used to have two main advantages: lower rates and longer tenors.

He believes that Brazil will start to see broader refinancing opportunities, including for debt previously contracted with development banks.

"Refinancing is something common among companies, to improve their credit profile. However, two or three years ago it was unthinkable to refinance a loan with subsidized interest rates in Brazil. Now, the current macroeconomic scenario has allowed capital markets to offer attractive interest rates and, depending on the project, tenors that could go over 20 years, such as for transmission lines. Thus, debt capital market transactions can complement or, in some cases, replace traditional development banks financing," said Girão.

In 2018, BNDES saw some R30 billion ($7.4 billion) in early payments across all sectors. In 2017 the total was R27.7 billion, and in 2016 it was R34.4 billion.

Expectations are that the speed of repayment is set to increase.

The availability of long-term project bonds (10-25 years), steady demand and lower interest rates allow owners of infrastructure projects to eliminate loans from BNDES and BNB and other traditional financing solutions, according to Igino Mattos, from the executive committee of Infra2038 and an IDB consultant.

"Project finance non-recourse bonds with no restrictions for dividends, no cash retention, longer and customized terms and conditions are becoming an excellent alternative. IRRs combined effect for the shareholder is huge, much more than any operational improvement, which is driving more companies to look for refinancing transactions," said Mattos.

Case studies

One of the first projects to refinance subsidized loans in 2019 was the power transmission company Tropicália. The SPV owned by BTG Pactual issued R407 million in debentures due 2043, replacing a loan from BNB even before it was fully disbursed.

Another emission of debentures on the market is Ventos de Santo Estevão Holding, which is set to issue R160 million in debentures for its Ventos do Araripe III wind complex.

Having started operations in January 2017, the project has negotiated the early-payment of a long-term financing with BNDES. The issuance will be used to partially repay this debt.

Macro scenario

The basic interest rate in Brazil established by the Central Bank, Selic, started its downward trajectory in 2016, when it achieved its highest point of 14.25% per year.

Slow economic activity led to low inflationary pressures, which allowed the Central Bank to continuously reduce the Selic, and it has now reached a record low level of 4.5%.

Economists already forecast the annual rates going as low as 4%, while others even predict negative rates.

BNDES rules

Despite a more beneficial macroeconomic scenario, the math to determine if it is more economical to issue debentures to replace an already contracted loan has to include a fee that the development banks charge for early repayments.

BNDES did not have clear rules determining the calculation of fines in these cases. Its contracts even included the option for the bank to completely reject an early payment.

In the first week of October 2019, however, the bank approved new rules and implemented them for both new and old contracts. Officials have explained that the goal is to increase transparency. They defend that bank was not avoiding early payments, it was just looking for a fair compensation for the costs it had incurred with the transaction.

What the future holds

Paloma Lima, partner at Demarest, believes that an avalanche of new refinancing transactions will be coming soon.

"With BNDES, it makes a lot of financial sense to replace its loans with capital markets transactions. In the case of BNB, if the financial aspect reaches a break-even, it can make sense to refinance it for qualitative reasons. Development institutions have more restrictive requirements, such as covenants, and it can be more suitable to go for debentures," said Lima. ■

DATA ANALYSIS: Infrastructure deals in the region are attracting institutionals with a taste for risk. By Sophia Radeva & Nikola Yankulov

Going once, going twice…

Institutional investors are showing a growing appetite for direct investment in Latin American infrastructure, with 2019 figures being three times higher than the full previous year.

IJInvestor and *IJGlobal* data show that most LatAm transactions that had institutional investor involvement over the past five years took place mainly in the M&A space. This could be explained not only by the participation of infrastructure funds but, compared to the US for example, attracting investors from abroad.

According to *IJGlobal* and *IJInvestor* top 10 deals involving a fund or an institutional investor, Canada's CDPQ and Brookfield Infrastructure were the most active, followed by US-based I Squared Capital.

Over the last two years, CDPQ and Brookfield have both engaged in acquiring, among others, some key gas transport infrastructure in Brazil, with the acquisition of controlling stakes in Transportadora Associada de Gas (TAG) and Nova Transportadora do Sudeste (NTS), respectively.

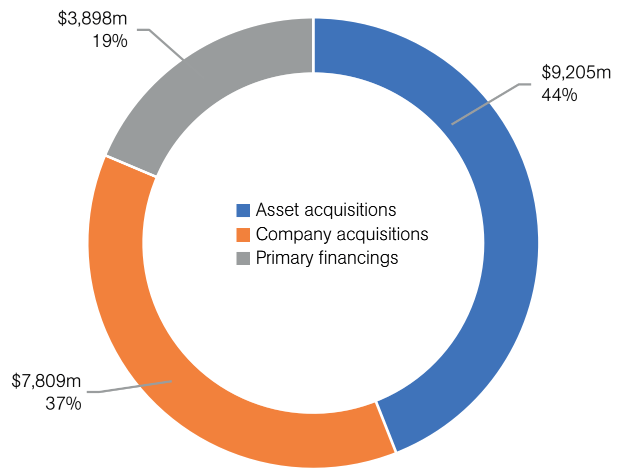
I Squared, meanwhile, targeted the power and renewables sectors in a broader range of countries in the region, while UK-based Actis, through its fourth fund, has snagged conventional power generation and midstream assets in Mexico.

Looking more closely at *IJInvestor* data on all infrastructure funds targeting LatAm investments exclusively, it becomes clear that almost half of all LPs come from abroad – with Europe still prevailing.

It could be said that infrastructure in the region will remain a critical growth engine and will provide more and more opportunities for those ready to take on risk. With ongoing privatisations targeting the disposals of key power generation and distribution facilities in the region, as well as gas pipelines, it seems that the potential for institutional investors in Latin America is largely untapped.

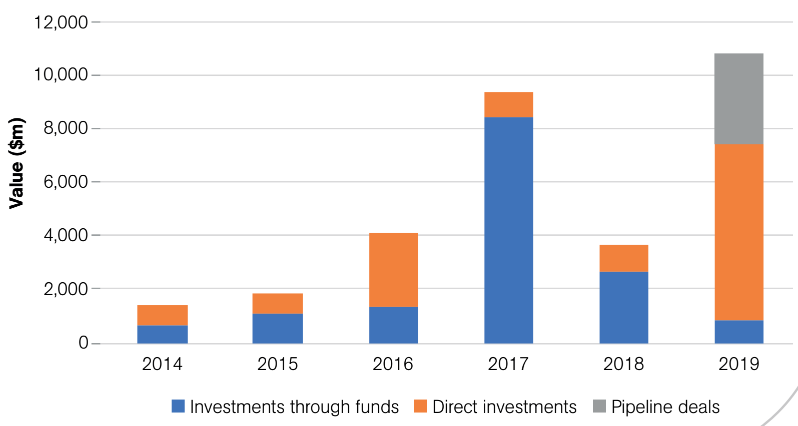
In July 2019 Brazilian energy incumbent Petrobras put more stakes up for sale in a number of generation and distribution companies, some of which have already attracted foreign infrastructure funds. *IJGlobal* and *IJInvestor* data suggest that the LatAm infra pipeline deals, involving institutional investors, totals more than $4.1 billion, with the biggest deal by far being the acquisition of 70% in Mexican toll road company RCO by Spain's Abertis and Singapore sovereign wealth fund GIC. ■

Institutional investors in LatAm transactions (2014-2019)



Source: IJGlobal/IJInvestor

Investments by institutional investors in LatAm (2014-2019)



Source: IJGlobal/IJInvestor

Asia Pacific

INSIDE

Formosa 2 offshore wind, Taiwan

Creating Asia's first infrastructure loan securitisation platform

Omaezaki-kou biomass, Japan

Pipeline & procurement deals

Closed deal values by sector

Oil & Gas: $26.49 billion

Renewables: $9.50 billion

Transport: $8.27 billion

Power: $5.36 billion

Telecoms: $4.03 billion

Social & Defence: $3.65 billion

Projects with recent tender updates

- Aboriginal First Iron Mine
- Bangkok-Rayong High Speed Railway
- Bangladesh Gas-Fired
- Broken Hill Compressed Air Energy Storage
- Greater Changhua 1 & 2a Offshore Wind
- Kidston – Mount Fox Transmission Line
- Laos – Vietnam Railway
- Mindanao Railway
- Sekong Coal-fired and Coal Mine

Countries with highest closed deal values

Malaysia	$16.34 billion	2
Australia	$12.87 billion	39
China (Mainland)	$10.21 billion	4
India	$4.73 billion	13
Thailand	$3.73 billion	6
Taiwan	$3.20 billion	3
Japan	$2.29 billion	8
Singapore	$1.51 billion	4
Indonesia	$1.04 billion	4
Philippines	$682 million	2
South Korea	$546 million	4
Afghanistan, Pakistan	$465 million	1
Pakistan	$391 million	7
New Zealand	$352 million	2
Bangladesh	$330 million	1
Solomon Islands	$240 million	1
Hong Kong (SAR)	$180 million	1
Kazakhstan	$167 million	1
Kyrgyzstan	$145 million	1
Afghanistan	$75 million	1
Samoa	$75 million	1
Uzbekistan	$75 million	1
Myanmar	$57 million	1
Tonga	$53 million	1
Vietnam	$53 million	2
Mongolia	$34 million	1
Nauru	$27 million	1
Tuvalu	$6 million	1

Transactions that reached financial close

01 Oct
Da Mi Floating Solar PV

29 Oct
Formosa 2 Offshore Wind

18 Nov
Gulf Pluak Daeng CCGT

30 Nov
Kacific-1 Satellite

04 Dec
Sydney Metro Southwest

11 Dec
Beyondie Sulphate of Potash Mine

Source: *IJGlobal*, from 1 September 2019 – 31 December 2019

DEAL ANALYSIS: This debt financing saw two financial institutions throw their hats into the Taiwanese offshore wind ring for the first time. By David Doré

Formosa 2, Taiwan

Last year saw another offshore wind milestone with financial close on a NT$62.4 billion ($2.04 billion) debt for the 376MW Formosa 2 project.

Interestingly, the equity portion has yet to cross the finish line due to pending changes to the project's sponsor line up.

Macquarie Capital (75%) and Swancor Renewable Energy (25%) are the original shareholders in the project's SPV, Formosa 2 Wind Co. JERA, the joint venture between Tokyo Electric Power and Chubu Electric Power, and Stonepeak Infrastructure Partners are in the process of finalising their respective equity acquisitions.

Debt financing

The project is thought to have a gearing of 75:25 debt-to-equity with a total of 20 local and international financial institutions and four ECAs participating on the debt financing. The NT$62.4 billion debt package consists of a roughly NT$55 billion commercial tranche and around NT$7.4 billion of contingency tranches.

Six Taiwanese financiers lent on the project: Taiwan Life (roughly NT$6 billion); Entie Commercial; SUN Commercial; Taipei Fubon Commercial (documentation); KGI; and Cathay United (lead documentation).

Meanwhile, the 14 international banks were: ANZ; BNP Paribas; Commerzbank; Crédit Agricole CIB; DBS (technical); HSBC (technical); ING (modelling); MUFG Bank; Natixis; OCBC; Siemens Bank (€90 million ($100 million) direct loan); Société Générale; Standard Chartered (insurance); and SMBC.

A source said BNP Paribas, HSBC, Société Générale and Taipei Fubon were big contributors. Some lent more than NT$5 billion.

The 18-year, fully amortising commercial tranche priced at three-month Taibor +240bp, stepping down to 200bp at COD (due by December 2021).

New kids on the block

Formosa 2 is supported by a combination of covered and uncovered debt facilities at 50:50, according to a banker.

The ECAs on the deal are Credendo, EKF, K-Sure and UKEF. All provided 100% cover except for Credendo's 90%.

Backing the involvement of Siemens Gamesa, EKF is providing the largest cover to the lenders, according to a source. UKEF is providing a NT$9.2 billion project finance guarantee.

Newcomer K-Sure is on the deal since the project SPV is importing underwater cables and a portion of the foundations from Korea. Credendo is covering the least at €100 million, according to a banker, linked to Luxembourg-based Jan de Nul supplying the foundations and offshore cables.

Taiwan Life is also a new participant, with EKF and UKEF fully wrapping the life insurer's tranche. Taiwan Life is said to have liked the "fairly attractive, good yielding risk", having gobbled up lower-yielding Taiwan government bonds ahead of the 11 January 2020 elections.

Commerzbank and Siemens Bank are backing Cathay United's performance bond. These banks don't have NT$ in their coffers. Guaranteeing the performance bond allows them to take some of the risk without the funding, said a banker.

Equity acquisition deals

JERA agreed in October to buy a 49% interest from Macquarie Capital. New York-based Stonepeak, meanwhile, is acquiring a 95% stake in Swancor Renewable Energy.

"MOEA [Ministry of Economic Affairs] became more cautious about how the original developers were sharing the project," said a source. The ministry began requesting informal restrictions from the shareholders, such as not selling shares for the time being.

After those close, shareholdings of the project SPV will be as follows: JERA (49%); Macquarie Capital (26%); Stonepeak (23.75%); and Swancor (1.25%).

Advisers

The sponsors' advisory team includes: Société Générale (financial); Clifford Chance (international legal); and Lee and Li (local legal).

Advisers to the lenders are: Linklaters (international legal); Tsar & Tsai (local legal); Benatar & Co (insurance); and Wood Group (technical).

Timeline

Banks' RFP responses in	24 January 2019
Sponsors request indicative bank debt pricing	4 June 2019
Stonepeak agrees Swancor RE deal	1 August 2019
JERA agrees Formosa 2 equity deal	9 October 2019
Financial close on debt financing	29 October 2019

DEAL ANALYSIS: Sponsor Renova made the most of Japan's shrinking renewables feed-in tariff scheme. By Mia Tahara-Stubbs & Alexandra Dockreay

Omaezaki-kou biomass, Japan

As Japan winds down its generous solar feed-in tariff (FiT) scheme, the country's renewable energy developers have turned to biomass – a sector that still enjoys a relatively high FiT.

Renova took full advantage of Japan's 20-year FiT to structure an aggressively leveraged financing for its 75MW Omaezaki-kou biomass power plant in central Japan.

Project

Renova started development in early 2016 on the project, which will be located in the commercial port zone of Omaezaki city in Shizuoka prefecture, 160km east of Nagoya and 220km west of Tokyo.

The developer planned to start design work in November 2019 with construction slated to begin in April 2021 and commercial operations in July 2023.

The total cost of the project, including pre-construction development costs, is around ¥50 billion ($459 million).

Renova owns 38% of the equity in the Omaezaki-kou biomass power plant.

The other partners are Chubu Electric Power (34%), Mitsubishi Electric Credit Corp (18%) and Suzuyo Shoji (10%).

Renova holds an option to acquire Mitsubishi's 18% stake at a future date, on or after completion of construction.

The project's approved FiT is ¥24/kWh, the applicable FiT to the year ending March 2018. Under Japan's FiT scheme, which is being phased out, the date of the central government's FiT application approval, rather than the date of start of operations, determines the 20-year tariff for a renewables project.

Renova is set to sign a 20-year power purchase agreement (PPA) at the government-set FiT price Chubu Electric Power. The PPA will apply from the date when the plant starts operating.

The developer made the final investment decision on the Omaezaki-kou biomass power plant on 19 November 2019. Financial close occurred on the same day.

> The financing includes fixed currency swaps to hedge against fluctuations in the price of the feedstock

On 28 November it emerged that a Japanese joint venture between Toyo Engineering Corp and Nippon Steel Engineering Co had won a full turnkey EPC contract for the plant.

The JV then placed an order with Siemens for a 74,950kW power output steam turbine for the project and related products, on or around 19 December.

Financing

The certainty of having a 20-year PPA with a legacy power utility such as Chubu Electric Power allowed Renova to leverage the project at an aggressive debt-to-equity ratio of around 90:10.

Chubu Electric Power has strong credit ratings of A3 from Moody's, and AA and A+ by Japanese rating agencies Japan Credit Rating Agency (JCR) and Rating and Investment Information Inc (R&I), respectively.

The roughly ¥45 billion debt financing package includes a mechanism to build up the project special purpose vehicle's cash reserves to around ¥2.5 billion to hedge against potential unforeseen accidents and problems.

The financing package also includes fixed currency swaps to hedge against fluctuations in the price of the biomass plant's fuel sources: palm kernel shells and wood pellets.

These feedstocks will be imported from Canada and the US; around 70-80% of the supplies will be delivered under long-term contracts and the remainder will be sourced on the spot markets.

Including the fixed currency swaps, the debt package priced at around three-month Tibor +200bp.

The package has two components: a 19-year, ¥40 billion non-recourse senior loan and ¥5 billion in mezzanine debt.

Shinsei Bank and Sumitomo Mitsui Trust Bank are the lead managers on the 19-year term loan. Mitsubishi UFJ Lease & Finance is the mezzanine lender.

Renova did not retain any outside advisers, financial or legal, for the transaction. ■

Timeline

FID, financial close	EPC contract awarded	Siemens receives order for steam turbine	Construction to commence	Operations to commence
19 November 2019	**28 November 2019**	**19 December 2019**	**April 2021**	**July 2023**

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NEWS ANALYSIS: *IJGlobal* spoke to Clifford Capital and AIIB about creating Asia's first infrastructure loan securitisation platform. By David Doré

One to watch

Clifford Capital and Asian Infrastructure Investment Bank (AIIB) announced last year the establishment of Bayfront Infrastructure Management (BIM), a platform to mobilise institutional capital for infrastructure debt in Asia.

BIM will leverage the knowledge gained during the marketing and issuance of the region's first securitisation of project finance and infrastructure loans, launched by Clifford Capital affiliate Bayfront Infrastructure Capital (BIC) in 2018.

BIM's $1.98 billion capitalisation plan will have a debt-to-equity ratio of 91:9, comprising $1.8 billion debt and $180 million equity. Clifford Capital will provide $126 million (70%) of the equity and AIIB the remaining $54 million (30%).

"We should think about BIM as a warehousing and distribution platform," said BIM chief exec Premod Thomas. "It will take out loans from participating banks. BIM will then hold them on its balance sheet, which would effectively serve as a warehousing facility until an adequate quantity amasses, pending their drop-down via distribution platform in subsequent issuances."

BIM looks to accelerate the time to issuance. BIC took about 18 months.

"We are looking to come to market between 12-15 months after going live in Q1 2020. This would mean we shortened the process by three to six months as a result of the learning of the BIC transaction and issue in Q1 2021," said Thomas.

BIM's business model comprises three parts:

- take-out eligibility framework
- warehousing facility
- distribution platforms

Richard Desai is BIM's chief risk officer and Nicholas Tan serves as COO.

Take-out eligibility framework

BIM will take-out infrastructure loans from the balance sheet of banks.

"The term take-out facility is evocative of the take-out from the balance sheet of the banks. It was developed between Clifford Capital and our conversations with the Monetary Authority of Singapore (MAS)," said Thomas. "We will probably not use the term take-out facility because that was a generic description of what it was we were seeking to do. We will increasingly use the term bayfront infrastructure."

> "Gather the assets and put it in a big refrigerator and keep it nice and cool until you get a sizeable amount of food in the refrigerator"

Clifford Capital and now BIM have been negotiating take-out agreements with 20 international banks and five DFIs.

The eligibility framework has been an important topic of these discussions. Part of the reason BIC took so long was that lenders weren't clear on what loans would be eligible.

"Adverse selection was a big potential problem, with the banks cherry-picking the loans," said Stefen Shin, AIIB's principal investment officer of capital markets and structured products. "We realised we needed a well-structured process with the participating banks."

Thomas told *IJGlobal* that "those understandings are now being baked into MOUs with each of the institutions".

He added: "Now we are much clearer about how the loans should look, we are spreading that information across to this larger group. Having a clear take-out eligibility framework will reduce one of the frictions to getting the loans off these banks' balance sheets onto ours."

Thomas stressed that beyond loan quality BIM would aim to warehouse a strong diversified portfolio based on industry, geography, structure and pricing: "The greater the diversification, the better the rating of the capital structure."

ESG considerations will be another factor. Most if not all the participating banks will be in compliance with Equator Principles 3. Thomas underscored that BIM won't warehouse coal loans.

"This is one of the big areas where AIIB will add value as the newest DFI on the block, which has very high ESG policies and standards," said Thomas.

Like BIC, BIM's initial issuances will be in US dollars. "We do, however, have the ability to do a small amount in AUD," Thomas said, "because Australia is the deepest infrastructure financing market in our region." BIM won't get into Yen for the foreseeable future.

This currency constraint will, therefore, preclude most local banks from participating in the beginning, as they don't do many US dollar deals. "Bank of China and the special drawing rights market are huge," Shin said, "but they don't do lots of foreign currency lending."

Warehousing facility

BIM will acquire mostly brownfield project and infrastructure loans from financial institutions, warehouse and manage them.

Shin highlighted the difference between the US and Asia financial markets: "If it was a US deal, you wouldn't need BIM. The reason is that the US syndicated loan market is super, super liquid. You can turn around deals quite quick."

However, in the US mortgage market or Asia infrastructure loan market, Shin continued, the ramp-up period is significant. "You cannot gather $500 million in weeks. It's impossible."

"We will build up our book to an adequate size in the warehouse," said Thomas. Shin alluded to roughly $700 million and then drop down after BIM distributes a portion to institutional investors.

Thomas stressed that BIM's book is an evolving number capped at $1.98 billion.

Shin likened the process of gathering food in a refrigerator: "Gather the assets and put it in a big refrigerator and keep it nice and cool until you get a sizeable amount of food in the refrigerator."

Distribution platforms

BIM has an initial target to issue securities every 12-15 months.

"Like BIC, each issuance will likely be $400-600 million, close to the $500 million sweet spot for issuance size," said Thomas.

The pilot issuance in July 2018 had 25 institutional investors from Asia, Europe and the Middle East during book-building with 16 ultimately joining. Thomas estimates those numbers will stay roughly the same for each issuance.

A key difference with BIM, Thomas pointed out, would be he will be marketing to wider set of investors. "We might look at 144A distribution format, which would take us to onshore US. It really depends on the interest we garner as we go wider in our search."

Like in BIC, BIM will hold 5-10% of the equity on the unrated tranche.

Comparables

Deutsche Asset Management subsidiary RREEF America's $431.3 million managed project finance collateralised debt obligation (CDO) RIN 1 and in-the-works RIN 2 transactions "comes closest to what we did last year" says Thomas.

AIIB's Shin suggested Freddie and Fannie Mac.

"Some don't like this comparison but generally what Freddie and Fannie Mac do for the US mortgage market is say to the mortgage banks, 'If you have loans that conform with our eligibility criteria, we'll take it off your books'," said Shin.

"We'll build up our book and regularly issue MBSs – or in our case infrastructure asset-backed securities – in the market," added the AIIB investment officer. "Freddie and Fannie are state-sponsored similar to Clifford Capital since it's 40% owned by Temasek."

However, the US mortgage market, and Freddie and Fannie specifically, do not do tranching like CLOs, noted Shin. Yet he stressed the role of Freddie and Fannie is huge.

Thomas also mentioned US alternative asset manager Mariner. It is active in the project finance securitisation space, and generally acquires the unrated, equity tranches, the lowest part of the structure in synthetic securitisation. "These are rough comparisons," cautioned the BIM chief executive.

"Our business model is the first of its kind in Asia," emphasised Thomas. "The ability to warehouse loans for an extended period of time is quite unique. Warehousing will benefit from a Singapore Government guarantee."

Challenges

Thomas ticked off seven challenges with BIM's business.

Firstly, permissions for loan transfer, as different parties, including sponsors, have to consent before the loans move into the warehouse.

Secondly, getting ECAs comfortable with BIM's business model. "Our aim is to talk with the ECAs," said Thomas, "and perhaps escalate the conversations on a G-to-G basis. Having AIIB join in those conversations will be beneficial."

A third obstacle is the time-consuming process to gain a credit rating for a security's tranches. BIM, which intends to work with Moody's, concedes that because it is a new asset class, an initial slow pace is understandable.

Other challenges involve the lack of pricing benchmarks, liquidity and research coverage. "We are working on certain pricing benchmarks with the education sector," alluding to EDHECinfra's pricing benchmark project.

Investor education is the seventh challenge. "During BIC we spoke with a lot of people," said Thomas. "As BIM's message resonates, we intend to approach more and more institutions."

The future?

Infrastructure asset-backed securities are in their very early days, cautioned Shin. One deal doesn't transform the market.

"We need three good deals in a year, then once you get over $1 billion in primary issuances, people then begin to say, 'Okay, this is interesting'," he said.

"If you are a sovereign wealth fund or insurer, you won't hire a new person or team to cover this new asset class when there's no massive primary issuance. You can't get more than some 10% on these deals. You're not going to set up a two-or-three-person team to buy $50 million of assets a year.

"Once we cross $2 billion in new issuance, then you have a new market and large players maybe build a two-person team – an analyst and an execution person," said Shin.

He added: "Then imagine you get a lot of these two-or-three-person teams at different institutional investors. The originating banks would notice and likely hire sales dedicated to this. Go with $200 million for three years; that's $600 million an investor has gobbled up.

"Then the banks might want to buy and sell a little bit, with investment bankers saying, 'I need to make a market and take some inventory'. All these things happen slowly in a natural market-building process, however.

"How fast can we get people to be really interested so that all the players in the market – from sponsors to investment bankers – come to the conclusion that they don't want to be on the outside looking in?"

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