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EDHECInfra INFRASTRUCTURE INVESTORS REPORT INSIDE

Brexit 2021

A special report in partnership with Assured Guaranty

IJGlobal Awards 2020
Shortlists announced

IJGlobal Awards 2020

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Editorial Director
Angus Leslie Melville
+44 20 7779 8034
angus.lm@ijglobal.com

Assistant Editor
Anna Cole-Bailey
+44 20 7779 8040
anna.colebailey@ijglobal.com

Americas Editor
Ila Patel
+44 20 7779 8629
ila.patel@ijglobal.com

Funds Editor
Ott Tammik
+44 20 7097 3842
ott.tammik@ijglobal.com

Senior Reporter, Asia Pacific
David Doré
+852 2912 8052
Dave.Dore@ijglobal.com

Senior Reporter, Americas
Juliana Ennes
+1 212 224 3430
juliana.ennes@ijglobal.com

Reporter, Energy
Elliot Hayes
+1 212 224 3445
elliot.hayes@ijglobal.com

Reporter, Energy
Sophie Mellor
+44 20 7779 8205
sophie.mellor@ijglobal.com

Reporter, funds and M&A
Arran Brown
+44 20 7779 8441
arran.brown@ijglobal.com

Reporter, European transport and infrastructure
Maya Chavvakula
+44 20 7779 8648
maya.chavvakula@ijglobal.com

Reporter, MEA
James Hebert
+44 20 7779 8181
james.hebert@ijglobal.com

Reporter, APAC
Civi Yapp
+852 2842 6971
civi.yap@ijglobal.com

Head of Data
Sophia Radeva
sophia.radeva@ijglobal.com

Data Managers
Yavor Guerdjikov
Stefaniya Dyulgerova

Data Analysts
Aleksandar Arsov, Lyudmila Zlateva

BD Manager, EMEA
Doug Roberts
+44 207 779 8546
doug.roberts@ijglobal.com

BD Manager, Americas
Alexander Siegel
+1 212 224 3465
alexander.siegel@ijglobal.com

Head of Subscription Sales
Dan Sedman
+44 20 7779 8675
dan.sedman@euromoneyplc.com

Production editor
Tim Huxford

Divisional CEO
Jefferey Davis

IJGlobal
Euromoney Institutional Investor PLC,
8 Bouverie Street
London
UK EC4Y 8AX
+44 20 7779 8870

Directors
Leslie Van De Walle (Chair), Andrew Rashbass (CEO), Wendy Pallot (CFO), India Gary-Martin, Jan Babiak, Colin Day, Imogen Joss, Lorna Tilbian, Tim Pennington

One year and one quarter – **what a combination**…

One year into lockdown and one quarter into Brexit and you just have to take a moment to reflect on how crazy this world is. However, the infrastructure and energy community marches to the beat of its own drum, carrying on regardless of challenges faced.

The temptation when writing pieces like this is to wax lyrical about the achievements of the global industry when faced with seemingly insurmountable challenges… but to do so feels a tad close to doffing one's cap, which sticks in this old hack's craw.

So let's focus more on the people. Having spent some time of late reaching out to old chums and industry contacts to see how they're faring, it comes as little surprise to hear that we're all in the same boat – pining for interaction with colleagues and people at large, fed up with the same routine and yearning for variety.

When we first went into lockdown in March 2020, the better half and I raised a glass of moderately-priced, supermarket prosecco to the notion of not commuting for a month or so. One year later, peering through a fringe that reaches the bottom of the highest chin and thoughts stray to that atrocious movie Cast Away… but without the attendant weight loss from being stuck on a remote Pacific island.

As with Tom Hanks, it's the little things that keep us going. He conversed with a football. We trek weekly to the supermarket.

The regular voyage for provisions is – however – fraught with peril, leaving one tooth grinding at people's insistence on not observing the distance rule. It also gives the chance to admire an array of face masks that range in ingenuity from what appeared to be a pair of skimpy lady's underwear to cumbersomely roaming the store, one arm raised to the sky, nose tucked into the right armpit.

The inventiveness of imbeciles is to be admired, not imitated.

Who would have thought a year ago that the high point of the next 12 months would be the launch of a new supermarket in the local environs?

Living in the outer reaches of the London Borough of Richmond, a frisson of excitement rippled (slowly) through the community as word spread over social media that a new Lidl (a low-price European supermarket chain) had opened across the river in Twickenham. Bags-for-life snatched, door slammed, engine spluttering to life and off to the neighbouring borough we sped (observing the 20mp/h speed limit).

With the wonder of infants, we roamed the sparsely-populated aisles pointing out products rarely seen on these shores… usually for good reason. Arriving at the checkout with an overladen drag trolley (those blue things are ghastly) to pay tuppence ha'penny for a pile of provisions that will rot before you have a chance to eat them and wine that could lift paint.

Not deterred by paint stripper vino plonko and mouldy satsumas (why easy peelers… sound like promiscuous police officers), the second visit saw us crammed cheek-by-jowl with the worst kind of shopaholics and a shoplifter who all but sent Enn Tee (the other half) sprawling as he barrelled through the checkout with his ill-gotten gains.

I mean really… shoplifting at Lidl? Has he no self-respect? There's a Waitrose along the road.

So here we are – strapped for stimulation, trapped on the hamster wheel of working from home… you might as well read the latest issue of the IJGlobal magazine.

Apart from the usual spread of regional case studies and features in the back end of the mag, we have a special focus on Brexit with a feature on Assured Guaranty and its new office in Paris. Further, we have a whole supplement on EDHEC Infra which has a compelling product to assess true valuation of investments made by funds, and a host more to keep you entertained and informed… and out of disease-ridden supermarkets. ■

Editorial Director
Angus Leslie Melville
angus.lm@ijglobal.com

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Developer

Sembcorp Industries

Singapore-based energy and urban development company Sembcorp Industries has appointed Eugene Cheng as the group chief financial officer, succeeding Graham Cockroft. Cheng joined the company on 8 March.

Tampa Electric

Archie Collins took over as CEO of Tampa Electric, one of Florida's largest investor-owned utilities, from Nancy Towers who retires at the end of June.

Vestas

Purvin Patel was made Vestas regional president for Asia Pacific, replacing Clive Turton. Patel joined from IS UK & Ireland where he was CEO.

Purvin Patel

Viridor

PwC grandee Paul Davies joined Viridor as interim group development director working across the infrastructure and carbon capture storage space, based out of London.

Ledcor

Amardeep Grewal has joined construction company Ledcor as senior VP for infra investments, based in Toronto. He joins from Parsons Corp where he spent 4 years as VP, head of concessions and infra finance.

BAI Communications

Brendan O'Reilly is now CTO at BAI Communications having joined from Telefónica where he was the CTO for O2's UK operation. He is based in London and started in March, tasked with accelerating BAI's expansion. He reports to group CEO Igor Leprince.

Nordex

Ilya Hartmann from start March is CFO at Nordex, stepping up from being CEO of its European division, and replacing Christoph Burkhard who exited end February. Hartmann joined Nordex in August 2017 from Acciona Energy.

Ilya Hartmann

SolMicroGrid

Richard Grosdidier – whose solar finance career has included stints at NextEra Energy, NRG Energy, Innogy Renewables and Sunfinity Renewables – has moved to microgrids. The PF veteran started in January as executive VP of commercial execution at SolMicroGrid.

John Laing

Rob Memmott started as CFO at John Laing having most recently been CFO of Praetura Group, a privately-owned financial services business. Based in north England, Memmott was CFO of Arrow Global Group, and led the company through its IPO.

CIMIC Group

Emilio Grande started as CFO at CIMIC Group early January replacing outgoing CFO Stefan Camphausen who oversaw the recent 50% sale of CIMIC's mining business to Elliott Advisors. Grande joined from engineering company UGL, a CIMIC subsidiary.

EDF

Oliver Moß joined EDF as head of strategy and corporate development based out of Pinneberg, Germany, after almost 20 years at PwC. He will support the implementation of mid- and long-term EDF strategy for renewable energy in German.

Chesser Resources

ASX-listed gold miner Chesser Resources appointed former Macquarie banker Andrew Grove as its new CEO from start February, based out of Perth. He replaces outgoing MD Michael Brown and joins from Perseus Mining.

Enel Generación Chile

An Enel Green Power executive was made general manager of Enel Generación Chile, following the resignation of Michele Siciliano. James Lee Stancampiano, Enel Green Power's head of business development in Chile, replaced him starting on 1 January.

Nautilus

Nautilus Solar Energy hired Courtney Matsuishi as general counsel, taking her from Akin Gump where she was senior counsel having worked in the law firm for more than a decade, and having started her career at Goodwin in 2008

Transurban

Michelle Jablko was appointed group CFO at Transurban having joined the road developer and operator from ANZ where she had been CFO since 2016. She is based in Melbourne and has deep experience in investment banking having been a lawyer before that.

Michelle Jablko

Vesper Energy

Vesper Energy brought in Rob Scheuermann as CFO. He joins from Indianapolis-based LNG supplier Kinetrex Energy where he had been CFO for over a year. Prior to that, he spent six years at SoCore Energy, first as CFO and then as president.

Equinor

Norwegian state energy group Equinor made Ulrica Fearn CFO with effect from 16 June 2021. She will succeed Svein Skeie who becomes senior VP and CFO for performance management and risk. Fearn is currently director of group finance at BT.

Vattenfall

Jenny Curtis joined Vattenfall Heat UK as director of commercial and development, having been co-head of sustainable energy at Amber Infrastructure. Curtis worked with stakeholders across the district heating market in the UK, as well as on technologies like decentralised energy, EV charging, energy efficiency and storage.


Jenny Curtis

Uniper

German utility Uniper made Mike Newman North American head of power and gas trading. He had led the gas trading business for the past three years, and now oversees the combined power and gas trading portfolio as senior MD of Uniper Global Commodities NA. He replaces Benjamin Pratt who left to join fintech platform BitOoda.

Rio Tinto

Jakob Stausholm became CEO of Rio Tinto at the start of January after board pressure to remove the chief exec following destruction in May 2020 of a sacred Aboriginal site in Western Australia. Stausholm has been with the Anglo-Australian miner since 2018 as an executive director and CFO.


Jakob Stausholm

Mace

British construction giant Mace made Robert Fields its new regional director for Australia and New Zealand as a part of the company's expansion into the region. He started in January from RPS Group and is based in Sydney, succeeding Jeremy Oakes who stays on in a consultant capacity.

Fortum

Finnish state-owned energy company Fortum announced Bernhard Günther its new CFO. He was also be made a member of the executive management team and relocated to Espoo in February. He was previously CFO of renewables firm innogy SE.

Eco Wave Power

Israeli wind energy developer Eco Wave Power hired Aharon Yehuda as its new CFO at the HQ in Tel Aviv. Yehuda joined from Israeli jet engine repair company Turbochrome where he had also been CFO.

Woomera

Australian copper ore miner Woomera made Kevin Seymour MD, effective from the start of 2021. He is a veteran geologist and will be working out of Perth, having previously been general manager of exploration at Ramelius Resources.

Glencore

Anglo-Swiss miner Glencore announced Gary Nagle as the new chief executive taking over from long-standing CEO Ivan Glasenberg who is retiring after 18 years at the helm. Nagle has been with the company for nearly 20 years and relocated from Australia to Switzerland.

Mainstream

Irish developer Mainstream Renewable Power hired Sergio Montenegro to fill the newly created CFO position for Latin America. He operates out of Chile and has deep experience in the sector, including having served as South America CFO at Vestas.

AES Corp

Italo Freitas was promoted from being head of the Brazilian subsidiary of AES Corp to take on a new regional role. Freitas is now VP of AES South, reporting to president Julian Nebrada. Clarissa Sadock replaced Freitas at AES Brasil.


Italo Freitas

Invenergy

Chicago-based developer Invenergy hired David Fatzinger as a VP to act as the company's country manager for Mexico. He reports to Paul Abitante, senior VP of international development, and has been working in the Mexican power sector for almost eight years.

Funds

EQT

EQT promoted 3 members of its infra team to partner as part of a wider wave of promotions. They are Anna Sundell in London; Johann-Christoph Balzer in Munich; and Ken Wong in Sydney.

Infratil

Jason Boyes was named chief executive of Infratil, succeeding Marko Bogoievski who retires after 12 years in the role, effective 1 April. Boyes joined Infratil in 2011 and will operate out of Wellington, New Zealand.

First Sentier Investors

FSI hired Sophie Durham as ESG director and Ilona Kriksciunaite as executive in the London office.


Sophie Durham

HSBC

HSBC has hired UBS veteran Steven Wirth as global head of real asset fund coverage. Wirth is spearheading coverage of the real asset funds, which the bank deems to be a "priority growth vertical within the private capital group".

River and Mercantile

Ian Berry – former head of infra equity at Aviva Investors (until May 2020) – joined River and Mercantile to establish a new infrastructure business. He was shortly joined by Allan Vlah, Fergus Helliwell, Anne-Sophie Eveno and Dan Wilcockson.

Impax

Sean Maguire joined the Impax Asset Management private equity/infra team in London as a MD, moving there from Statkraft. His experience in renewables – particularly PPAs – will be put to sourcing and executing new investment opportunities. He reports to Carsten Johansen, MD and head of the PE/infra team.


Sean Maguire

Greenbacker

Dan Bernardi and Quinn Pasloske joined Greenbacker Capital Management in senior roles in the US capital raising and origination team on the Greenbacker Development Opportunities Fund (GDEV). They operate out of New York.

GCP

Thilo Tecklenburg, former partner at French asset manager Meridiam, was made MD of Golding Capital Partners to strengthen GCP's infrastructure team. He reports to managing partner and CIO Matthias Reicherter.


Thilo Tecklenburg

Power Sustainable Capital

Carl Olivieri exited CDPQ to join Power Sustainable Capital in Quebec as senior associate. PSC is a global multi-platform alternative asset manager focused on long-term investments in sustainable strategies.

Pantheon

Pantheon promoted two of its infra team to partner. London-based Jérôme Duthu-Bengtzon and Dinesh Ramasamy in San Francisco were made up from principal to partner. Paul Barr was also taken on as investment partner in London.

Schroder Aida SAS

Schroders has appointed Chantale Pelletier as global head of infra and president of Schroder Aida SAS, the firm's Paris-based infra business. She joins at the end of March from CDPQ and reports to Georg Wunderlin, Schroders's global head of private assets.


Chantale Pelletier

Colony Capital

Colony Capital and digital infra investment arm Digital Colony have named Latifa Tefridj-Gaillard as MD and head of Europe capital formation. She joins from Goldman Sachs and will advance Digital Colony's strategy in the region.

Infracapital

Charles Brière was hired into Infracapital at associate level, based in London. He spent the last three years at DC Advisory where he began as an M&A analyst in 2018, before being made an associate in April 2020.

EIF

Project finance veteran Celine Barbot joined the European Investment Fund as an investment manager in the climate and infra funds division. She relocated from Paris to Luxembourg for her new role and previously worked at Colas.


Celine Barbot

Starwood

Starwood Energy Group Global recruited Jeffrey Levy, the former Atlantic Power Corp GC, as deputy GC and MD. Before joining Atlantic Power, he held in-house counsel positions at First Wind Energy and Ameresco.

KKR

KKR appointed Giacomo Di Nepi as a senior adviser to assist on healthcare investment opportunities and support existing portfolio companies. Di Nepi began his career at McKinsey, followed by 11 years at Novartis where he held a number of executive roles, including CEO of Novartis Italy.


Giacomo Di Nepi

Brookfield

Toronto-based David Krant in early March became CFO of Brookfield Infrastructure succeeding Bahir Manios who remains as chief strategy officer at Brookfield Infrastructure and CIO of Brookfield Asset Management's newly-created reinsurance business. Manios will also continue to be responsible for Brookfield's private infra funds.


David Krant

Carlyle

Renowned infra specialist Macky Tall left CDPQ to join Carlyle as co-chair of infra at the end of Q1 2021. Tall will work alongside co-chair Brooke Coburn, as well as Pete Taylor and Pooja Goyal, co-heads of the Carlyle Global Infrastructure Opportunity Fund (CGI).


Macky Tall

Ardian

Michael Obhof joined Ardian Infrastructure in the newly-created position of MD, based in the New York office. He is focused on Ardian's North American portfolio and reports to Mathias Burghardt. Prior to this, he was at Goldman Sachs' Infrastructure Investment Group.

CIP

Boris Korejtko joined Copenhagen Infrastructure Partners at VP level, following 3 years at Talanx Investment Group. Korejtko operates out of CIP's Utrecht office in the Netherlands in its new market fund's team working on renewable energy investments.

Vertical Bridge

Eve Bernèche exited CDPQ to join Vertical Bridge's board of directors. She was senior director of infra at CDPQ which acquired a 30% stake in Vertical Bridge Holdings – the largest private owner and operator of communications infrastructure in the US – in June 2019.


Eve Bernèche

GIP

Noah Keys – former Lehman and Barclays investment banker – joined Global Infrastructure Partners as a managing director in New York. He is responsible for GIP's capital raising and IR activities in North America and was most recently at AlpInvest Partners.

Lenders

IFC

Martin Spicer was made director for Latin America and the Caribbean at the IFC, having worked at the institution for more than 20 years. Spicer is based out of Bogotá, Colombia.

Martin Spicer

AFC

The Africa Finance Corporation hired Sameh Shenouda as its new executive director and CIO, replacing Oliver Andrews who had been CIO since August 2014. The new hire joined from infra developer Zarou.

Sameh Shenouda

Lloyds

Lloyds Bank has appointed project finance specialist Tony Hable as the new director of its infra and project finance originations division. He joins from Mizuho where he was the director of power and advisory within the European structured finance department.

Lloyds

Victoria Whitehead has been promoted to MD and head of infra/transport at Lloyds Bank in London. Whitehead has been at Lloyds since 2001 and reports into Guillaume Fleuti.

Victoria Whitehead

KfW IPEX Bank

Christian Bevc has been promoted to KfW IPEX global head of its syndications and treasury division, based in Frankfurt. He will oversee syndications across the projects, assets and export sectors. He has worked at KfW IPEX for over 20 years.

NIB

Nordic Investment Bank named André Küüsvek as its new president and CEO, starting 1 April and succeeding Henrik Normann who is retiring. As an Estonian, he is the first NIB president from a Baltic country and joins from EBRD.

Schroders

Tim Hallam, a former executive director at the Northern Australian Infrastructure Facility, joined Schroders' newly-established private debt team in Australia. He started as a portfolio manager to work closely with head of private debt Nicole Kidd.

Kommunalkredit

Sebastian Firlinger joined Kommunalkredit as chief risk officer from Südwestbank AG, relocating from Stuttgart to Vienna for his new role. He joins the bank's executive board, which includes CFO Jochen Lucht and CEO Bernd Fislage.

RBC

James Elgeti was promoted to project and structured finance VP at RBC Capital Markets in London, having joined as an associate in 2018 from Societe Generale.

ABN Amro

Timo Buijs exited his post as infra VP at NIBC to join ABN Amro Bank's project finance division in Amsterdam. He is charged with overseeing digital infrastructure finance at ABN.

HSBC

Alexandre Broggi and Dimitrios Papatheodorou joined the HSBC Global Asset Management infra debt investments team. Hong Kong-based Broggi started as senior portfolio manager of Asia infra debt and is an internal move, replacing Frederic Thomas. Papatheodorou came from Sequoia Investment Management and is on the London team.

Alexandre Broggi

East West Bank

Michael Gee, a senior MD who recently left CoBank's project finance team in Denver, surfaced at East West Bank where he operates out of Pasadena, California. Gee had been with CoBank since 2014 and focused on power, renewable energy and midstream energy transactions.

Advisers

Winston & Strawn

US-based law firm Winston & Strawn created a fully-integrated energy/infra industry group led by partners Mike Blankenship, Mike Pikiel and Rich Shutran. Partners Alan Hoffman and Joe Karp continue to lead the firm's PF practice group and energy regulatory practice group, respectively.

Nossaman

US law firm Nossaman welcomed two infrastructure lawyers to the firm's partnership – Shant Boyajian in Washington DC and Courtney Krause in San Francisco.

Kirkland & Ellis

Tatiana Monastyrskaya joined Kirkland & Ellis as a partner in the debt finance practice group, based in New York. She advises PE firms, infrastructure funds and financial institutions in the energy and infra space.


Tatiana Monastyrskaya

Bose McKinney & Evans

Thomas Cook, former deputy mayor of the City of Indianapolis, has joined law firm Bose McKinney & Evans as partner. He joined the site selection and economic incentives group to assist clients with economic development opportunities in Indiana and the Midwest, site selection, financing options, workforce and development incentives and P3s.

Tribe

Tribe Infrastructure Group hired David Whitehurst as development director in London as part of a push to expand the company's UK business. He previously spent 19 years as an investment director with John Laing's European primary investment division.


David Whitehurst

Hogan Lovells

Hogan Lovells appointed Mochamad Kasmali as corporate and finance partner in the infra, energy, resources and projects practice. Kasmali joins Dewi Negara Fachri & Partners, Hogan Lovell's association firm in Jakarta, Indonesia.


Mochamad Kasmali

Barrenjoey

Barrenjoey Capital poached two more JP Morgan people following Rob Stanton's move to the newly established Australian advisory firm last year (2020). Dyson Bowditch, JP Morgan head of ANZ syndications, and Jabe Jerram, co head of investment banking, jumped ship to the Barclays-backed firm.

AECOM

Jennifer Aument has joined AECOM as CEO of its global transport business to drive innovative solutions. She joins from Transurban where most recently she was president and CEO of its North American business.

EY

Tony Johnson has resigned from his role as head of EY Oceania after 6 years in the job. The Melbourne-based regional managing partner will stay on until 30 June while his replacement is identified.


Tony Johnson

Scope

Independent European credit ratings agency Scope Group made Carlos Terre MD of its mandate and license business. He continues to be based in Berlin and oversees credit ratings, risk-return ratings, ESG ratings and ancillary products, such as risk models and analytical tools.

Credit Suisse

Credit Suisse promoted Ted Michaels from being head of North America renewables in New York, to a new global position overseeing investment banking in renewables and sustainable energy technology. He has been at Credit Suisse for 14 years, handling corporate and PF mandates and M&A.

Linklaters

Established Linklaters lawyer Matt Keats as taken over as the firm's head of energy and infra for the Middle East – succeeding Sarosh Mewawalla who has now retired from the partnership.


Matt Keats

Rubicon

Nick Melton joined Rubicon Capital Advisors as MD and head of North America, coming from Greenhill & Co. He operates out of New York and will lead Rubicon's strategic advisory, capital markets and principal investment activities in the US and Canada.

Marathon Capital

Chicago-based investment bank Marathon Capital established an outpost in Europe with a senior hire from Moelis & Co in London. Christopher Shaw is tasked with expanding Marathon's client and investor base as senior MD and head of European investment banking.

Deloitte

Oliver Bradley, senior commercial manager for the UK's Department for Transport, joined Deloitte as a manager in its government and infra division. Bradley had been at the DfT since 2018

Cuatrecasas

Spanish law firm Cuatrecasas, pursuing growth in LatAm, has hired nine partners in Chile, Mexico, and Colombia, three of whom work in the energy sector. The relevant ones are Josefina Yávar and Macarena Ravinet (in Chile), and Allesia Abello-Galvis (Colombia).

AZB & Partners

Anuja Tiwari joined AZB & Partners as a partner in the Indian law firm's infra, PF and energy practices in Delhi. Tiwari, along with colleagues Mallika Anand, Amoolya Khurana and Aman Raj, started early in January.


Anuja Tiwari

REM Capital

Nils Driemeyer, former global head of renewable energy at Hamburg Commercial Bank (formerly HSH Nordbank), joined German advisory firm REM Capital. He is head of energy, infra and international finance, based in Hamburg, and oversees M&A, debt advisory and PPAs.

Miranda & Amado

Peruvian law firm Miranda & Amado made up two lawyers to partner in its natural resources, infra projects and labour practice. They are Isabel Lira Miró Quesada and Carlos Cadillo Ángeles, who both joined the firm in 2008 as associates.

Baker McKenzie

Nick Rainsford joined Baker McKenzie as the firm drives a strategy to grow its transactional practice. The lateral hire saw him shift across from Ashurst where he was a financial sponsor and M&A partner.


Nick Rainsford

Milbank

Karen Wong, a Los Angeles-based partner in Milbank's project, energy and infra finance group with over three decades of legal experience, announced her retirement. She may consider future consulting opportunities.


Karen Wong

ProFin

Financial modelling veteran Graham Bloomfield launched project finance advisory firm ProFin in London. It aims to provide "bespoke specialist services" for projects, including financial advisory for PF transactions, financial modelling, business planning and cash flow forecasting.

Mattos Filho

Brazilian law firm Mattos Filho brought on Adriano Drummond Trindade as partner in its infra and energy practice. Trindade, who has expertise in the mining sector and joined from rival firm Pinheiro Neto, where he worked for nearly 23 years.

Apricum

Renewable energy advisory firm Apricum hired Charles Lesser to expand its transaction advisory services. The London-based adviser will started on 1 January. Apricum's partners include Nikolai Dobrott (founder), Florian Haacke, Frank Beckers, Dr Moritz Borgmann and Florian Mayr.

Vinson & Elkins

Vinson & Elkins promoted Houston-based Matt Falcone to partner, energy transactions and projects, while Katherine Frank was made up to partner, M&A and capital markets in the Dallas office. Falcone advises public and private companies, private equity funds and other financial sponsors, while Frank is experienced in corporate finance and securities law.

Katherine Frank

WFW

Watson Farley & Williams opened a new office in Düsseldorf in January, expanding the law firm's German energy practice. The team of eight lawyers moved over to the firm from Pinsent Masons with the lead partners being Thorsten Volz and Torsten Wielsch.

DLA Piper

DLA Piper recruited a Latin America-focused partner from Baker McKenzie to serve as regional head of banking and finance. Margarita Oliva Sainz de Aja joined to oversee the LatAm banking division. She will be a partner of DLA Piper Argentina, resident in the New York office.

Margarita Oliva Sainz de Aja

Furcolin Mitidieri Advogados

Legal energy and infra specialists Felipe Furcolin and Marcos D'Avino Mitidieri have founded the Brazilian boutique law firm Furcolin Mitidieri Advogados. It focuses on infra and public law, advising clients in sectors such as electricity, oil and gas, sanitation, toll roads and ports.

Felipe Furcolin

Boll Behrendt Lüdemann

Finance veterans Christian Boll, Philipp Behrendt and Olaf Lüdemann launched Hamburg-based Boll Behrendt Lüdemann, an insurance advisory boutique with a primary focus on renewable energy. Their goal is to offer "unique global insurance and risk advisory for insurance due diligence services".

White & Case

White & Case expanded its project development and finance practice with two hires in Singapore. Tim Fourteau and Jamie Franklin joined as partners from Latham & Watkins. They both have strong energy focuses.

Tim Fourteau

Squire Patton Boggs

Natalie Lonergan and Tatiana Gotvig joined Squire Patton Boggs as Sydney-based partners in the firm's energy and natural resources practice. Lonergan, is long established in the energy space while Gotvig has worked for 2 decades on gas, LNG and energy infra across APAC.

Cescon Barrieu

Cescon Barrieu opened a Toronto office in January, the first time a major Brazilian law firm has had a physical presence in Canada. The office is headed by Frederico Marques who until August (2020) was leading McCarthy Tetrault's Latin American practice. ■

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Brexit special report 2021

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Assured Guaranty

Assured Guaranty – a Parisian response to Brexit

IJGlobal speaks to Assured Guaranty's Paris-based **Raphael de Tapol** about the challenges brought by Brexit and how AG has risen to overcome them…

As the only company still actively engaged in writing new financial guarantee business in Europe, Assured Guaranty (AG) is well positioned for the post-Brexit environment having created a new subsidiary, AA rated Assured Guaranty (Europe) SA (AGE) to serve the European markets from Paris. Its previous UK business, Assured Guaranty UK Limited (AGUK), continues to operate from London.

AGUK has historically covered everything from the UK to the rest of Europe, Australia and New Zealand. However, while Brexit served as a catalyst, AG was already considering opening a continental European base of operations as the team were seeing increasing opportunities in Europe.

Raphael de Tapol, Deputy Managing Director at AGE, says: "Regardless of Brexit, we saw increasing demand for our products in Continental Europe, and believed that having a presence on the continent would help us seize that opportunity and materialise it. Brexit accelerated that process."

He adds: "As soon as the referendum took place in 2016, we started working on our strategy. The issue for us then was not only being able to continue to write new business in the EU, but it was also essential for us to be able to service existing policies – receive premiums, pay claims and make sure the policies we had issued in Europe up till then would remain enforceable for our policy holders."

AG took the decision to not wait until the last minute and to have a strategy whatever the outcome, opening the new company in early 2020 and identifying Paris as the ideal location given its central position in Europe, communication links, and it being a vibrant financial hub that is home to a number of key players in the infrastructure space.

France proved to be a welcoming host.

"We had a lot of exchanges with the French regulator that were very constructive and positive," says Raphael. "That was another reason why we chose Paris – there was a very good dialogue with the regulator and it was a relatively smooth process.

"AGE obtained its licence at the start of 2020 and wrote its first policy the following month – the financing of one of the Spanish solar PV projects that we have guaranteed."

Transfer of assets

One of the first tasks the Paris office faced was the transfer of existing EU exposures from the UK to the new French balance sheet.

"AGUK, our London based company, had issued a number of policies for the financing of various European infrastructure projects and it was essential that we ensure those policies remain enforceable for our policy holders and that we would be able to continue to service them after Brexit," says Raphael. "To that end, we had to transfer the portfolio from the UK balance sheet to the new French entity."

This involved a Part VII Transfer, which is more common for multi-line insurers when they transfer portfolios and assets to support those policies and is a court approved process designed to ensure the transfer is appropriate for policyholders. This was finalised in October 2020, several months before the Brexit deadline.

"This meant that immediately we had a portfolio of 79 policies, approximately €6.1 billion of exposure, that were transferred to the French company. Such policies were almost exclusively in the infrastructure, energy and public debt sectors," says Raphael.

"At that stage, the French entity which at that time only had a handful of policies that we had issued since the start of operations, became a much larger operation."

The future beckons

Having established the European beachhead and relocated a significant portfolio to the Paris company, it was time to drive business which – for AG – has recovered impressively from the lows of the global financial crisis.

Raphael de Tapol

"We had a portfolio of 79 policies, approximately €6.1 billion of exposure, that were transferred to the French company. Such policies were almost exclusively in the infrastructure, energy and public debt sectors."

"Historically, our main focus had been the UK as we had our capital and resources there and the market was more comfortable with the monoline product and capital market issuances," says Raphael.

"However, even before we opened in Paris, we had already resumed issuing new guarantees in Europe – mostly in the secondary market – and it has proved to be one of our most active sectors in the infrastructure space over the last 18 months.

"We re-entered the Spanish market after having taken a pause after the global financial crisis and have closed four large transactions in just over a year – with both the PV and CSP technologies – and we are actively working on deals that we are hoping to close in the coming months."

These transactions all benefit from regulated revenues – a preferred risk profile for AG, perfectly aligned to the company's historic activity.

"Whilst these deals have been a growth area for AGE, the group carefully manages single risk and sector limits in order to manage the effects of correlated credit events. We will only be able to do so many Spanish solar deals with regulated revenues as a result," says Raphael.

Beyond the Spanish solar market, AGE is looking to diversify its broader renewables exposure across Continental Europe, looking for solar projects in other jurisdictions with a similar risk profile.

"We will be targeting individual solar projects backed by a PPA where the offtaker is a utility company, or any other entity for which we would normally guarantee the debt issuance – the likes of quasi sovereigns like universities or local authorities," says Raphael.

"However, we are fully conscious that most solar projects being developed these days tend to be backed by PPAs where the offtaker is a traditional corporate and that is something we would not typically have credit appetite for on a standalone basis."

"Finding opportunities where we can apply our infrastructure and structured finance capabilities is a key part of our strategy going forward."

Raphael de Tapol, Deputy Managing Director at AGE

"We could explore providing a guarantee to the financing or refinancing of a portfolio of solar projects which are backed by multiple corporate offtakers." says Raphael. "That is not something we have seen yet, but with the speed at which the market is moving and at which some big equity sponsors are acquiring or developing new solar projects, this is something we expect to see soon."

AG sees opportunity here for the future – renewable energy projects backed by corporate PPAs with the right level of diversification (industries and jurisdictions) as well as locations.

This speaks to non-infra deals AG has closed in recent years: "In parallel to our infrastructure segment which has been very strong in Europe over the last decade, we have been providing financial guarantees in the structured finance space, in particular in the CLO sector."

"Finding opportunities where we can apply our infrastructure and structured finance capabilities is a key part of our strategy going forward." says Raphael.

AG hopes to replicate the approach it has taken in the solar sector and apply it to onshore wind. Offshore wind has so far remained challenging for the monoline which – as is the nature of the beast – tends to shy away from early-mover status in an emerging sector, but AG recognises that the sector has significantly matured over the last few years and is now actively considering entering this market as well.

Traditional focus

A cornerstone for AGE's target business across Europe will continue to be more traditional PPPs – concession-based projects – a sector that has historically been active for monolines.

While this sector has been most active in the UK PFI market, AG has remained focused on European projects where – until recently – it has been challenging for the wrapper to compete against local lenders.

If AG is to operate in this space, it is likely to be on big-ticket transactions.

"We like to be the controlling creditor – the majority portion of the senior funding solution," says Raphael. "For large projects, we need support for large capacity from our investor base, something that has changed recently… mostly thanks to the deals we closed in Spain.

"For PPP projects, we may be able to guarantee senior debt up to €800 million per project and have seen evidence of investor appetite to buy wrapped debt up to that amount at very competitive margins."

Raphael adds: "This is interesting to sponsors for a number of reasons. The universe of investors who have bought debt wrapped by AG is global. We have seen the wrapped solution attracting investors into jurisdictions and sectors that they might not have been interested in without the financial guarantee. We have also seen such investors taking bigger tickets if the debt is wrapped. From the sponsor's point of view – especially for those large financing requirements – with us acting as guarantor, we are the single point of contact.

"That makes the whole process – not only during execution, but also during the life of the project – between the sponsor and the senior funder much smoother."

"We re-entered the Spanish market after having taken a pause after the global financial crisis and have closed four large transactions in just over a year."

Raphael de Tapol, Deputy Managing Director at AGE

As to regional focus, AGE is targeting highly-rated European countries with a particular focus on availability based projects in Benelux, Scandinavia and France. It also continues to target toll roads where the monoline has wisdom to bring to the table.

Talking about European toll roads, Raphael says: "We have been able to observe how these projects have performed through economic cycles – most recently with the Covid-19 crisis. We believe that we can be very competitive in this sector".

Stewart Robinson

Stewart Robinson, Managing Director, Power, Energy and Infrastructure at Cantor Fitzgerald

"Cantor have been discussing the AG wrapped bond solution with the global institutional investor base for a number of years. Each year and after each successful transaction we see increasing demand for wrapped debt. Depending on the institution this demand is driven by relative value returns versus other highly rated debt, the improvement in Solvency II or regulatory treatment, or simply de-risking for lenders entering new markets, sectors or investing in deals with construction risk. This demand is present across major currencies and geographies and Cantor are actively pursuing AG wrapped transactions in Europe, US and Australia."

Structured finance & infrastructure experience

One area that is of particular interest for AG – as previously mentioned – is the blend of its capabilities in both structured finance and infrastructure finance.

AG's Raphael de Tapol anticipates that this combined approach could reap rewards in the guarantee of portfolios of operational infrastructure assets held by banks. Similar to the way AG's products have helped Solvency II regulated insurers to be efficient with their capital, AG believes that the monoline's product could be all the more central for banks seeking the same benefits.

"We have been approached by a number of banks looking for our credit protection on their existing portfolios for a range of asset classes, not only infrastructure, as a means for them to optimise the capital associated with those assets," says Raphael.

"If the portfolio shown to us by a bank consists exclusively of assets which we are comfortable with from a credit standpoint, then we could guarantee the entire portfolio and enhance the rating to our credit rating of AA. We have done a few of those over the last few years, largely driven by regulatory objectives. But these portfolio opportunities are also a way for us to guarantee exposures that we probably would not be able to do on a stand-alone basis."

This approach is opening the door to opportunity for the monoline.

"When banks come with portfolios of infrastructure assets that we would not guarantee individually because they are in a jurisdiction or an asset class we are not comfortable with, we can guarantee a senior portion of the portfolio," says Raphael.

"Either the bank itself would retain a first-loss tranche, or that first-loss tranche would be transferred to a third party – which we may be able to facilitate. We could front-end guarantee 100% of the portfolio and transfer that first-loss risk to another party."

This is an interesting area of activity for AG and – should the monoline be able to prove the value of its product to banks on existing assets – there is no reason why this trend should not lead to an uptick in activity… even for new debt.

All told, having engineered impressive recovery from the all-time low of the global financial crisis, Assured Guaranty seems to be riding a wave of new business with the French company playing an increasingly vital role in this post-Brexit economy. ■

Julián Pérez de Madrid

Julián Pérez de Madrid, Head of DCM at Banco Sabadell, Madrid

"I have been working with Assured Guaranty since 2018, achieving the closing of the first wrapped project bond in Spain since 2010. Up to date, we have arranged close to €1 billion transactions with AG, and we are currently working in projects of circa €400 million.

"AG is very flexible and committed. During the execution phase of a Project Bond, it is standard to come across some complications. Assured Guaranty always find a way to solve them in a very constructive way, something that is crucial to get transactions closed in form and time.

"In our experience when placing a project bond, investors look at Assured Guaranty as a reliable partner and – in our experience – appraise the benefit of the guarantee in two main aspects: giving comfort in the process of investing and during the life of the investment, basically through alignment of interests and awesome analytical team; and letting investors meet the most efficient yield / capital consumption, not only improving the credit rating of the investment but achieving an uncorrelated credit position.

"As lead manager, we also see AG as a partner. They help us to find the financial solution to our clients, both the issuers and investors."

The post-Brexit future of the UK fund

In the run-up to Brexit, many UK-based fund managers shifted domiciles to Luxembourg – but for now, much of the business operations remain in Britain. Whether it will stay that way depends on future relations and EU ambitions, writes **Ott Tammik**

Since the EU referendum, an estimated £1 trillion in assets and thousands of jobs have moved from London to Europe, according to analysis by EY. The statistics have become more palpable in the months since the transition period came to an end, with Amsterdam taking London's place as Europe's biggest trading centre and the risk that other services from derivatives to bonds are following.

For the UK's financial services industry, the last-ditch trade deal agreed in December 2020 (which has been bogged down by further delays) has been a frustrating "no-deal". With Europe holding all the cards, as one fund manager puts it, the UK and EU have still yet to hash out a framework for the financial sector, with an MoU initially due before the end of March.

Two of the biggest challenges facing fund managers in particular are the loss of passporting rights – which allowed them to raise capital from investors across the EU – and certain capital regulations that will push institutional investors towards a preference for EU funds over non-EU funds.

In particular, the loss of passporting is an issue for core infrastructure funds, which have been popular with EU investors, whereas core+ strategies have been more popular with US and Asia investors.

The consequences, such as staffing up in Europe, are still evolving but have been playing out since the referendum. In a nod to this trend, placement agent Campbell Lutyens, which supports funds on their capital raising activities, recently opened an office in Paris, saying it "enables the firm to continue supporting its clients and investors effectively following the UK's departure from the European Union".

Losing the passport

In January, the UK has shown it is keen to cooperate in financial services by adopting the EU's regulatory framework for private funds (the AIFMD) as a British law and granting market access to the EU in a number of areas based on "equivalence" – a legal recognition of the other's regulatory rules. But, as lawyers point out, the main benefit of the somewhat problematic EU fund regulation was passporting, which no longer applies.

Fund managers based in the UK – historically home to a big portion of infrastructure funds – are having to find workarounds to gain access to European institutional investors.

For large financial firms with a strong European presence, the loss of UK passporting rights is a mere technicality with little impact, but for plenty of funds it is a problem – particularly in the


Oliver Crowley

"In some countries private placement is simply not a viable option, which makes them very problematic for certain managers targeting investors."

infrastructure market and particularly smaller UK-based fund managers that previously relied on passporting.

"This is more problematic for the smaller funds – those typically in the sub-£500 million range – and those with no presence in the EU wanting to market across Europe," says Oliver Crowley, a partner at Pinsent Masons.

"For others who have had to set up operations in the EU as a result of Brexit, it is still an additional cost."

UK-based funds that previously relied on passporting, now have three main options for fundraising in the EU (aside from setting up EU operations, typically in Luxembourg or Ireland):

- so-called private placements – national frameworks that allow market access on a country-by-country basis
- white-label service providers – companies that set up EU funds on behalf of UK-based managers and delegate much of the work to the latter
- reverse solicitation – EU investors seeking out a UK fund on their own initiative

But there are a number of challenges with these options. In the case of private placements – which firms from non-EU countries like the US have used – these arrangements are different in each country and can be complicated.

For instance, it may take just a few weeks to get fund marketing set up in Luxembourg – but it could take several months in Germany. Moreover, private placement is not available in countries like France, Italy, Spain and Austria.

"In some countries private placement is simply not a viable option, which makes them very problematic for certain managers targeting investors," says Crowley.

Another problem is that the European Securities and Markets Authority (ESMA), which for years has been clamping down on offshore shell companies, has indicated that it could further restrict white-labels and reverse solicitations. For instance, it could increase substance requirements – the minimum threshold for staff on the ground in Europe. It is part of a landgrab by the EU, but also "understandable from an EU perspective", says one London-based funds professional.

Institutionals face regulatory capital requirements

Nevertheless, unless you're a fund manager with lots of investors in countries that don't have a private placement regime – which haven't historically been huge allocators of capital to UK infrastructure fund managers – then the private placement route may not really be a problem, says James Sargent, a partner with Weil Gotshal & Manges.

"Ultimately, you can access a lot of EU investors with a UK structure. You just have to go through a different way of doing it," says Sargent.

A bigger concern for some managers in the wake of Brexit is that EU insurers and German pension funds – a big portion of the infrastructure investor base for a number of core infra funds – are subject to regulatory requirements that disincentivize them from investing in non-EU funds.

Due to Solvency II rules and the German Investment Ordinance, institutional investors have to hold less regulatory capital for EU funds than for non-EU funds. As such, investors that previously invested in UK funds, will likely be putting their money in EU funds going forward.

Keeping options open

London-based Asper Investment Management tells *IJGlobal* that it has domiciled its latest funds in Luxembourg due to Brexit.

Asper – which focuses on energy transition infrastructure with a value-add strategy and counts Dutch pensions group APG among its investors – recently concluded fundraising for a €250 million co-investment platform.

The firm is weighting its options for future fundraisings in light of the loss of passporting rights. Its current approach is to keep its options open: working with providers of fund administration services in Luxembourg and analyzing national private placement rules.


Luigi Pettinicchio

"Our client base is composed of institutional investors, including in the EU and the UK, so preserving the ability to market effectively post-Brexit is of strategic importance for our business."

Furthermore, Asper has recently established a subsidiary in the Netherlands, which it says was driven by other operational needs to have local resources, but the office also facilitates the option of setting up a local fund if needed in the near future.

"Our client base is composed of institutional investors, including in the EU and the UK, so preserving the ability to market effectively post-Brexit is of strategic importance for our business," says Luigi Pettinicchio, co-founder and chief executive of Asper.

While market players say a full-scale exodus of the funds business to Europe seems unlikely, it seems safe to assume that as time goes on, a lot will be determined by where investors are based.

In the meantime, the UK is seeking ways to become more competitive outside the EU, with HM Treasury currently reviewing the UK funds' regime. ■

It’s a long way to Frankfurt

IJGlobal reporter **James Hebert** takes a look at the lending environment for infrastructure across Europe as the reality of Brexit becomes (kind of) apparent…

Remember back to the simpler, more innocent times when the worst thing you’d hear about Brexit in the news was the total capitulation of the UK economy due to relocations to Frankfurt and mutilated Toblerone bars?

Even with a deal – the EU-UK Trade and Cooperation Agreement – now in place, the British economy is currently reeling from a GDP shrinkage of 9.9% for the year 2020, towards which the Covid-19 pandemic played a uniquely large, deleterious role.

Maybe the gloomiest predictions were right about the state of the economy after Brexit – but for the most part 2020 wasn’t due to the risks of Britain attempting to go out into the world alone, but rather Britain having to stay inside.

As the vaccines are rolled out nationwide, some minds are turning to the post-pandemic period, such as whenever we can go back to watching football games without the FIFA sound effects. The size of the economy will recover, but it will be adapting to the new trading relationship built across the channel.

Inner London may not have much fish, but it’s still home to the largest financial sector in Europe… complete with its energy and infra lending market. However, while the new fishing rules have been made clear, there is still uncertainty over the services sector in the new EU-UK deal.

Now that the UK has officially left the European Union, how much closer are we to seeing the effects Brexit will have on energy and infra lending in the UK?

The status of the deal

Approximately three years ago, perhaps the biggest question arising from the referendum result was whether there would/should/could be a Soft Brexit or a Hard Brexit – very much the “Oasis or Blur?” of the 2010s but with fewer hit singles.

Eventually, as the end of the transition period approached in December 2020, the primary question morphed into the more alarming “will there be a trade agreement at all?” and the most urgent prognostications about Brexit were then attached to the prospect of ‘no-deal’. Neither ‘hard’ nor ‘soft’ Brexit, but a separation process with no free trade regime in place.

Finally, the EU-UK trade deal was signed on 30 December 2020. Despite a clearer picture for businesses dealing in physical goods, the financial services sector is still more or less waiting for a deal – the topic of finance was largely left out of the negotiations for the EU-UK deal, which was otherwise focused on more visible industries and labour movement.

A bank source told *IJGlobal*: “Frankly most banks have just been playing the long game in terms of reacting to the issue because I think there was an expectation that there would be a softer form of Brexit and that clearly hasn’t come to pass.”

On the other hand, there is also an upbeat mood in the response to the deal. Charlie Hodges, a managing director at financial adviser Augusta & Co believes that “international investors look set to deploy growing amounts of capital here. There is a strong belief that the energy market is well regulated and perception that currency risk is manageable.”

The common factor in both of the above statements is that it’s yet too early to conclude on the EU-UK trade deal as either a success or failure for energy and infra project finance – agents in the market are still operating on expectations and belief.

What are the current impacts?

It was evident on the morning of 24 June 2016 that neither the sky had fallen on our heads, nor had a resuscitated Winston Churchill appeared to pull a sword out of a Yorkshire pudding. The Leave campaign had won, but the short-term impacts of the vote would take much longer to appreciate.

It would inevitably take time to assess the effects and the financial sector isn’t special in this regard. Nearly five years later, many in the industry are operating on the expectations of Brexit, rather than whatever effects it currently has.

One European bank executive told *IJGlobal* that, so far, the impacts that have been felt across the industry depend on the department: “We are starting to see the most obvious and apparent impact on our business is that when we look to originate and underwrite loan facilities our syndications capacity that we have in London can't talk to investors in the European space. We have to talk to them via our European located distribution colleagues.

"So, as in the past we might have had one deal run from our London office and selling loan assets into Europe or even underwriting loan assets in Europe and distributing out of London. Now when speaking to EEA domiciled investors in the primary market, you may find two people from one bank on the phone call with the same client so that technically our London based colleague isn't talking without the surveillance and oversight of a European qualifying individual. So that is a very apparent impact."

Dan McCarthy at One Search provides a different response to current impacts: "So far, I have seen more evidence of people trying to take advantage of [Brexit] than I have companies. For example, people know that they can get a better compensation package in London than they can in, say, Paris. But if they can get the London job and only have to physically BE in London two days every fortnight… perhaps they can win on this trade. We also see candidates for roles who are working for a more rigid business actively looking in the market, greatly attracted by the flexibility being shown by others."

As expected, these current impacts are rather limited. In addition, the extent to which these are either significant hurdles or big benefits for lenders both appear minimal.

Whither the exodus? Will lenders be WFH (working from Holland)?

This was one of the doomsday scenarios talked up for Brexit – the prospect of banks and bankers alike moving wholesale from London into another city across the channel, where EU member-states offer unrestricted access to the EU27 single market. How is this going, anyway?

McCarthy answers: "I have not seen one single instance of a critical/senior deal origination role in frontline M&A or project finance being moved from London to the continent – which is just as well for the institutions concerned. Most people in these positions are in great demand and if told their role was being relocated, they could easily stay in London and get a comparable role with another firm."

One unnamed source however hinted that the opposite process is taking place, and that some banks are simply more prepared than others: "Take for example BNP Paribas, they had a presence in both Paris and London so they didn't have to make such drastic changes out of the box. Out there is where you have your sales professionals because those still need to be domiciled in the jurisdictions where they are booking trades. Therefore, you've seen quite a substantial shift in terms of how clients are being spoken to and discussed… transactions in terms of who their critical point of contact is."

McCarthy adds: "If I did have to pinpoint a place where there has been some activity, I would go for Luxembourg. Some banks have been using this as an opportunity to get a foothold in continental Europe whilst perhaps optimizing their tax situation at the same time. The view from these shops seems to be that there is no city which seems particularly attractive to their existing staff, or indeed which might help them, attract talent, so they choose Luxembourg based on cost effectiveness.

"Certain platforms have been trying to induce continental European nationals to move to the continent, but it is difficult to get people to leave London – the vast majority of continental Europeans don't want to go back. London has everything – no European capital compares to it for overall quality of life. In Amsterdam you can park your car opposite the office – that's the best argument I've heard for going there."

Will any changes made during the pandemic be crystallised by Brexit?

As already mentioned, the oft-predicted economic turbulence caused by a rocky exit process (whether because of a Hard Brexit or no-deal) was nonetheless a major side-effect of the pandemic declared by the World Health Organisation in March 2020.

The pandemic has (virtually) shaken up the way many companies do business. If the banks were aiming to make any Brexit-related changes, has the pandemic brought them forward? Has Covid-19 mutated with Brexit-16?

When asked about any hybridisation of Brexit and pandemic, McCarthy responds: "I have not seen any evidence of this. The businesses that didn't need to be in London had already presumably gone through this thought process in the past or were not there in the first place. If you are a front office, client facing business/business unit which needs constant access to the market, to your customers and other third parties, you need to be in London, and businesses understand this."

"The key issue for European banking in the next 5 years will likely be the repercussions of Brexit, rather than the pandemic."

Alistair Higgins, a managing director at ING Bank told *IJGlobal*: "I think inevitably yes. There will be a lot of that taking place but it's very difficult to know… the management of a company is not going to go and say 'we're doing this now because of Brexit three or four years ago', they will say it is part of a general rebalancing in light of everything."

Talk of 'rebalancing' or 'restructuring' has been heard in many companies across the region, even during the pandemic the healthcare sector and healthcare-related research industry have not been invulnerable to personnel shifts and redundancies. As the UK Chancellor, Rishi Sunak, recently announced the furlough scheme is set to continue past April and last until the end of September (2021), clearly responding to concerns from businesses over the possibility further layoffs.

So, what about the financial sector?

Higgins says that ING Bank is "in some regards fortunate that we don't have an overweight presence in the UK. So, we are unlikely to see substantial reductions in our UK presence but that's not true of every institution…


Bart White

"In terms of pipeline of opportunities we remain bullish on the UK for infrastructure & project finance over the near-term at least."

"Take French banks for example, they over the last 15 years chose to have the UK as their principle base of operations because there was a more flexible workforce and a better ability to get business done and for them I think there could very much be a series of progressive cuts, reshuffles, and moves to get that European centre of gravity back which would naturally be their starting point.

"The key issue for European banking in the next five years will likely be the repercussions of Brexit, rather than the pandemic."

The regulatory sphere

Bart White is head of structured finance at another European bank with strong interests in the British market, Santander Corporate & Investment Bank UK. He "remains bullish" but adds that – over time – "the 'unknown unknowns' may come from the impact of regulatory deviation vs the ECB."

Higgins: "[The] Brexit related changes are tangible and real and one thing that has driven the market over the last 10 years and will for the next 10 years is regulation and that's not going away."

One of the most prominent arguments wheeled out for Brexit is the opportunity to cut yet more red tape and reduce – if not remove wholesale – the amount of the much-dreaded regulation drawn up in Brussels. Naturally, this train of thought has enabled the creation of a highly efficient financial sector in London ever since the 'big bang' of deregulation in 1986.

However just like White at Santander, Higgins is speaking from the perspective of a European bank that would be concerned by any new red tape that affects their entry into the UK market.

In his words: "Brexit is going to have a very material impact on the financing of infrastructure post-Brexit, because the whole market is more defined by regulation today than ever, and the central premise of Brexit is contention over regulation."

The lack of consensus

As already remarked, it is too early to conclude what effects the EU-UK trade deal will have on the energy and infra lending market. There is no consensus as yet – it is still at the point where the void of uncertainty is easily filled with either optimism or pessimism, just strike out whichever mood appeals.

Furthermore, the short-term expectation of increased red tape and reduced economic growth – which was a possibility not discounted by some in the Leave camp – has been rather upstaged anyway by the impact of the Covid-19 pandemic in 2020.

In the UK energy and infra spheres since June 2016, many projects were able to achieve financial close in spite of some having Brexit-related issues cited by the people involved when they spoke to *IJGlobal*:

- 42MW Newhurst waste-to-energy – sponsors took a bet on the supply of refuse derived fuel (rdf), which could be affected by a drop in rdf exports to EU member-states
- A465 motorway PPP – lenders "did not have visibility of the risk" involved, including tax implications and movement of labour

The bottom line is that these deals were nonetheless successful and other transactions that have achieved this feat in recent times did not appear to have any concerns of the type at all, such as the Dogger Bank Wind Farm projects and Seagreen Offshore Wind project – both of which were project financed on the back of multi-billion pound, ECA-backed debt tranches.

White at Santander says that "in terms of pipeline of opportunities we remain bullish on the UK for infrastructure and project finance over the near-term at least." A look at the EU's Tender Electronic Daily portal still shows dozens of listings for UK infra opportunities for companies both large and small.

White adds: "Furthermore we anticipate minimal impact on liquidity for new deals, as whilst a handful of international lenders are stepping back and focussing on their core geographies, the UK will similarly benefit from heightened attention from its own long list of domestic lenders."

There is however consensus on the importance of London and here is where the discussion turns entirely macro. Whatever the view is on Brexit, the UK's capital city is still highly prized for its economic status – which goes against the grain of some pro-Brexit narratives. After all a majority of Londoners voted Remain, while many Leave-supporters outside the capital have been content to depict the capital as filled with out-of-touch elites more likely to drink highly carbonated Belgian beer than real ale.

In some ways Brexit has necessarily been 'anti-London'. Many people in the market have expressed concern that the EU-UK trade deal provides more regulatory clarity on fishing – which is a highly visible industry with plenty of pictures for local papers and a wealth of puns for headlines – than on the financial sector.

That's not to suggest that banks have a PR problem, but rather there is something inherent to Brexit that inevitably pits London on the losing end. Not enough fish, no shared border with Ireland, and no masses of Europeans taking up the managing director jobs in Canary Wharf.

There is simply no consensus on how hard the UK's energy and infra lending will be hit, regardless. On one hand… Higgins says: "I think [Brexit is] going to be pretty detrimental to Europe as well as the UK, but as Phillip Hammond [UK Chancellor from July 2016 to July 2019] rightly observed, it is a political outcome rather than an economic one, and sadly the repercussion of that is that in the round there will be more significant downsides to be weathered for most people in and outside the industry."

However, on the other hand… Hodges says: "There will be some long-term pressure, likely from higher inflation and tax rates, but this is not unique to the UK and I sense that the returns will be resilient to potential macro headwinds. The UK is open for business and the worst of the uncertainty that has dogged the market in the past four years is over (rightly or wrongly!)"

So, there it is – the post-Brexit clarity on energy and infra lending now clarified: it's not clarified. ■

IJGlobal Awards 2020

This year the **IJGlobal Awards** have gone all-out to give the market something to celebrate in a year that has been remarkable for having little to smile about.

Congratulations to all the nominees!

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Europe & Africa shortlists

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- MUFG
- Santander

MLA
- BNP Paribas
- Garanti BBVA
- MUFG
- Santander
- SMBC
- Societe Generale

Financial Adviser:
- Amsterdam Capital Partners
- BNP Paribas
- Cantor Fitzgerald
- DWPF
- Garanti BBVA
- MUFG
- Societe Generale

Legal Adviser
- Allen & Overy
- DLA Piper
- Herbert Smith Freehills
- Linklaters
- Norton Rose Fulbright
- White & Case

Model Auditor
- BDO
- DWPF
- Mazars
- Operis

Sponsor
- Orsted
- SSE
- Bouygues Telecom

Investor
- Allianz Global Investors
- Ancala Partners
- Edmond de Rothschild
- Meridiam
- Vauban Infrastructure Partners

Public Sector Award
- Ministère de l'Économie et des Finances de la République Française
- Entwicklungsagentur Region Heide AöR, Germany
- Polska Grupa Energetyczna

Africa

MLA
- Rand Merchant Bank
- SMBC
- Societe Generale

Financial Adviser
- Rand Merchant Bank
- SMBC
- Societe Generale

Legal Adviser
- Clifford Chance
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Europe & Africa Judges

Caroline Miller Smith
Partner
White & Case

Caroline is a partner at White & Case and is head of the EMEA project development and finance group. Her practice focuses on infra and power transactions, including road, rail and airports, transmission and distribution, renewable and thermal generation, desalination and water management, ports, social infra and defence projects, in all of which she has long-standing experience. She undertakes both greenfield and acquisition transactions, as well as complex financings. The breadth of her experience means she is adept at advising on projects in multiple jurisdictions, including Europe, the Middle East and Latin America.

Matthew Houseley
Founding Partner
Newbridge Advisors

Matthew is a well-known figure in the infra community having advised on project and property financings for 30 years and is a founding partner of Newbridge Advisors. He previously worked for RBC for 12 years where he was managing director, head of the social infrastructure team. He has helped deliver funding for government offices, hospitals, housing, rail, renewables, roads, schools, secure accommodation, universities, waste and water projects. Other work has included advising clients on equity disposals and acquisitions, regeneration initiatives, restructurings and capital raisings.

Allan Baker
Managing Director
Societe Generale

Allan has worked at Societe Generale for 10 years – rising to his current role of managing director, global head of power advisory and project finance – and has been involved in the power sector for more than 30 years, initially as an engineer and then in finance. During his career he has advised on and/or financed power projects in Europe, the US and Asia, and in sectors ranging from greenfield renewable energy, through gas and coal, to the acquisition of large international power portfolios.

Fiona Reilly
Managing Director
FiRe Energy

With a career that has spanned legal and financial advisory and now industry, Fiona Reilly has a compelling history in the infra/energy space. She is currently MD of FiRe Energy as well as serving as a strategic advisory board member to the Nuclear Industry Association; non-exec director of Ansaldo Nuclear; and is the UK representative and co-chair of the EMWG for the GIF. Fiona is a sector specialist with more than 25 years' experience encompassing nuclear, oil and gas, renewables and thermal power. She is often involved in large-scale projects particularly the development, structuring, international regulatory development and compliance, licensing and financing.

Mark Henderson
Chief Investment Officer
Gridserve Sustainable Energy

Mark is a well-known figure in the European infra market – an investment banker and asset manager for 30 years, who has advised on, structured and financed more than £5 billion and 8,000MW of infrastructure energy projects. In more recent times, Mark has been involved in structuring and raising the capital needed for Gridserve's sustainable energy infrastructure platform – a tech-enabled sustainable energy business that develops, builds, owns and operates solar energy and battery storage solutions for critical power infrastructure. In the UK, Gridserve is constructing the country's largest and most advanced subsidy-free hybrid solar farms and a network of more than 100 Electric Forecourts.

Europe & Africa Judges

Sarah Roberts
President
INTECH Risk Management

Sarah is an insurance expert in the PPP industry and is one of the few female insurance advisers in the infra industry in North America – though her scope increasingly takes in Europe. She brings a wealth of knowledge and an intimate understanding of risks faced by lenders and stakeholders. Lenders, sponsors and authorities in Canada, the US and Europe are continuously seeking Sarah's services and expertise regarding risk and insurance matters to achieve success.

Manish Gupta
Head of Transport
EY

Manish is a regular on the *IJGlobal* Awards panel, securing repeated appearance for being one of the most consistently prepared members of the team. He is a long-established partner at EY based out of the London office in the infra corporate finance team, with responsibility for the transport sector. Manish has more than 20 years' experience in infra financing and M&A, with transactions ranging from project finance, refinancings and complex restructurings. He has extensive cross-border development and financing experience, having worked with governments, banks and investors across the entire transport and infrastructure space.

Sarah Heavey
Managing Director
CIBC

Another well-known face from the European infra community, Sarah joined CIBC in 2012 to set up and lead its project finance and infrastructure business in Europe, with a focus on origination and structuring for balance sheet deployment and client coverage. She is now managing director and head of project finance and infrastructure for Corporate Banking Europe at CIBC Capital Markets. Prior to this, Sarah was at Dexia's London-based project finance and infrastructure team for 10 years, and RBS prior to that.

Chris Williams
Head of PF, London
LBBW

Chris joined LBBW in September 2018 as head of project finance, London, to establish a new team focused on infrastructure and renewable opportunities across the UK and Ireland. The Team now consists of 6 people and has closed 12 deals to date (at the time of writing) with commitments totalling around €850 million. Previously Chris was at Bank of Ireland for almost 19 years in project finance origination covering PPP, infrastructure and renewable energy transactions in UK, Europe and occasionally North America.

Claus Fintzen
Head Infra Debt
AllianzGI

Claus is the CIO and head of infra debt at AllianzGI in London. The platform was created in 2012 to develop the institutional market for this asset class and to originate suitable transactions for the Allianz Group and certain external institutional investors. Before joining AllianzGI, Claus spent 8 years at MBIA/Trifinium as a director, where he was involved in a variety of transactions, including transport, social housing, renewables, real estate and corporate debt, and was responsible for the origination and structuring of transactions in Germany and Austria.

Layth Irani
Co-General Manager
SMBC

Layth is co-general manager and MD of the international and structured finance department of SMBC Bank International. He has more than 30 years' experience of acting as adviser, arranger and lender in the transport, infrastructure and telecoms sectors. He is responsible for project financing including transport, infrastructure, telecoms, oil and gas, and power and renewables projects and of acquisition

Europe & Africa Judges

financing in those sectors. He is also responsible for EMEA emerging markets financing within SMBC BI. He has worked on projects in Europe, Middle East, Africa, North and South America and Asia.

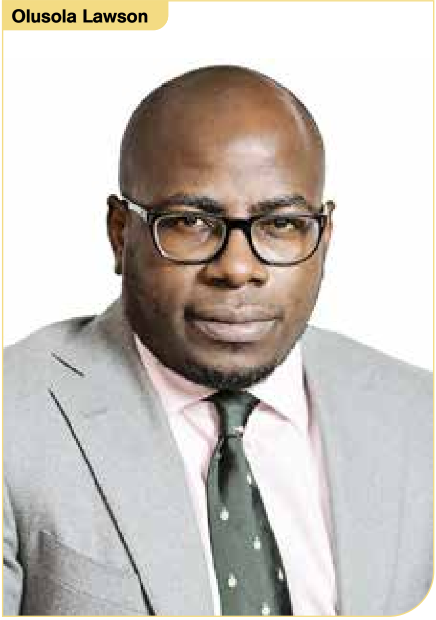
Emilio Cattaneo
Head Technical Assistance
PIDG

Emilio joined PIDG in 2015 as executive director of The Emerging Africa Infrastructure Fund, becoming head of technical assistance in December 2019. He has more than 35 years of corporate finance, asset management and advisory experience across several markets, including Africa, Latin America, India and Southern Europe. Emilio spent close to 20 years with HSBC in the UK and abroad. Subsequently, he worked in a number of smaller firms, including an advisory M&A boutique that he founded and ran for 7 years and in a commodity brokerage firm focused on emerging markets, including Africa. Before joining PIDG, Emilio was director of asset management at Climate Change Capital, mostly focused on renewable energy and agri-business transactions in Africa.

Susan Shehata
Senior Adviser
John Laing Group

One of the best-known members of the HSBC team, earlier this year Susan joined John Laing as a senior adviser. Susan brings a wealth of experience from more than 20 years of transaction and financing experience across the infra and utilities sectors. She was previously global co-head of infrastructure and real estate finance at HSBC, where she oversaw debt and financial advisory, lending and capital markets, across sectors including energy, transport, telecoms and social infrastructure. In her relatively new role at John Laing, Susan is advising John Laing's Investment Committee.

Olusola Lawson
Co-Managing Director
African Infrastructure Investment Managers



Olusola was appointed co-managing director in August 2020 and has more than 16 years of corporate finance and infrastructure equity investing experience across European and African markets. Previously he was an investment manager in Macquarie's European Infrastructure Funds team in London, where he worked on a number of European infra transactions in a principal capacity, and played a key role in portfolio company management, primarily in the petrochemical storage and transport space. Prior to joining Macquarie, Olusola worked at PwC London, where his focus was on transaction advisory services to a primarily private equity client base.

Kevin Ryder
Consultant
Caseyare Consulting

Kevin Ryder recently stepped down as UK country head at Nedbank Limited, London branch, a role he had held since September 2015 to establish an independent consultancy, advising project developers and investors. Kevin spent 12 years at Nedbank London, following a transfer from Nedbank's head office in Johannesburg in 2008. He is a lawyer by background and has worked in financial services for more than 30 years. His specialities include project finance and M&A, with particular focus on his home continent of Africa.

Victoria Westcott
Partner
Reed Smith

Victoria Westcott is a partner at Reed Smith where she leads the project finance practice and co-heads the Africa business practice. She is dual-qualified practicing under English law and French law and has led teams financing projects across the globe including in Europe, Turkey, Middle East, Asia, Central Asia, CEE and Africa with a particular focus on emerging markets. Victoria specialises in particular on transport and social infrastructure projects, renewable and conventional energy projects and water deals of all types (desalination, wastewater treatment, etc.). ■

IJGlobal Awards 2020

North America shortlists

Bond Arranger
- Citi
- HSBC Securities (Canada)
- MUFG
- Natixis Securities Americas
- RBC Capital Markets
- SMBC

MLA
- CIBC
- MUFG
- Natixis New York Branch
- Nomura
- RBC Capital Markets
- SMBC
- Societe Generale

Financial Adviser
- Agentis Capital
- Cantor Fitzgerald
- CIBC Capital Markets
- Macquarie Capital
- RBC Capital Markets
- Societe Generale

Legal Adviser - Energy
- Kirkland & Ellis
- Latham & Watkins
- Linklaters
- Milbank
- Norton Rose Fulbright US
- Torys
- White & Case
- Winston & Strawn

Legal Adviser - Infrastructure
- Allen & Overy
- Davies Ward Phillips & Vineberg
- Norton Rose Fulbright US
- Nossaman
- Torys
- Winston & Strawn

Corporate trust
- Bank of New York Mellon
- Deutsche Bank
- Wilmington Trust

Investor
- Meridiam
- Quinbrook Infrastructure Partners

Technical Adviser
- Altus Group
- Infrata
- Lummus Consultants International
- Rieth Jones Advisors

Model Auditor
- Mazars
- Operis

Public Sector Award
- Prince George's County Public Schools (PGCPS)
- University of Idaho
- City of Edmonton, Alberta (Valley Line West LRT)
- Province of Nova Scotia (Highway 104)
- University of Iowa (Utility System PPP)
- Miami-Dade County (civil and probate courthouse)

North America Judges

Laurie Mahon
Vice-Chair, US Investment Banking
CIBC Capital Markets

Laurie Mahon serves as vice-chair of CIBC's US investment banking business, a role she assumed after having led the global infrastructure and power team since August 2013. She has spent her entire professional life in the infrastructure space, having had a multifaceted career as a banker, public sector manager, infrastructure executive, consultant, journalist and developer focusing on the development and financing of large infrastructure projects around the globe. Laurie also spent 12 years as an independent adviser, helping numerous public and private entities develop transport projects in the US, Latin America, China and the UK.

Tom Rousakis
Senior Managing Director and US Infrastructure Leader
EY Infrastructure Advisors

Tom Rousakis is a senior managing director and US infrastructure leader with EY Infrastructure Advisors (EYIA). Tom has 24 years of experience in US infrastructure finance and is a recognised authority on the growing US public-private partnership market. Tom joined EYIA in 2013 after 16 years in infrastructure investment banking for Morgan Stanley and Goldman Sachs. He led transaction teams from inception through execution of debt and advisory assignments, developing rating agency, deal structure and investor marketing strategies for over $25 billion in infrastructure projects for highway and transit agencies, as well as universities and state and local governments generally.

Thilo Rose
Senior Investment Director
Meridiam

Thilo Rose is a senior investment director with Meridiam in New York, having moved there in January 2020. Prior to moving to New York, Thilo worked in Meridiam's HQ with a focus on project development in the UK, Germany, and Scandinavia. Thilo has been with Meridiam since 2011 and has worked on numerous projects including the closings of two E18 road projects in Finland, the IoW Highways Maintenance PFI project, the acquisition of a 50% stake in the A4 Project, the closing of the A7 Lower Saxony Project in Germany and the M8 road project in Scotland.

Dolly Mirchandani
Partner
White & Case

Dolly Mirchandani focuses on infrastructure and public private partnership projects and has over 20 years' experience working on some of the most significant deals in the sector. She represents sponsors, infrastructure funds, commercial banks, institutional lenders, contractors, secondary market investors and governments in the tender, development and acquisition of greenfield and brownfield infrastructure projects. Dolly has played a leading role in the introduction of private investment and finance in the infrastructure sector in North America, having advised on multiple, award-winning transactions, including ones that were first-of-their-kind. Dolly is one of the most widely respected and successful practitioners in this field.

Nicolas Moessner
Senior Director, Infrastructure Debt
CDPQ

Nicolas's infrastructure finance career spans over 20 years, having worked at SocGen, Dexia, Deutsche Bank. He has also worked on impact investments at Juilliard Global Ventures and NM Strategy. Nicolas' professional exposure spans the Americas, EMEA and Asia. His areas of expertise

North America Judges

range from strategic business development, building & nurturing diverse and inclusive teams, investments due diligence, risks management, advising, structuring and distributing acquisition/LBOs, project finance & PPPs, asset backed securities, structured trade & export finance, as well as operational & financial optimisation of new ventures for transport, energy, telecoms, waste, water, education & social assets.

Lindsay Wright
Senior Manager
KPMG


Lindsay Wright

Lindsay is a senior manager in KPMG's infrastructure advisory practice with over 12 years' experience. She provides strategic, financial and commercial advice to a diverse mix of public and private sector clients. Lindsay has worked across social infrastructure, defence and energy sectors, but with a particular focus on transit and transport. She specialises in delivering large, complex, city-changing infrastructure around the world. She has advised on projects around the world, bringing international leading practice to all of her clients.

Charles-Henry Lecointe
Global Co-Head and Head of Infrastructure Debt, North America
LGIM


Charles-Henry Lecointe

Charles-Henry relocated from London to the US to lead LGIM's infrastructure debt efforts in North America while co-leading the LGIM infrastructure debt team globally. Charles-Henry joined LGIM in 2014 and is responsible for origination and investment into debt across the infrastructure spectrum, including transportation, regulated utilities, energy and social infrastructure assets. Since joining LGIM, Charles-Henry has invested around $3.5 billion equivalent in the infrastructure debt sector globally having closed several landmark transactions across USD, GBP and EUR such as the Prince George County Public Schools, the University of California Merced campus expansion, the Los Angeles Airport Consolidated Rent-a-Car (LAX CONRAC), the 1.2GW Hornsea Phase 1 and the 660MW Walney Extension Offshore Wind transactions, the London Gateway Port refinancing and Terminal Investment Limited (TIL).

Lysa Scully Leiponis
Innovative Strategic Advisor
LL Aviation and Ferrovial


Lysa Scully Leiponis

Lysa Scully Leiponis, principal and president of LL Aviation Advisors is a forward thinking aviation leader with 35 years of notable transport industry experience. Prior to starting her own advisory firm, Lysa had a distinguished 33-year career as a leader at The Port Authority of New York and New Jersey. As the former CEO/Airport General Manager of LaGuardia Airport, Lysa created a detailed vision for customer excellence to serve the airport's 30 million annual passengers. She inspired and led 400 staff, and galvanized airport stakeholders, to implement pioneering projects to transform the customer experience. Lysa was recently appointed independent senior adviser for the Ferrovial Airports US division.

Sia Kusha
Group Head for Project Development and Partnering and Senior Vice President
Plenary Americas


Sia Kusha

Sia is Plenary America's group head for project development and partnering and senior vice president. In this role, he leads project development across all sectors. He is responsible for development, identification and assessment of new opportunities, as well as interaction with owners and assisting them in bringing projects to market. He positions Plenary with appropriate project sponsors and selects partners through leveraging industry relationships. A forty-year veteran of the industry, Sia is a highly experienced programme and project executive who has delivered a variety of infrastructure programmes for a diverse range of public and private clients. He has been instrumental in integrated delivery policy development in the US and has helped public owners develop design-build and P3 legislation, programmes, project pipelines and procurement processes in Arizona, California, Florida, Georgia, North Carolina, West Virginia and Virginia.

Luuk Veenstra
Head of Distribution, North America
M&G Investments


Luuk Veenstra

North America Judges

Luuk Veenstra is head of distribution North America, M&G Investments Americas. He set up the North American distribution office for M&G in 2018 and is based in New York. He transferred across from the Amsterdam office which he joined in 2013 as a director institutional distribution for the Benelux region. Prior to joining M&G, Luuk spent 3 years at PGGM Investments as a senior investment manager where he was responsible for the sourcing, negotiation, execution and asset management of direct investments in infrastructure.

Mike Pikiel

Partner and Co-Head of Energy & Infrastructure Industry Group

Winston & Strawn

Mike Pikiel is a New York-based partner at Winston & Strawn and co-head of the firm's energy & infrastructure industry group. He represents sponsors, developers, investors, lenders and underwriters in a wide range of projects and complex finance transactions, including project financings and acquisition financings. Mike has nearly 20 years of experience representing clients in the infrastructure, transport and energy sectors and he also has significant experience with public-private partnerships (PPPs).

Tim Treharne

Principal, Advisory Services

Arup

Tim leads Arup's advisory services business based in New York. He joined Arup in 2018 following a 38-year career in banking and finance, principally in project finance, across a wide range of sectors and geographies. His specialties include project finance, PFI/P3, privatisations, and restructurings. Tim has delivered projects in transport, energy, and social infrastructure and has worked with public authorities developing their projects and programs including providing input to necessary legislation. With experience of delivering projects from multiple perspectives as adviser to public authorities, bidding groups and, as a principal as both lender and equity investor/developer, Tim brings a depth of experience and market knowledge in developing alternative delivery models for public and private clients alike.

Nasir Khan

Managing Director & Head of Infrastructure, Americas

Natixis

At Natixis, Nasir is responsible for infrastructure finance for power and renewables, transport, social infrastructure and telecoms. He has over 20 years' experience in infrastructure and energy. Prior to his new role, he was managing director and head of infrastructure for the Americas at Bank of Tokyo-Mitsubishi UFJ. There, he specialised in business development across lending, advisory and capital markets. He has also held positions at Ports America Group and Citigroup.

Jill Jamieson

CEO

Illuminati Infrastructure

Illuminati Infrastructure, is a boutique professional services firm specializing in public sector advisory services. A globally recognized leader in public-private-partnerships, Jill has worked extensively throughout the United States, Latin America, Europe and Asia. With nearly 30 years of experience, successful transaction experience encompasses work across multiple infrastructure sectors, including transportation, water, energy, education, climate/resilience, and social sector, with a capital portfolio of over US$32 billion. Jill is also a national authority on infrastructure policy, frequently called to testify as an independent expert before Congressional committees on P3 and other forms of innovative finance and delivery. ■

IJGlobal Awards 2020

Asia Pacific shortlists

Bond Arranger
- Bank of America
- Citigroup
- HSBC
- MUFG

Development Finance Institution
- Asian Development Bank
- China Development Bank
- InfraCo Asia Development
- International Finance Corporation
- Japan International Cooperation Agency

Financial Adviser
- Citigroup
- DBS
- Macquarie
- Mizuho
- MUFG

Legal Adviser
- Allen & Overy
- Ashurst
- Linklaters
- Milbank
- Norton Rose Fulbright
- White & Case

Mandated Lead Arranger
- DBS
- HSBC
- MUFG
- SMBC
- Société Générale

Public Sector
- City of Sydney
- Infrastructure Development Company (Bangladesh)
- Government of Australia
- Government of Indonesia
- Government of New South Wales

Sponsor
- Adani
- Ayala
- Chubu Electric Power
- Korea Electric Power
- Macquarie
- Marubeni

Technical Adviser
- Afry
- Arup
- DNV
- Lummus Consultants International
- Mott MacDonald

IJGlobal Awards 2020

Asia Pacific Judges

Zia Azeez
Head of Asia, global structured finance
SMBC


Zia Azeez

Zia's team provides project finance, export credit and agency finance, and acquisition finance, for the power, renewables, infrastructure and natural resource sectors. Zia, who works from Singapore, has been on the GSF team since 2006 when he initially worked on advising and arranging transactions across a wide range of sectors before leading the team's business in the metals and mining space in Asia for about 4 years from 2009. Then Zia headed the power infrastructure team where he played a key role in developing SMBC's renewables business across Asia, including establishing SMBC's reputation in Taiwan's offshore wind market.

Stephen Boddington
Head of Asia construction practice
Marsh Insurance


Stephen Boddington

Stephen has more than 3 decades of experience in insurance broking, for more than 25 years of which he has specialised in insurance and risk solutions for the construction industry. Stephen leads Marsh JLT Specialty's construction practice in Asia and is a member of the global construction practice. Based in Hong Kong, he maintains responsibility for major construction projects and clients in Asia and Asian interests abroad. You'll regularly find Stephen presenting at construction conferences and seminars and facilitating Marsh JLT Specialty's annual construction training called Academy.

Shantanu Chakraborty
Director, infrastructure finance, South Asia, Central Asia, and West Asia, private sector operations
Asian Development Bank


Shantanu Chakraborty

Based in Manila, Shan has been with the multilateral for more than 15 years. His responsibilities include managing a team of investment professionals, who are responsible for origination and execution of infrastructure and project finance transactions. Prior to this assignment, Shan was director of PSOD's private sector transaction support division, which provides support to origination divisions in areas of safeguards, guarantees and syndications, development effectiveness, integrity due diligence and technical assistance. His earlier roles in ADB included being the senior adviser to the vice-president of private sector and cofinancing operations, providing strategic and operational support to the vice-president's office.

Isabel Chatterton
Regional industry director, infrastructure and natural resources, Asia and Pacific
IFC


Shantanu Chakraborty

Isabel has a deep relationship with the multilateral community around the world. Seven years before her current role, she was the regional manager for PPP transaction advisory services, initially for South Asia in Delhi and then in Singapore, as her mandate expanded to cover all of Asia Pacific during the past 4 years. The Singapore-based industry director also spent 4 years in IFC's subnational finance unit, where she worked in deal origination, structuring and supervision of debt and structured finance products in more than 6 Latin America countries.

Alice Chow
East Asia board member & director of advisory services
Arup


Alice Chow

Asia Pacific Judges

With more than 30 years' experience, Alice is a member of Arup's East Asia board, leading the firm's advisory services in the region to help clients think long-term, design for success, invest wisely and manage for better business performance. She's known for combining engineering expertise with commercial and operational know-how. Alice has managed many award-winning projects, ranging from strategic airport gateways to mission-critical systems and much-needed education and healthcare facilities. In 2019, Arup named Alice an Arup Fellow – a high honour of technical and professional achievements across the industry globally.

Anna Chung

Partner in project development and finance
Shearman & Sterling


Anna Chung

Anna, who works from Seoul, began her career at Australian firm Corrs Chambers Westgarth and joined Shearman's London office more than 14 years ago. She has since worked in the firm's Shanghai and Singapore offices before relocating to Seoul to lead the Korean practice. Anna concentrates on project development and financing, focusing on power, infrastructure, oil and gas, and petrochemical sectors. She represents sponsors and lenders, including regional development banks, multilaterals and export credit agencies.

Nicky Davies

Partner in project finance & construction and engineering
Norton Rose Fulbright


Nicky Davies

Nicky specialises in financing and construction aspects of major infrastructure projects, focusing on negotiating concession agreements, D&B/EPC, facilities management/O&M and other project and finance documentation. She has advised lenders, sponsors and governments across a range of sectors, including defence, accommodation, education, health, mining, power generation, rail, sport and leisure infrastructure, and water and waste. Nicky is based in Singapore.

Audra Low

Chief executive officer & executive director
Clifford Capital


Audra Low

Audra has overall responsibility for Clifford Capital's strategic leadership and performance. Since joining Clifford Capital at its inception in 2012 as head of origination and structuring, she has spearheaded the growth of the Clifford Capital franchise in project and asset finance markets spanning several sectors. Audra brings with her a wealth of experience working with Singapore-based companies on infrastructure projects locally and overseas. Prior to Clifford Capital, she spent 12 years in project finance with HSBC, playing a key role in the origination and financing of numerous innovative projects in South East Asia, both as financial adviser and lead arranger.

Kian Min Low

Chief development officer
JERA Asia


Kian Min Low

Singapore-based Kian Min brings with him more than 2 decades of experience in the power industry. He led JERA's entry into Bangladesh with 2 investments in 2019 – a 718MW CCGT power plant and a 22% equity investment in Summit Power International. Prior to joining JERA, Kian Min was Sembcorp Industries' head of business development for ASEAN. At Sembcorp, he led the company's expansion into Myanmar with the Myingyan IPP – the first internationally tendered and project financed power transaction in the country.

Asia Pacific Judges

John Maxwell
Asia head of energy & infrastructure
Linklaters

John Maxwell

John previously served as the firm's Tokyo managing partner between 2012 and 2020. He has also worked in London and Hong Kong. John, who works from Tokyo, advises sponsors, lenders and export credit agencies on the development and financing of, and acquisitions in, world-scale and new-market energy and infrastructure projects throughout the world, including offshore wind, LNG, petrochemical and conventional power projects. His experience also includes cross-border rail and large-scale infrastructure projects.

Kanna Mihara
Senior vice-president, private capital markets Japan
Macquarie Capital

Kanna Mihara

Tokyo-based Kanna connects Japanese capital with global infrastructure opportunities. Recent experiences include the formation of a partnership with JERA on Formosa 1, 2 and 3 offshore wind projects in Taiwan and the acquisition of Electricity North West in the UK by a consortium including Kansai Electric. Since joining Macquarie in 2013, she has worked on 2 of the first 3 major infrastructure privatisation projects in Japan – Sendai Airport and Aichi Toll Road – as a financial adviser to the concessionaire of each transaction.

Quyn Siew
Head of project and infrastructure finance in Asia Pacific
Citigroup

Quyn Siew

Based in Hong Kong, Quyn runs Citi's project and infrastructure finance business in Asia Pacific. He has 13 years' experience of project and structured debt across Asia Pacific. He led many of Asia Pacific's landmark project bonds, as well as debt and ratings advisories. Prior to joining Citi in 2016, Quyn was with NAB for 9 years in Australia and Hong Kong, where he worked in project finance, transportation finance and mezzanine debt teams.

Rob Ward
Managing director & head of project finance and head of ESG finance, Oceania
MUFG

Rob Ward

Rob continues to expand MUFG's infrastructure, renewables, utilities and natural resources businesses in the region's project finance market. In the newly created ESG finance role, Rob is responsible for all ESG financing in Oceania, contributing to MUFG's target of arranging ¥20 trillion ($189 billion) in ESG financing by 2030. Rob has nearly 25 years of investment banking experience, covering structured finance, advisory and debt capital markets. He previously led MUFG's advisory business in Oceania. You'll often find Rob engaging International Project Finance Association's Australian Council and actively contributing to Infrastructure Partnerships Australia, having served on several industry task forces. ■

IJGlobal Awards 2020

Latin America shortlists

Bond Arranger
- Banco Santander
- Citigroup
- Goldman Sachs
- MUFG
- SMBC

MLA
- Banco Santander
- BNP Paribas
- MUFG
- Natixis
- SMBC
- Societe Generale

Financial Adviser
- Astris Finance
- Banco Santander
- FDN
- SMBC

International Legal Adviser
- Allen & Overy LLP
- Baker Mackenzie
- Clifford Chance
- Greenberg Traurig
- Milbank LLP
- Norton Rose Fulbright LLP
- White & Case

Local Legal Adviser
- Estudio Echecopar
- Garrigues
- Mattos Filho
- Mijares, Angoitia, Cortés y Fuentes
- Pinheiro Neto Advogados

Tax adviser
- Garrigues
- Pinheiro Neto Advogados

Sponsor
- Atlas Renewable Energy
- Grupo Argos
- Macquarie Capital
- Sempra Energy
- Modec
- Mainstream
- EnfraGen

Corporate Trust
- Deutsche Bank
- Patria Investments

DFI
- BNDES
- CAF
- IDB
- IFC
- FDN

Public Sector Award
- VALEC Engineering, Construction and Railways
- ProInversion
- BNDES
- ANI

Latin America Judges

Aitor Alava
Managing director
Natixis, NY

Aitor heads Natixis Infrastructure Finance for Latin America. He has 20 years of diverse infrastructure finance experience, including the banking, developer, and construction sides. He joined Natixis' Americas platform in 2013, having headed project finance in Spain and Portugal for Natixis since September 2011. Prior to joining Natixis, Aitor was deputy head, project finance Spain and Portugal at BNP Paribas and, earlier, director of global export and project finance Iberia at Fortis Bank. He has also worked at FCC, Andersen Consulting, and OHL.

Francisco de la Barra
Partner
Barros & Errázuriz, Chile

Francisco is a partner at Barros & Errázuriz and co-leads the projects and finance group. He was a Professor of Commercial Law at Pontificia Universidad Católica de Chile School of Law, Santiago, joining Barros & Errázuriz in 2010. His main areas of practice include project and corporate finance transactions, as well as project development and financing transactions in the infrastructure, energy (generation and transmission), transportation and water utilities.

Jorge Camina
Director
Allianz GI, NY

Jorge joined Allianz Global Investors in June 2016 as director within the infrastructure debt team based in New York, responsible for origination and execution in all sectors. Since joining AllianzGI, Jorge has spearheaded the development of debt investments in the energy and renewables sectors in US and the expansion of the infra debt strategy into Latin America in 2018. Jorge has executed more than $3 billion of investments in the US and $1.8 billion in LatAm.

Juan-José Cárdenas
Partner
EY, Peru

Juan-José leads the projects and infrastructure practice in EY Law Peru. A seasoned lawyer, with more than 25 years of experience mainly focused in large transactions in Peru and Latin America, his practice focuses on PPP projects, project finance, M&A, venture capital and corporate finance. During his professional career, Juan-José has led and participated in large PPP projects in several sectors such as in ports, airports, energy, transport, sanitation, telecom, among others, providing legal counsel to international and domestic companies, banks, multilateral organizations and governmental entities.

Fuensanta Diaz Cobacho
Managing director
Intesa Sanpaolo, NY

Fuensanta heads structured finance at Intesa Sanpaolo in New York, where she is responsible for activities in the Americas focusing on originating, evaluating, and structuring investments in the infrastructure, energy, oil and gas, and real estate sectors. She has structured, arranged and financed public and private biddings for infrastructure assets in support of local and global players in the industry including assets such as roads, tunnels, ports, logistics, social infrastructure, petrochemical facilities, gas pipelines, conventional power, and wind and solar portfolios.

Tobey Susan Collins
Managing Director
Astris Finance, Washington, DC

As managing director and head of energy Americas, Tobey leads the energy practice for Latin America, including both conventional and renewable energy. Recent transaction highlights include gas-fired power in Central America; solar projects in Chile, Brazil and El Salvador; wind projects in Argentina and Brazil; and transmission projects in Brazil and Chile. Tobey is also CEO of the firm's affiliate, Astris Securities. Prior to joining Astris in 2013, Tobey spent 10 years leading transactional finance teams as a sponsor/owner of electricity assets, including six years at the AES Corporation.

Latin America Judges

Pedro Garcia
Partner
Garrigues, Chile

Pedro is a partner at the Santiago de Chile office of Garrigues, where he heads the project finance team. A repeated name in a number of relevant transactions, from banking to capital markets, including energy, transport, water and toll roads. He recently advised the Central Bank of Chile in the design and implementation of a $50 billion secured liquidity facility to local banks, to provide them with low-cost funding.

Paloma Lima
Partner
Lefosse, Brazil

Partner at the Brazilian law firm Lefosse Advogados, Paloma focuses on cross border financings, investments, and M&As particularly in the infrastructure sector. She guides clients through the complexity of regulations in industries such as airports, transport, traditional and renewable energy, oil and gas and shipping. She advises corporations on project and infrastructure finance, multi-sourced financing, privatizations and corporate restructurings, formation and reorganization of business ventures. She has worked for prominent law firms, financial institutions and the IDB in Washington, DC.

Ariel Ramos
Senior partner
Mayer Brown, Mexico

Ariel is a senior partner of the energy, infrastructure and finance groups of Mayer Brown based in Mexico City. With almost 30 years of experience, he is considered a leading expert in infra, energy, government procurement and regulatory matters related to these. He was one of the first lawyers to participate in the implementation of projects under the PPPs or APP scheme in Mexico. He has represented a wide range of clients in the structuring, negotiation and implementation of projects, risk assessment, regulatory advice and negotiation of governmental contracts, including PPP or APP projects, public financed works (OPF), concessions, EPC and O&M contracts.

Miriam Signor
Partner
Stocche Forbes, Brazil

Miriam is a partner at Stocche Forbes Advogados and her practice focuses on banking and finance, infrastructure, structured finance, sustainable finance, concessions and PPPs. She has extensive experience in advising financial institutions, investment funds, development agencies, borrowers and sponsors in structuring, developing and financing infrastructure projects in various regulated sectors.

Pablo Sorj
Partner
Mattos Filho, Brazil

Pablo is a partner at Mattos Filho law firm. Based in Rio de Janeiro, he concentrates his expertise on transactions, project development and financing of the energy sector. He has worked for both sponsors and lenders in dozens of transactions awarded IJGlobal Deal of the Year and has been in the forefront of most innovative transactions in the infrastructure and energy sectors in Brazil.

Cynthia Urda-Kassis
Senior Partner
Shearman & Sterling, NY

Cynthia is a senior partner in Shearman & Sterling's project development and finance practice and heads the firm's mining and metals group. She represents sponsors, borrowers, lenders, and alternative financiers in project development and finance transactions worldwide, with extensive experience in the energy, infrastructure, mining and general manufacturing industries, as well as in power, infrastructure and mining restructurings. Cynthia's significant experience includes a long history of notable transactions, both domestic and foreign. ■

IJGlobal Awards 2020

Middle East & Africa shortlists

Bond Arranger
- Citi
- Santander

MLA
- BNP Paribas
- MUFG
- SMBC
- Societe Generale
- Standard Chartered Bank

Financial Adviser
- Bank Muscat
- Cranmore Partners
- EY
- Synergy Consulting

Legal Adviser
- Clifford Chance
- Covington & Burling
- Dentons
- Norton Rose Fulbright
- Pinsent Masons
- White & Case

Model Auditor
- BDO
- Mazars
- Operis

DFI
- EBRD
- EIB
- IFC
- JBIC

Sponsor Award
- ACWA Power
- EDF Renewables
- Marubeni Corporation

Public Sector Award
- National Center for Privatization & PPP
- New Urban Communities Authority "NUCA"
- Ministry of Finance, Saudi Arabia
- DEWA
- EWEC

Middle East & Africa Judges

Dan Taylor
Adviser
National Development Fund

Dan is currently an adviser to the National Development Fund of Saudi Arabia on a strategic infrastructure financing initiative. He started his career in leveraged and acquisition finance in Australia in 2000, continuing with UBS and Goldman Sachs in M&A advisory with a focus on the industrials, building materials and services sectors. In 2008, he moved to the Gulf where he was head of investment for a UAE sovereign direct investment entity and then CIO for a large, diversified family group.

Suresh Bhaskar
Chief BD Officer
Engie

Suresh is executive VP and chief business development officer for Engie in the newly formed Middle East, South and Central Asia, Turkey, Africa (MESCATA) region. His core skills are in strategy, project development, financial analysis, equity/debt structuring and financial closing in relation to acquisitions, greenfield, and brownfield opportunities. Before joining Engie, Suresh worked with US utility AES as part of its Indian BD team, and prior to that with Indian power companies like Reliance Power and GMR Energy.

Abbas Husain
Regional Head Project & Export Finance
Standard Chartered Bank

Abbas is the Standard Chartered Bank regional head of project and export finance EMEA & Pakistan and head of corporate finance for Africa, Middle East & Pakistan based out of Dubai. He has worked in finance for more than 20 years and has deep experience in credit analysis, structuring and documentation. Before joining SCB, he worked for Citibank managing a portfolio of MNCs and local corporates. Prior to that, Abbas worked at Bank of America where he managed a diversified portfolio.

Shaun Johnson
Vice President
Miahona

Shaun has more than 22 years' experience in infrastructure, working for both the public and private sectors across Australia, the UK & Europe and now the Middle East. He started his career at Ashurst and then Freshfields, and has spent the last 16 years in-house holding down positions within sponsor/equity groups. He has closed deals in several sectors spanning water, waste, aviation, industrial gases, health and education. Since 2016, Shaun has been living in the Middle East, initially working at Vision Invest and now as VP and board secretary at Miahona (a Vision Invest subsidiary focused on utilities in the GCC).

Maarten Wolfs
Partner
PwC

Partner, infra & government leader based in Dubai since 2011, Maarten leads the region's capital projects and infrastructure practice focusing on privatisation and government fiscal efficiency transformation engagements. Maarten's career at PwC has spanned three continents during which time he has advised on more than $100 billion of CAPEX consulting engagements in over 15 countries in Europe, Middle East and Oceania. He has also specialized in large scale financings and procurements of "mega projects" across a range of industry sectors (energy, utilities, transport, real estate and social infra) acting for the private sector and for government agencies and ministries.

Laughlan Waterston
Head of corporate and project finance
SMBC

Laughlan is head of corporate and project finance at SMBC's Middle East department based in Dubai, having switched roles with Tom Waterhouse in the summer of 2020. He has 25 years' experience in banking with more than 20 of those in project and structured finance. He has experience on a wide variety of projects and corporates in the energy and infrastructure sectors including power, renewable energy and oil and gas, petrochemicals, waste to energy, wastewater, utilities, social infrastructure and transportation.

IJGlobal Awards 2020

Middle East & Africa Judges

Yusuf Macun
Managing Partner
Cranmore Partners

Yusuf has around 25 years' experience in energy and infrastructure financing and investments, and has held leadership roles on the buy-side and sell-side of the energy and infrastructure sectors (as sponsor, adviser or lender) in Europe, Middle East and Africa. He has closed more than 30 transactions, representing around $20 billion, across frontier, emerging and developed markets. Yusuf created Cranmore in 2015 as a boutique advisory firm in the project advisory space in the wider Middle East and Africa region.

Catherine Workman
Partner, Head ME Region
Pinsent Masons

Catherine is a partner and head of the Middle East region for Pinsent Masons. In addition she is the board sponsor for the law firm's business in Saudi Arabia, while also serving as a board member of the British Aviation Group. Catherine is a projects lawyer specialising in PPP projects across a range of sectors particularly airports, ports and waste management. She has worked on projects across Europe (including Croatia, Cyprus, Greece and Poland), Africa (including South Africa, Nigeria and Ghana) and the Middle East (UAE, Saudi, Kuwait and Oman).

Christopher Cantelmi
Principal Investment Officer
IFC

Chris is a principal investment officer for the IFC infrastructure and natural resources department based in Dubai, where he is responsible for origination and execution of debt and equity investments in the power, water, energy and other essential infrastructure sectors throughout the MENA region. He led IFC's efforts to support renewable energy programmes in Jordan and Egypt, while creating and structuring complementary low transaction cost, standardised limited recourse project financing programmes to support the many renewable developers participating.

Adel Elsohl
Co-Head Investment Banking
Natixis

Adel is the Dubai-based managing director and co-head investment banking, coverage, and infrastructure energy finance at Natixis – responsible for the Middle East, Turkey and Africa. He more than 20 years of experience in banking, including 9 years with RBS' infrastructure finance group in London covering advisory, lending and equity. Adel has worked across numerous sectors in the infrastructure sector including power, renewables, oil and gas, telecoms, water, waste, and social infrastructure as well as accommodation in META, delivering delivered fixed rate solutions from institutional investors.

Matt Keats
Head Energy & Infra, ME
Linklaters

Matt is head of Linklaters' Middle East energy and infrastructure practice and has been with Linklaters for more than 25 years. His practise focuses on advising investors, developers, contractors and funders on the development, acquisition/disposal and financing of energy and infrastructure projects around the world. Matt's experience spans the oil and gas, power and infrastructure sectors. He has spent most of his career based in London, but ran the Linklaters energy and infrastructure practice in Moscow from 2010 to 2015, relocating to the Middle East in 2020.

Sami Neffati
Managing Partner
Aberdeen Standard Investments Investcorp

Sami is managing partner of the Aberdeen Standard Investments Investcorp joint venture focusing on infrastructure in the GCC and MENA region. He previously held the position of assistant general manager of energy at SMBC in London. Sami is an emerging markets specialist with long experience in the MENAT region. He headed Sumitomo's BD for Africa and led teams working on financing projects in renewable, power generation, transmission and distribution. ■

Special Report 2021

IJGlobal
Project Finance & Infrastructure Journal

The next generation of data for **infrastructure investors**

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EDHEC*infra*

EDHECinfra – Prepare to be disrupted

EDHECinfra talks about bringing transparency and advanced finance to the world of unlisted infrastructure investment, and what it means for the future of the asset class.

To the usual "How was Covid for you?", the team at EDHECinfra knows not to smile too much. "When we launched the commercial activities of EDHECinfra in 2019," recalls director and founder Frederic Blanc-Brude, "one of us said something like 'what we need now is a good crisis!' "

After a decade of rising prices and minimal trouble (if you put Spanish toll roads, UK power and few other things aside), investors in the infrastructure asset class could almost have been forgiven for thinking that these assets never lost value and in fact always became more valuable, while continuing to pay handsome dividends.

"The sector went through a period of re-valuation after the GFC," says Blanc-Brude. "Objectively, 15 years ago infra was cheap. Since then, investors willing to receive lower returns that is, paying higher prices, for the same risks have led the yield compression we are all aware of."

But with Covid-19, the perception that infrastructure was impervious to shocks had to be re-considered. "It was on TV," says Blanc-Brude. "Airports closed, national lockdowns, etc. This is hard to ignore." Covid has since led to a number of calls for valuations to be reviewed, from Superannuation Trustees to the Danish FSA. How badly and how systematically infrastructure investors were hit by Covid has become a recurring question.

"The problem investors face," says Abhishek Gupta, Head of Product Development at EDHECinfra, "is that they cannot measure the risks of this asset class by looking at the reported NAV data, which consists mostly of stale appraisals." This is an old problem in private asset classes of course: assets are appraised year after year using a very similar discount rate than the one used at the time of the investment. Combined with stable infrastructure cash flows, these 'smooth' discount rates make it look like the value of the assets never changes much. "Appraisals hide the volatility," says Gupta. "If you were to believe these numbers, the risk/

Frederic Blanc-Brude

"15 years ago infra was cheap. Since then, investors willing to receive lower returns that is, paying higher prices, for the same risks have led the yield compression we are all aware of."

return profile of infrastructure would be so good that it cannot be true. In fact, it would be extraordinary for fund managers to be selling these assets so cheaply on exit. Ergo, reported appraisals do not capture the fair market value of these assets."

The reality of course is that nobody believes the risk or volatility suggested by appraisal NAVs to be true. But then what is the fair market value of unlisted infrastructure? And why does it matter?

"It matters," answers Tim Whittaker, Head of Data at EDHECinfra, "because until you measure fair market value, you cannot measure the risks that investors are taking. And until then, you cannot manage your investments in infrastructure. For example, you cannot decide on a strategic asset allocation or how much DC pension plans can allow members to withdraw without penalising other members."

The Infrastructure Adventure

Whittaker recalls the beginning of the EDHECinfra 'infrastructure adventure' and how the team decided to approach data and valuation. "We are science-minded people, so we were well aware of the issues in existing datasets. They are very biased, especially in terms of what gets measured there is a problem of survivorship bias: only the good assets end up reporting. We wanted all of them, including the train-wrecks…" he says.

Since 2015, Whittaker has been leading a team of financial analysts that embarked on the ambitious project of collecting enough data to build a representative database of the investible universe in the 25 main markets where investors buy and sell unlisted infrastructure equity or debt. "We focus on markets where we can observe transactions," he says, "and pick up price signals. What you call the 'principal market' under IFRS 13."

The adventure has paid off. At the end of the rainbow, EDHECinfra found close to 7,000 uniquely identified, private, unlisted infrastructure companies, organised using the fast-spreading TICCS taxonomy that EDHECinfra launched in 2018 and is now used by the likes of OTPP or Blackrock to classify and benchmark their infrastructure equity and debt portfolios.

From this universe, EDHECinfra tracks the performance of a representative sample of close to 700 firms and thousands of private debt instruments.

Market Calibrations

With all this data, EDHECinfra has been able to apply the kind of advanced asset pricing and portfolio theory that they wanted. "We have collected and validated data for hundreds of private transactions," says Gupta, "but you cannot use 'comps' with infra, there just aren't enough deals or assets.

Instead, you can reduce the problem to something simple but powerful," he says.

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Abhishek Gupta

Tim Whittaker

Fabrice Lee-Choon

"Each of these deals includes information about the price investors are willing to pay to be exposed to certain risk factors, like leverage or size or a country or a merchant revenue stream. If we can measure these factor premia over time, we can price all the other assets, because they are exposed to the same factors, only in different quantities."

EDHECinfra has been very successful at measuring the market value of private infrastructure assets when compared with actual deal values (see below). This has allowed them to build fully-fledged market indices like the infra300, an index that tracks the performance of 300 unlisted investments in infrastructure equity in 22 countries over the past 20 years.

The infra300® (Bloomberg:infra300) has become a reference index for numerous investors, such as the OECD staff pension plan, for their asset allocation or performance tracking. Thanks to indices such as this, the questions of how risky or how impacted by Covid unlisted infrastructure is can finally be answered.

Another Hurdle

"The infra300 captures the impact of changes in cash flows, risk premia and interest rates, on a mark-to-market basis," explains Blanc-Brude, "it is as close as tracking the fair value of the asset class as you can get. We now produce this index on a monthly basis because many of its users need monthly reporting."

Amongst the by-product of the EDHECinfra indices is a measure of the latest expected returns in the market. Blanc-Brude argues market expected returns for different segments of the market is what LPs should use as hurdle rate in different types of infrastructure funds. Data shows that the hurdle rate of infrastructure funds have been stuck at 8% for the past 15 years. "In effect, there is no difference between the hurdle rates of so-called 'core' funds which are supposed to be investing at the lower end of the risk spectrum and the `core+' and 'opportunistic' funds that invest in risker, presumably higher return assets," he says.

Faced with decreasing yield and stuck with a relatively high hurdle rate requested by investors badly informed on the actual market yield of infrastructure assets, fund managers have no other choice but to take more risk and add more fund leverage or stray from their original mandate to invest in infrastructure. In the end, these risks are passed back to LPs who are invested in vehicles that may not have the risk-return profile they intended.

Dry powder has also increased by 200% in a few years and Blanc-Brude is convinced that using the wrong hurdle rates in funds is one of the reasons for this. EDHECinfra research shows that the opportunity cost of all this dry powder is enormous. "Had even half of the infrastructure dry powder had been invested in the infra300 index during the past ten years," says Blanc-Brude, "LPs and GPs would have been able to share approximately USD100bn of extra payouts." Instead, much money is waiting on the side-line for opportunities that would have to return much more than what the average market expected return currently is.

Put on your platform shoes

While the largest database of infrastructure investment data in the world was being built, EDHECinfra was also busy creating a state-of-the-art "index and analytics data platform" for investors to access not only its several hundred indices but also valuation metrics, discount rate tools and soon a fund analyser tool that promises to revolutionise the way fund GPs and LPs can benchmark funds.

Head of Production Fabrice Lee-Choon leads the technical team at EDHECinfra and is responsible for delivering new index data to EDHECinfra's customers on the tenth day of each month. "Producing indices for unlisted assets with a ten-day lag had never been done before," he explains. "Usually, investors have to wait for 4 to 6 quarters before they can get updated numbers."

But EDHECinfra's clients do not have to wait. "This is the power of using a layer of models with all our data," says Lee-Choon. "We can run the computations using the latest market data for the quarter or the month whenever is necessary. This also allows us to run custom index solutions for specific users," he adds.

As well as EDHECinfra's platform, all this new data is can also be distributed via Blackrock's Aladdin, Rimes or Bloomberg.

Join the Evolution

Infrastructure investors have been adapting to this new reality more or less fast. "It's really an evolution towards the next generation of indexing and reporting for this asset class," says Lorenzo Menichino, who heads up sales for Northern Europe. "Sophisticated investors have immediately seen the importance of reporting risk and performance more accurately. It's also a way for some managers to differentiate themselves by offering better defined products using TICCS as an anchor and a clear benchmark," he adds.

Recent research by EDHECinfra showed that most investors should really hold about 10% of infrastructure in their portfolio, either equity or debt depending on their profile. "Now that the correlations with other assets can be measured, the applications are many," says Adrien La Greca, who covers North America Sales. "Investors have had these questions about strategic asset allocation for a long time. Now they can be answered," he adds.

The infrastructure investment sector has been through evolutions before. This one is "the end of pre-history," says Blanc-Brude. And literally that is the case: with representative market benchmarks, EDHECinfra has started producing the written history of the sector's risk-adjusted performance and evolution from exotic sub-sub-plot of the alternatives pocket into a major asset class that will play a role for years to come in long-term investment solutions. Get ready. ■

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The next generation of data for infrastructure investors

The infrastructure asset class has long suffered from a lack of adequate measures of fair value and risk. A new generation of research and data on unlisted infrastructure equity and debt allows asset owners and managers, consultants and regulators to access the true characteristics of the asset class.

Thanks to years of research, data collection and industry collaboration, EDHECinfra produces as series of essential tools and datasets that support the growth of the asset class by making it more transparent and well-understood. This includes:

- Key **market indices** tracking the fair market value a representative set of hundreds of investments in unlisted infrastructure equity and debt produced on a quarterly and monthly basis. Hundreds of sub-indices provide access to granular benchmarks using the TICCS® taxonomy of infrastructure companies, across geographies or investment styles.
- For each segment of the unlisted equity and debt universe, essential **risk analytics** are also available, including extreme risk and credit risk measures.
- **Valuation metrics** reflecting the latest evolution of the market price of risk for different types and styles of infrastructure and a dynamic valuation tool for investors to estimate the risk premia of their own assets using the latest information from secondary market data.
- A **fund benchmarking** tool uses mark-to-market returns for hundreds of equity unlisted infrastructure investments over the past 20 years to simulate thousands of funds invested in specific strategies or segments and produce robust benchmarks of fund performance (available in Q2 2021).
- **Peer group benchmarking** using pooled portfolio of actual holdings by investors, comparing the strategies, risk and alpha of direct investors, asset managers etc. Peer groups are based on in-depth research on individual portfolio holdings by asset owners and managers on an ongoing basis and the fair market valuation of the relevant assets.

EDHECinfra is also at the origin of a classification system of infrastructure investments (TICCS®) as well as data collection standards for the evaluation and reporting of performance at the asset level (see below). These standards are validated and used across the industry to create transparent and robust assessments of the performance and risks of the asset class.

Users of EDHECinfra data include the largest asset managers and asset owners in the world, prominent consultants and valuers, as well as prudential and economic regulators.

Table 1: Index & Analytics Data Produced by EDHECinfra

Market Indices	*Available quarterly and monthly*		
inc. infra300® infraGreen® infraDebt500®			
Sub-indices and benchmarks	*Available quarterly*		
Global TICCS® Indices	Equity Style Indices (Core, Core+, Mid-Market..)"	Debt Style Indices (Inv. Grade, RPI-linked, Fixed/ Floating Rate..)	Geographies (Regions and Selected Countries)"
Risk & Performance Analytics	*Available quarterly and monthly for selected indices*		
Capital Gains	Cash Yield	TICCS® Contributions	Max Drawdown
Value-at-Risk	Duration	Expected Loss	Default Risk
Valuation Metrics	*Available quarterly and monthly*		
Market Ratios	Risk premia	DCF drivers	Cost of Capital
Credit Spreads	Yield to maturity		
Fund Benchmarking Tool	*Updated quarterly*		Available in Q3 2021
by Style	by Vintage	by Horizon	by Fee Structure
PMEs	Direct Alpha	Dietz Returns	IRR Quartiles
Peer Group Benchmarking	*Updated semi-annually*		Available in Q4 2021
Peer group ratings	Peer group performance	Peer group style analysis	

Source: edhecinfra.com

EDHECinfra: from academic insights to industry relevance

Robust research practices and the objective to create solutions for the industry are at the heart of the *EDHECinfra* approach.

EDHECinfra was created in 2015 at EDHEC Business School thanks to the support of the Monetary Authority of Singapore, Natixis, Meridiam, Campbell Lutyens, the members of the Long-Term Infrastructure Investors Association and the Global Infrastructure Hub (a G20 initiative).

From the onset, the objective of EDHECinfra was the creation of industrial-grade market indices and benchmarks for the purpose of documenting the characteristics of the infrastructure asset class.

The academic DNA of EDHECinfra means that we put modern financial theory first. In practice, it means that returns must correspond to risks priced by markets and that asset valuations should reflect current market data, especially the latest changes in interest rates and risk premia.

We set out to build a representative, bias-free database of investible infrastructure companies including data on both equity and debt instruments, and to design asset pricing models that could capture the evolution of the price of risk for unlisted infrastructure investments.

The industry supports this effort and the EDHECinfra Advisory Board provided essential guidance as EDHECinfra developed its approach and designed the benchmarks and valuation tools the industry and regulators need.

Already in September 2015, in a letter to the Dean of EDHEC, the Chairman of EIOPA wrote that the conclusions of the regulator with regard to the definition and treatment of infrastructure under Solvency-II "draw to a very large extent on the work of Professor Blanc-Brude." (EIOPA 15-726)

Since then, numerous investors have started using EDHECinfra indices and benchmarks directly in the investment process, including for risk reporting, asset allocation and performance monitoring.

EDHECinfra now provides the industry with the only access to current, mark-to-market, representative indices and benchmarks of the risk-adjusted performance of unlisted infrastructure equity and debt.

Thanks to this project, the infrastructure asset class has entered a new era of transparency and granular data, which will continue to improve the prudential treatment of the asset class, increase global asset allocations to unlisted infrastructure and support the development of the infrastructure investment industry.

THE EDHECinfra Advisory Board

Advisory board members include:

- Anne-Christine Champion (Natixis)
- Paul Shantic (Calstrs)
- Gillian Tan (MAS)
- Adriaan Ryder (ADIC)
- Laurence Monnier (Aviva)
- Robert Bianchi (Griffith University)
- Kim Jee (KIC)
- Christopher Manser (Swiss Life)
- Marie Lam-Fremdo (GIH)
- Noel Amenc (EDHEC)
- Matthew Lim (GIC)
- James Davis (OPTrust)
- Timo Välilä (UCL)
- André Laboul (OECD)
- Paul Carrett (FWD)
- Premod Thomas (Bayfront)
- Stefano Gatti (Bocconi)
- Jordan Schwartz (World Bank)
- Ian Berry (River & Mercantile)
- John Faye (CDPQ)
- Sancho Chan (Sunlife)

Advisory board members

TICCS®: define your style

Collecting a lot of infrastructure data required EDHECinfra to create a taxonomy of infrastructure investments: The Infrastructure Company Classification Standard or TICCS® was first released in October 2018 and soon became an industry standard that allows the definition of clear and robust investment styles in the asset class.

There are several ways to define 'infrastructure': the OECD and the World Bank use definitions that focus on what infrastructure does, that is, delivering essential services. For the purposes of classifying investments in infrastructure, a better approach focuses on what infrastructure 'is like' in terms of its attributes as a business. This is the route taken by financial regulators in their effort to define qualifying infrastructure assets under various prudential frameworks. Criteria-based definitions of qualifying infrastructure companies exist under the Basel-II Accord, the Solvency-II Directive and the CRR-2 Regulation of European banks.

The TICCS® View

TICCS® is not strictly speaking a definition of what is and what is not 'infrastructure' but a taxonomy to objectively organise the constituents of the infrastructure investment universe. We identify six fundamental economic criteria for an asset to be meaningfully designated as 'infrastructure':

- **Single-use investment**: infrastructure assets are 'relationship-specific' i.e. the investment required only makes sense in the context of a 'relationship' – typically a contract, license or concession.
- **Sunk or irreversible capital investment**: this relationship is needed because the initial capital expenditure is 'sunk' i.e. irreversibly invested and unusable for any other purpose than the one originally intended.
- **Large size requiring a long repayment period**: the investment is sizeable in absolute terms, making the repayment period necessarily long.
- **Inflexible total cost structure**: infrastructure assets have highly predictable fixed costs and low variable costs, resulting in an inflexible cost structure. Hence the need for certainty of future revenue streams and the role of long-term contracts since assets have no alternative use.
- **Infrastructure as a service**: infrastructure companies have value because their assets provide a useful service to users, despite consisting mainly of large tangible, immobile assets.
- **Not a store of value**: unlike other 'real' assets such as land, buildings, etc., infrastructure is not a store of value, only a provider of useful services.

An industry standard

On this basis, *TICCS* has four pillars as shown in the table 2. The super-class level (eg. Transport), breaks down into a class level sectors (e.g. Rail) and asset level sub-classes (e.g. High-speed rail). TICCS is the object of annual market consultations and reviewed by the independent TICCS Review Committee. In 2021 members of the TICCS Review Committee (see box).

TICCS is used by pension funds, insurers and asset managers to categorise their investments and reflect their exposures to well-defined segments of the infrastructure universe that can also be benchmarked by equivalent sub-indices since the EDHECinfra data is organised using the same taxonomy. For example, an investor in contracted and merchant infrastructure projects across social and transport infrastructure can design a representative portfolio benchmark using the weights of each segments in its own portfolio.

TICCS Review Committee as of Q1 2021

- Andrew Knight (RICS) – Chairman
- Avi Turetsky (Landmark Partners) – Secretary
- Mark Blair (OTTP)
- Anne-Christine Champion (Natixis)
- James Davis (OPTrust)
- Christophe Dossarp (SOURCE)
- Fraser Hughes (GLIO)
- Marie Lam-Frendo (Global Infrastructure Hub – G20)
- Serge Lauper (BlackRock)
- Trevor Lewis (Asian Development Bank)
- Christoph Manser (Swiss Life)
- Laurence Monnier (Aviva Investors)
- Petya Nikolova (New York City Comptroller's Office)
- Paul Shantic (CALSTRS)
- Marija Simpraga (LGIM)
- Nicholas Tan (Clifford Capital)
- Rick Walters (GRESB)

Table 2: The Four TICCS® Pillars

Pillar I: Business Risk	Pillar II: Industrial Activity	Pillar III: Geo-Economic Exposure	Pillar IV: Corporate Governance
Contracted	Power x-Rnw	Global	Projects
Merchant	Env. Services	Regional	Corporates
Regulated	Social Infrastructure	National	
	Energy & Water Res.	Subnational	
	Data Infrastructure		
	Transport		
	Renewable Power		
	Network Utilities		

TICCS®:

- 3 classes and 5 sub-classes of business risk;
- 8 industrial super-classes, corresponding to 33 industry classes of specific industrial activities and 95 industrial asset-level subclasses;
- 4 geo-economic classifications; and
- 2 corporate-governance classes with 2 subclasses.

Source: docs.edhecinfra.com

What is infrastructure investment really like?

Using the EDHECinfra data, valuation approach and the TICCS® classification gives investors the true view on what investing infrastructure really is like.

Being exposed to 'infrastructure' can often be a little abstract. In effect, investors are exposed to *some* infrastructure. Using granular data and an objective classification system confirms that the difference in risk-adjusted performance between different segments of the infrastructure universe is significant and suggests that investors need to monitor their exposure to infrastructure in details as shows on table 3.

The period of Covid-19 in particular has highlighted how differently exposed to certain risks investors in infrastructure can be. The Covid pandemic revealed both the capacity for resilience of certain types of infrastructure like contacted projects and the exposure to economic risks of merchant corporates, two segments well-captured by the TICCS taxonomy, as also shown in table 3.

The EDHECinfra approach also reveals the sources of the risk and performance of the different segments of the asset class. Beyond the impact of cash flows, their relative exposure to interest rate risk and changes in risk premia of these companies are major components of the ongoing fair value of unlisted infrastructure companies. In effect, changes in the fair value discount rates are much more significant drivers of

Table 3: Performance and risk measures of key segments of the infrastructure equity and debt universe as of Q4 2020, local currency returns

Indices	1-year total return*	3-year total return	5-year total return	10-year total return	10-year volatility	99.5% 1-year Value-at-Risk	Maximum drawdown	Modified Duration**
infra300®	-1.9%	3.2%	6.6%	13.8%	12.6%	25.2%	31.3%%	9.30
Contracted infrastructure	2.0%	6.7%	8.4%	15.0%	11.2%	19.9%	27.6%	7.90
Merchant infrastructure	-6.6%	4.7%	9.8%	15.3%	14.3%	29.1%	35.5%	10.20
Roads	6.0%	9.7%	11.5%	16.1%	15.3%	31.7%	31.2%	11.10
Airports	-35.1%	-12.6%	-0.7%	10.5%	18.3%	40.7%	39.8%	13.50
Global projects	2.1%	8.4%	10.3%	16.3%	11.9%	21.9%	29.4%	8.50
Global corporates	-13.5%	-2.5%	3.0%	11.2%	13.9%	29.8%	34.0%	9.60

**estimated at YE 2020 **percentage change in value for one percentage change in discount rate*
Source: indices.edhecinfra.com

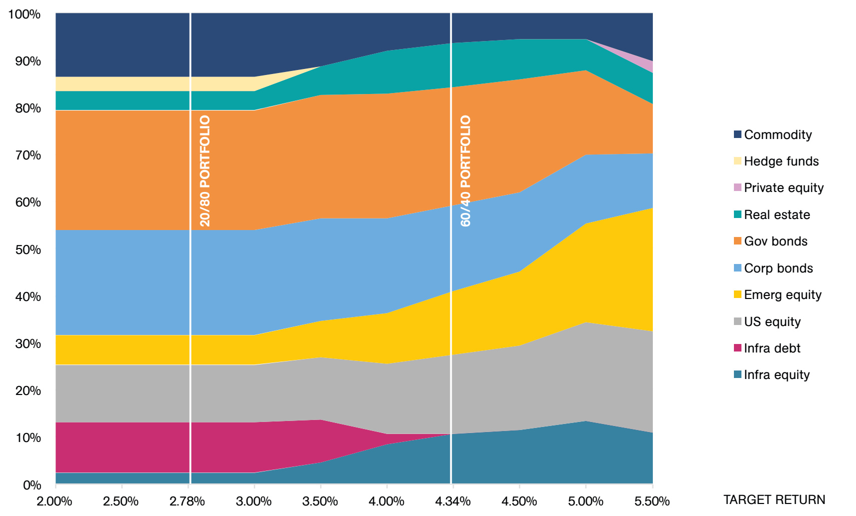
risk and performance than changes in future cash flows, even in a period like the Covid pandemic.

For example, using EDHECinfra data for a sample of 500+ unlisted infrastructure equity investments in 22 countries in 2020, lower future dividends due to Covid-19 contributed on average to reducing the net asset value of unlisted infrastructure investments by approximately -3.5%, while downward movements in interest rates contributed to increasing valuations by more than +5%. Higher risk market premia further deflated them by as much as -9%. Over the past three years, for the same universe, the cumulative impact of changes in interest rates on fair values is +15%, compared to less than one percent for changes in expected cash flows.

But the most appealing feature of unlisted infrastructure equity investment remains its cash yield, which is the main source of stability and attractiveness in risk-adjusted terms. Recent research by EDHECinfra shows that infrastructure companies are very good at paying dividends compared to other firms (Whittaker and Tan, 2020). Thus, the cash yield of the infra300 index remains at 7 to 8% in recent years, as shown on figure 1.

Measuring the true volatility of unlisted infrastructure investments presents the significant advantage of allowing investors to engage in asset and risk management.

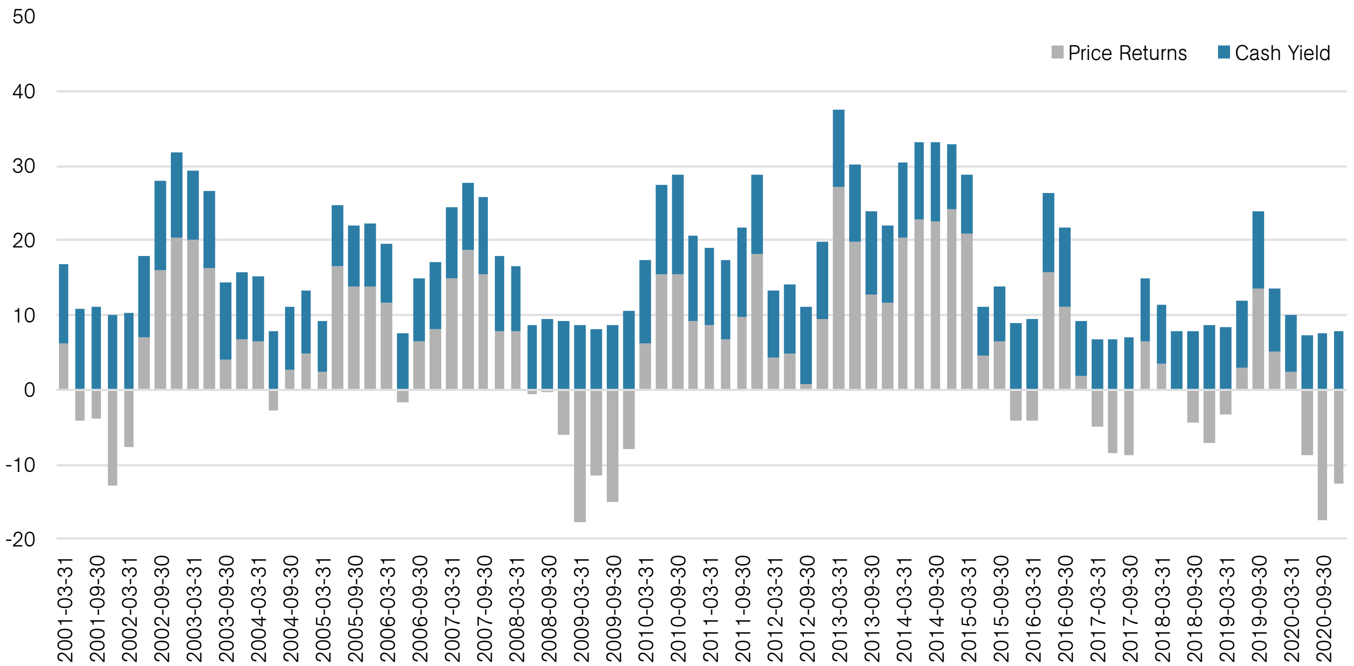
Figure 2: Optimal Asset Allocations with ten asset classes including unlisted infrastructure equity and debt.



Source: Amenc et al 2021, Strategic Asset Allocation to Unlisted Infrastructure – EDHEC Infrastructure Institute Publications. Forward-looking return and risk data EDHECinfra, other asset classes based on market consensus

Figure 2 shows that in a multi-asset context with 10 asset classes, unlisted infrastructure equity and debt always have a role to play in the portfolio of different styles of investors and that optimal allocations could be as high as 10% compared to the much lower current levels. Once the performance of the asset class is adequately measured on a fair value basis, investing in unlisted infrastructure can bring significant advantages to investors: it is a demonstrable source of diversification, income and liability hedging, as long as it is properly benchmarked within the portfolio.

Figure 1: Year on year price and cash returns of the infra300® index (unlisted equity)

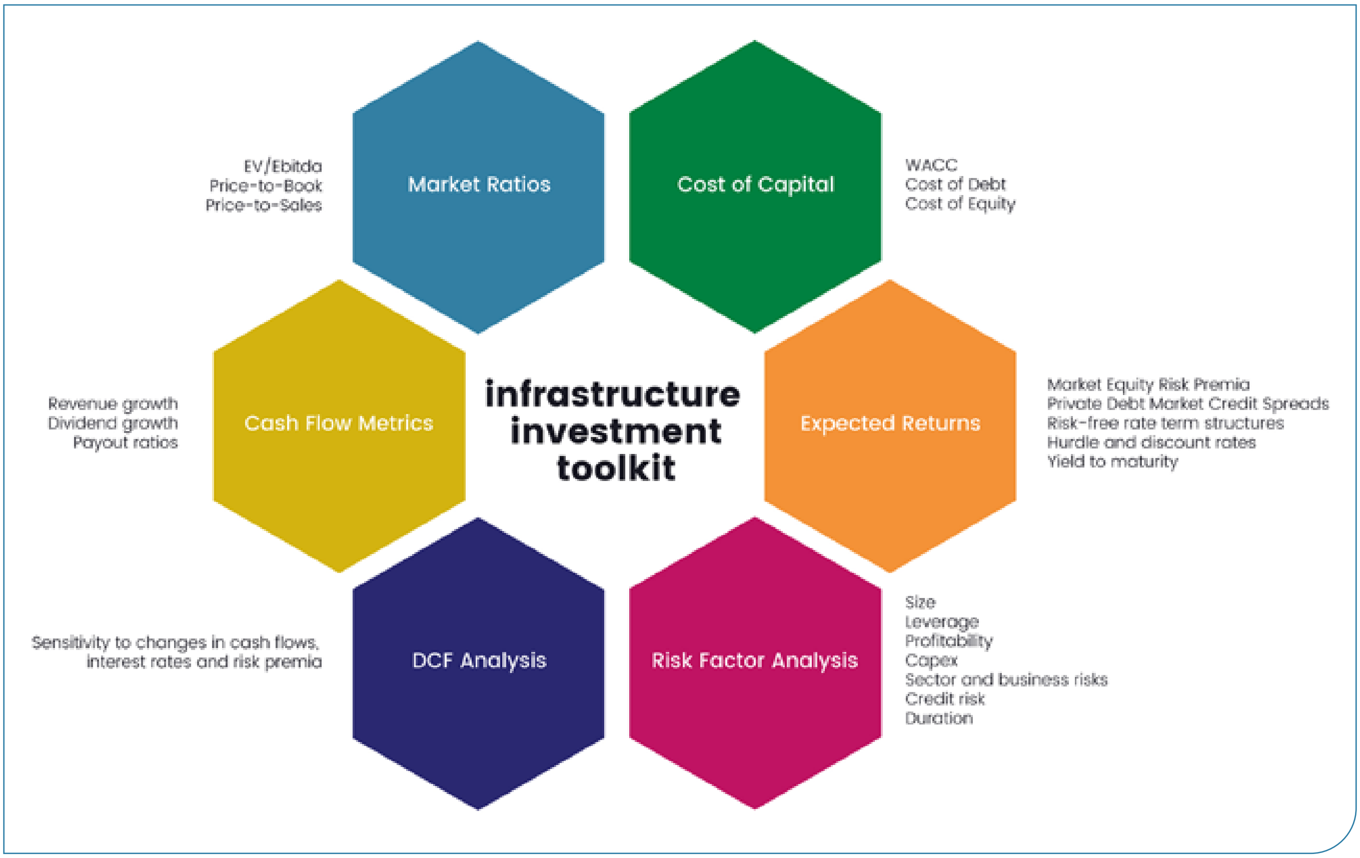


Source: indices.edhecinfra.com

The Infrastructure **Investment Toolkit**

EDHECinfra has identified more than 6,800 private investible infrastructure companies in 25 countries, from which it has built a representative set of 650+ tracked investments and 1,200+ financial debt instruments going back 20 years. Investors in infrastructure have access to the analytics needed to evaluate, benchmark, compare investments in unlisted infrastructure equity and debt using 20 years of data collected and curated by the EDHECinfra team.

Equity metrics are available by TICCS® segment including business risk, industry and corporate structure, as well as equity styles including core, core+, mid-market, etc. Debt metrics are also available by TICCS® segment and by debt investment styles including investment grade, fixed rate, floating rate and inflation-linked (UK only).



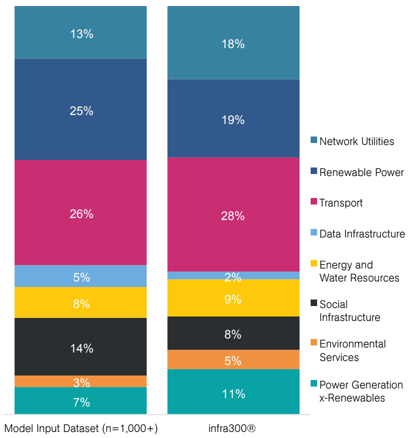
The science of **accurate valuations**

Measuring the market price of illiquid, unlisted infrastructure investments is not straightforward due to the paucity of available data. However, recent advances in data collection and asset pricing using robust, scientific methods and now give very good results.

As more investors consider allocations to unlisted infrastructure, the need to bring the asset class into the mainstream of risk management, asset allocation and prudential regulation is increasing rapidly. Reflecting the impact of Covid-19 on infrastructure valuations has made this trend all the more urgent. Appraisal values typically implying very smooth returns that do not reflect the latest market conditions. In the absence of comparable transactions, most unlisted infrastructure investments have effectively been booked at or near historical cost. However, thanks to recent advances in data collection and asset pricing techniques, it is now possible to estimate the evolution of fair market prices for unlisted infrastructure equity investments. It can be shown that:

1. Common risk factors explain observable valuations of unlisted infrastructure companies.
2. The risk premia of these factors can be measured on an ongoing basis, as new transactions table place. Thanks to these risk premia, individual assets that do not trade but are exposed to the same factors can also be priced.
3. This approach predicts transactions prices accurately within 5% of observed transaction prices and produces robust series of returns with no smoothing.

Figure 3: Transaction price data used in valuations vs infra300® index



Source: Blanc-Brude and Gupta 2021.

This technology allows measuring the true yield of infrastructure investments, their optimal contribution to multi-asset portfolios, duration and much more.

For example, looking at a comparison between model-predicted ratios like EV/EBIDTA, Price-to-Book and Price-to-Sales against actual deals values for a large and diversified set of observed transactions between 2000 and 2020 (see figure 3), we see in table 4 that model-predicted prices are accurate. The prediction error is typically within 5% or less of observed prices.

Table 4: Estimated vs. Reported Valuation Ratios and model goodness of fit

Ratio	Reported Mean	Estimated Mean	Reported Median	Estimated Median	R^2	RMSE*
EV/EBITDA	15.54	15.34	12.98	12.61	0.97	2.27
P/Book	2.37	2.28	1.65	1.59	0.87	0.90
P/Sales	3.35	3.21	2.52	2.32	0.85	1.43

** root mean squared error Source: indices.edhecinfra.com*

While we cannot use "comps", because there are too few observable prices, we can reduce the number of dimensions of the problem to a few systematic risk factors that are found in every transactions. On each valuation date, the fair value of any infrastructure investment is a function of a) a future stream of dividends, b) the term structure of risk-free rates in that country and at the relevant horizon and c) a risk premia.

Given a stream of expected cash flows (which can come from the asset owner), and a term structure of rates (built using the yield of risk-free bonds at the relevant horizons, in the relevant country), estimating the fair value of unlisted infrastructure equity boils down to estimating the equity risk premia for a given company.

EDHECinfra research has determined that the most relevant, robust and persistent risk factors that explain transaction prices in unlisted infrastructure transactions are:

- Leverage (Liabilities / Total Assets)
- Size (total assets)
- Profitability (Return on Assets pre-tax)
- Investment (Capex / Total Assets)
- Country risk (Term Spread)
- A range of control variables including business model and industrial activities according to the TICCS® taxonomy.

These factors are in line with fundamental concepts in asset pricing and corporate finance. For example, higher leverage should increase the cost of equity as per the Modigliani and Miller theorem, and the size, profits and investment are well established risk factors in modern equity valuation since Fama and French.

With this technology and curated datasets, it is possible to measure the fair value of unlisted investments on a fair market basis on an ongoing basis and to provide investors and regulators with the granular and accurate information they need.

Future-proofing Asia Pacific – Hydrogen financing's bamboo shoots

The market is increasingly seizing opportunities across hydrogen's value chain in Asia Pacific, with a natural alignment evolving between value chain and financial solutions. The industry needs to devote most resources towards drafting and negotiating security and guarantee packages, IJGlobal's **David Doré** finds

Sponsors, bankers and advisers are increasingly seizing opportunities across hydrogen's value chain.

Japanese trading house Sumitomo Corporation and Queensland state entities – Gladstone Regional Council, CQUniversity Australia and Australian Gas Industry Group – have signed an MoU for the 250-300 tonne Gladstone green hydrogen plant, allowing the project to enter its design phase.

Australian natural gas transmission company APA Group has taken on a new initiative – the first project under the company's Pathfinder Program – to convert a 43km section of the Parmelia gas pipeline in Western Australia to a hydrogen-ready transmission pipeline.

French renewables developer Neoen is partnering with Australian utilities provider ActewAGL to deliver the continent's first commercial hydrogen refuelling station to coincide with the rollout of the government of the Australian Capital Territory's new fleet of 20 Hyundai Nexo hydrogen vehicles.

All these up-, mid- and downstream projects reached milestones during the past month.

Hydrogen task forces have also buttressed the financing market, sprouting up first to map hydrogen's value chain and then position firms to gain competitive advantage.

"It's rewarding to work with bank colleagues and clients in many industrial sectors across the hydrogen value chain," says Astrid Behaghel, hydrogen coordinator at BNP Paribas.

"We've trained about 300 people within the bank, mainly industry teams who have deep, rich knowledge and explore how hydrogen may impact business models and support energy transition," she says.

Discussions at SMBC in 2019 and 2020 tended to be open ended and client driven. As the bank last year gained more internal clarity about its value proposition, it started identifying unique client relationships and channels.

"Many of these hydrogen projects need match making," says Siddhartha Shrivastava, head of energy and natural

Astrid Behaghel

"We've trained about 300 people within the bank, mainly industry teams who have deep, rich knowledge and explore how hydrogen may impact business models and support energy transition."

resources of SMBC's structured finance team in Asia. "A refiner may need to sit together with a CO2 user while a trader may want to talk with a certifier. We're looking to push out more aggressively."

Yet market sources appreciate the risk that undergirds the dynamism of this ever-growing subsector.

"If you ask for my thoughts six months from now, I might see things quite differently," cautions a North American institutional investor.

Awareness buys time. Time buys options

Amid the market's verve is the fact that non-recourse infrastructure loans in Asia Pacific's hydrogen markets are not yet here.

"It's early days for hydrogen financing in this part of the world," says Shrivastava. "We started looking at hydrogen project financing a little more than a year ago."

Whether project, corporate, sovereign or hybrid financing takes the lead may depend on where the project sits along the value chain. However, each is likely to materialise quickly.

Sponsors, bankers and advisers will soon be testing how defining aspects of project financing – financing structure, security and guarantee, governance and law, and risk mitigation – apply to the universe's most abundant element.

Financiers appreciate that green hydrogen will be an important element of the world's energy transition – much as renewables has reshaped the world's power sector during this century's first 20 years.

"But would it make complete economic sense to entirely focus on green hydrogen when our analysis shows green hydrogen is still more expensive than blue hydrogen?" asks Shrivastava.

"Blue and green hydrogen have enormous potential. However, it's difficult to understand how and when the opportunities will materialise," adds a pension fund investor. "We're keeping a keen eye on the cost curve, especially around green hydrogen."

"We don't have to play directly in hydrogen production," a Singapore-based managing director says. "We may gain exposure by investing in renewables to power the hydrogen plant or networks to offtake production."

DNA detectives

A natural alignment is evolving between parts of the hydrogen value chain and financial solutions. Upstream production is likely to be more conducive to project financing, midstream pipelines may be reasonable candidates for corporate bonds since the asset is highly regulated, and end-use financing will very much depend on the sponsor's culture of finance.

"We're working with clients to find appropriate solutions," says Behaghel. "Some companies, like IPPs, have project financing in their DNA. Whether products are something the client is familiar with or we together need to find a more innovative solution will depend on the corporate culture."

Loan facility, project sponsor, currency, hedging, facility tenor, availability period and repayment are considerations when structuring a hydrogen infrastructure loan.

Project finance bankers may prefer that the senior debt facility be large to realise economies of scale in the production of the financial solution, involving costly technical, environmental, insurance and legal reviews.

Pitching to advise or lend on a project being developed by a reputable and experienced project developer may be a logical way to ensure the facility is sufficiently large. Big state-owned companies or investment-grade private developers – for example, Sinopec, refiner Indian Oil or the global Japanese trading houses – would be natural allies in this thinking.

However, smaller pure-play green hydrogen infrastructure developers have emerged to test that thesis, large incumbents and suppliers to those

Siddhartha Shrivastava

"But would it make complete economic sense to focus entirely on green hydrogen when our analysis shows green hydrogen is still more expensive than blue hydrogen."

incumbents are noticing. Mitsubishi Heavy Industries agreed in November 2020 to invest in green hydrogen and ammonia project developer H2U.

H2U's A$240 million Gateway hydrogen project in South Australia's Eyre Peninsula is set to be the largest green ammonia plant in the world, 60x bigger than Australia's largest electrolyser at Tonsley, Adelaide, which is under construction.

A banker's normal preferences for hard currency contracts – or local currency contracts with foreign currency adjustments – interest rate swaps and commodity price hedging will be an integral part of the financing structure.

The greatest need for innovation among those three may be in commodity price hedging because there are yet no spot prices for hydrogen. S&P Global Platts' hydrogen price assessments are helping to develop the market by covering the following:

- **Alberta, Canada**
  - steam methane reforming (SMR) without carbon capture and storage (CCS)
  - alkaline electrolysis
  - polymer electrolyte membrane (PEM) electrolysis, excluding and including capex

- **10 regions in US**
  - SMR w/o CCS
  - alkaline electrolysis
  - PEM electrolysis, excluding and including capex
- **Netherlands**
  - SMR with and w/o CCS
  - PEM electrolysis
  - alkaline electrolysis
- **Japan**
  - SMR w/o CCS
  - PEM electrolysis
  - alkaline electrolysis

Sponsors, bankers and advisers will need to consider whether to continue using the practice of conventional hydrogen production, or grey hydrogen, through SMR without CCS. This hydrogen subsector tends to use the feedstock price, predominantly natural gas, as an integral element in contracts.

Shrivastava says that most of his discussions in Asia during the past year have been about production of blue hydrogen through SMR or auto thermal reforming, coupled with carbon capture, utilisation and storage (CCUS). "It's low-hanging fruit and the mark-up on the commodity is not significant," the Singapore-based banker says.

"Where is hydrogen going in 30 years?" asks Perth-based Philip Sealey, Clifford Chance director and head of renewables in Asia Pacific.

"It may be like natural gas. I don't have a 15-year contract with my NG supplier. There's a liquid market to buy at spot. That's where it will end up. However, during this initial period hydrogen financing will need much more structured arrangements."

Weaving a banker's blankie

Arguably, sponsors, bankers and advisers will need to devote most resources towards drafting and negotiating the security and guarantee package. This element to reach financial close may determine whether Asia Pacific's hydrogen financing market leans more towards sponsors or bankers.

Project contracts, insurance, security package, ranking, guarantees, covenants and share retention obligation will loom large in reaching financial close. A banker's proclivity towards enforceable, robust project contracts with proper allocation of risks will surely be at the vanguard.

"Our main challenge during the next year is not whether hydrogen-related projects can be banked," says Shrivastava. "We're really looking for commercial projects with robust contracts. The good news is that there's fertile ground for commercial models."

The development of economic and

Philip Sealey

"During this initial period hydrogen financing will need much more structured arrangements."

technical advisory markets should play an important role in how quickly projects can achieve financial close. An early step to provide confidence to industry participants will be market studies supporting cashflow projections with adequate coverage. Enegix Energy in March (2021) signed an MoU with US-based Black & Veatch to complete feasibility studies for the construction of a $5.4 billion green hydrogen plant in Brazil.

Washington, DC-based Rachel Crouch

Rachel Crouch

"Given the projected rapid pace of development of the hydrogen market, parties may consider whether to include price review provisions in their offtake contracts."

of Norton Rose Fulbright has analysed long-term revenue contracts, comparing how hydrogen financing may adapt the LNG market's use of two models: tolling and sale and purchase. She also explores take-or-pay, which is common in the LNG subsector, or take-and-pay models to deal with contract quantities.

Pricing is a third factor in commercial contracts. "Given the projected rapid pace of development of the hydrogen market, parties may consider whether to include price review provisions in their offtake contracts," Crouch writes.

"These provisions should be considered carefully because price reviews are very susceptible to dispute, and there are unlikely to be objectively determinable spot prices to rely on by the time the opportunity for a price review arises under early green or blue hydrogen sale contracts."

Tokyo-based Hans Menski, project finance partner at Clifford Chance, adds: "Along with robust, detailed contracts, at a practical level storage will be very important. Industrial users will need uninterrupted supply. Since hydrogen will not be as fungible as natural gas – at least for the foreseeable future – supply bottlenecks need to be addressed."

Borrowers will continue taking out comprehensive asset insurance packages to cover construction and operational risks, as well as third-party liabilities. The insurance market for blue and green hydrogen production will need to mature more quickly than grey hydrogen, market insiders argue.

Project financiers' preferences for security over fixed assets, bank accounts and contracts for project companies will be matched by their desire to have borrowers pledge shares.

During this initial phase, dominated by blue and green hydrogen production, the market will likely see a fair share of guarantees by forward-leaning governments, export credit agencies and development finance institutions.

Behaghel expects that governments that have already strategized about hydrogen will turn those commitments into guarantees. Australia, Japan and South Korea already have hydrogen targets.

Bankers would like to focus on markets and sectors with investor-friendly regimes and policy tailwinds and avoid reliance on unsustainable subsidies. An example of a favourable signal is the Wollongong City Council's pitch to make Port Kembla the site of a production facility, as part of an NSW Standing Committee on State Development inquiry to develop the state into a hydrogen hub.

The proposal by Wollongong – Australia's steel city – is also significant because it may portend other steel-producing cities, which

Hans Menski

"Since hydrogen will not be as fungible as natural gas – at least for the foreseeable future – supply bottlenecks may be challenging."

are keen to decarbonise their production processes, to take a gander at hydrogen's opportunities.

"A significant portion of the cost of green hydrogen production comes from renewables," notes Shrivastava. "Some APAC markets may have excess renewable energy supply that could be tapped into to bring economic viability to green hydrogen production."

"Australia has huge ambitions with electrolysers and commercial green hydrogen in general," says the SMBC banker. "It's entirely plausible they can do large solar and wind projects at cost that makes sense."

He also highlights the mitigation of completion and performance risk. "Well beyond construction risk, we would want to see these units perform and expect strong warranties to be in the mix," he says.

A bolt-on CCUS unit has the risk of leaks. Likewise, corrosion may be a factor in hydrogen pipelines. "Developers and technology providers would need to stand behind those warranties," says the SMBC banker.

The dearth of performance history may translate into higher financing costs, but this is the case with any new subsector. In the meantime, bankers may turn to the supplier's creditworthiness.

Intermountain Power Agency (IPA) in March (2020) awarded Mitsubishi Power with a notice to proceed to deliver two power trains for the Intermountain Power Plant in Delta, Utah. IPA is recommissioning the coal-fired power plant into an 840MW hydrogen/natural gas-fired plant.

"It's really the world's first gas turbines specifically designed to run on green electrolytic-produced hydrogen," says Mitsubishi Power vice-president of renewable fuels Mike Ducker.

IPA and the Los Angeles Department of Water and Power will respectively own and operate the facility. "The starting point is this is fully contracted," Ducker emphasises.

Moving forward

Hydrogen financing faces challenges. While the number of governments expressing their commitment to hydrogen is growing, more of them need to articulate coherent hydrogen strategies, market insiders say.

"More and more countries will continue publishing hydrogen strategies," remarks Clifford Chance's Sealey. "Written policies help people get excited about the size of market. But I'd be surprised if a project financing of a full-scale project closed within six months."

He suggests sponsors, bankers and advisers in Asia Pacific study HyDeal Ambition – an initiative among more than 30 companies across the value chain to deliver 100% green hydrogen across Europe at €1.5/kg, including transmission and storage before 2030.

"APAC, of course, lacks the EU's coordination," Sealey recognises, "but the project's value-chain approach, based on extensive market research, may accelerate us to where we want to go."

Behaghel anticipates government-to-government hydrogen pacts to proliferate.

Australia and Japan have agreed to work together on hydrogen. "Australia and Japan recognise that hydrogen is a key contributor to reducing emissions, especially when produced from renewable energy or fossil fuels combined with carbon capture, utilisation and storage," said Minister for Resources and Northern Australia Matt Canavan in a statement in January 2020.

Singapore and Chile in February (2021) also signed an MoU to collaborate on low-carbon hydrogen technologies.

More recently, Canada and Germany in March (2021) entered into an agreement to collaborate on a number of "shared energy priorities", including hydrogen and

Mike Ducker

"It's really the world's first gas turbines specifically designed to run on green electrolytic-produced hydrogen."

LNG. Germany and Saudi Arabia have also signed an MoU on the production and use of hydrogen during a German-Saudi virtual session.

Menski envisions a fair amount of work for cluster projects in industrial zones. Investment in bolt-on assets to bring a hydrogen production component to existing facilities or upgrade legacy natural gas pipelines to transport hydrogen may not require project financing.

"We continue to engage with developers and technology providers all around the world," says a market insider. "We're already invested in a large gas grid that has been at the leading edge of hydrogen and has pilots pushing forward."

An institutional investor anticipates Europe to remain the leading region for hydrogen. "Government support is the only way this thing is going to get moving from a practical standpoint," they confide.

"While our team independently looks at hydrogen's trajectory, it's better to learn through an existing platform or portfolio company. They will have a strong network and good relationships with governments." ■

Going green – the Dutch clean hydrogen vision

The Netherlands is a leading light in the green hydrogen revolution with many pinning hopes on it as a pathfinder for Europe. *IJGlobal* assistant editor **Anna Cole-Bailey** takes a look at the most ambitious projects

After Germany, the Netherlands is the largest producer of grey hydrogen in Europe, having long used it in the chemicals industry. However, in recent times the Dutch have played a leading role in driving adoption of its more virtuous cousin… green hydrogen.

The Netherlands is increasingly becoming an attractive playing field for hydrogen developers owing to its extensive natural gas pipeline infrastructure and depleted gas fields in the North Sea.

The first operational hydrogen pipeline in the Netherlands was built in 2018 by Dutch gas company Gasunie in the south west region of Zeeland.

The same year (2018) the Dutch government decided to end its reliance on natural gas production by 2050 to end the risk of earthquakes caused by gas exploration, and look to cleaner energy sources instead.

Since then a slew of energy companies have – largely through collaborations – begun testing the potential for green hydrogen production across regional clusters, industry and ports.

At the time of going to press, *IJGlobal* identified 5 prominent hydrogen projects:

- NortH2
- PosHYdon
- Shell and Eneco JV
- Ørsted and Yara hydrogen electrolyser
- SinneWetterstof hydrogen pilot

Two of the most ambitious hydrogen projects underway at the moment are NortH2 and PosHYdon, both of which plan to use offshore wind to produce green hydrogen.

NortH2

A consortium of Dutch companies consisting of Gasunie, Groningen Seaports and Shell Nederland in February 2020 launched the NortH2 project to develop a 3-4GW wind farm (option to expand up to 10GW) in the North Sea with the electrolyser likely in the seaport of Eemshaven in Groningen (northern Netherlands).

Project completion is slated for 2030 and once it is commercially viable, the sponsors may re-locate the electrolyser offshore.

The consortium plans to:

- scale up offshore wind capacity from 3-4GW in 2030 to 10GW by 2040
- eventually produce 800,000 tonnes of green hydrogen a year by 2040

Since the project's conception, German utility RWE and Norwegian energy company Equinor have come on board.

The plan is for RWE's gas storage business to store the hydrogen and its energy trading company will supply the clean fuel to industrial customers and heavy-duty vehicles.

Groningen has become something of a green hydrogen powerhouse in recent years – dubbed the "European hydrogen valley" – in a shift driven by the green agenda and seismic disturbances.

A particularly strong earthquake rocked Groningen's sizable natural gas field (the biggest onshore natural gas field in Europe) in 2018, forcing a halt to production.

This prompted a number of initiatives to transform the province and the northern Netherlands region more widely into a European hub for hydrogen production.

Last year (2020) northern Netherlands became the first region to obtain a subsidy worth €20 million ($16m) from the Fuel Cells and Hydrogen Joint Undertaking of the European Commission for the HEAVEN project to create a green hydrogen supply chain in the region.

PosHYdon

With plans to become the world's first offshore green hydrogen project, Neptune Energy's PosHYdon pilot gathered pace last year (2020), attracting several high-profile partners.

Neptune Energy – an independent E&P company – is working on this ambitious project to produce offshore green hydrogen in the Dutch North Sea by installing a hydrogen-producing plant on the no-longer-producing Neptune-operated Q13a platform.

Electricity produced by offshore wind will generate the hydrogen plant on the Q13a platform, located around 13km off the coast of Scheveningen, which will convert seawater into demineralised water and then into hydrogen through electrolysis.

The hydrogen produced will then be transported onshore along with natural gas via existing pipelines NOGAT and Noordgastransport.

By the end of 2020, the project added DEME Offshore, Gasunie and Eneco as partners.

Eneco's role will be to supply the pilot with simulated wind data from its offshore wind farm Luchterduinen off the coast of Zandvoort and Noordwijk to model electricity generated to integrate 3 energy systems in the North Sea: offshore wind, offshore gas and offshore hydrogen.

Details of the project's financing have not been released, but Neptune expects subsidies to fund the build.

The initiative was set up by Nexstep, the Dutch association for decommissioning and reuse; and TNO, a scientific research body.

Neptune Energy's PosHYdon pilot attracted several high-profile partners

Shell Nederland entered into a JV with Dutch natural gas supplier Eneco to build a 200MW green hydrogen electrolysis plant in the Port of Rotterdam

Shell and Eneco JV

In line with its pledge to be a net-zero emissions company by 2050, Shell's ambitions with regards to green hydrogen have not gone unnoticed.

As well as its involvement in NorthH2, last year (2020) Shell Nederland entered into a JV with Dutch natural gas supplier Eneco to build a 200MW green hydrogen electrolysis plant in the Port of Rotterdam (south Holland) on the Tweede Maasvlakte expansion.

The same year (in July 2020), the pair's CrossWind JV won the tender to build and operate the third unsubsidised wind farm in the Kust Noord zone, with a 750MW capacity. Electricity from this offshore wind farm will be used to power the electrolyser.

Shell and Eneco subsequently issued guarantees to partners of the JV for investment in the construction and operation of Hollandse Kust.

The wind farm, equipped with 69x 11MW Siemens Gamesa turbines, is expected to be operational in 2023, with the electrolyser producing between 50,000 and 60,000kg of hydrogen per day.

According to the JV, hydrogen produced will initially be used at the Shell refinery in Pernis, near Rotterdam, to decarbonise the production of fuels, with further ambitions to decarbonise heavy-duty trucks.

Ørsted and Yara

Following on from the success of Ørsted commissioning its first offshore wind farm last year (2020) – the 752MW Borssele 1 & 2 offshore wind farms in Zeeland – the Danish renewables giant has set its sights further on the Dutch province through a partnership with Norwegian fertiliser producer, Yara.

The duo announced last October (2020) that they are developing a 100MW wind-powered hydrogen electrolyser for ammonia production in Yara's Sluiskil power plant in Zeeland.

The plant is expected to produce 75,000 tons of green ammonia a year and will be powered by energy produced by Borssele 1 and Borssele 2, located off the coast near Yara's Sluiskil plant.

Ammonia produced by the plant is planned for use in the production of low-carbon fertiliser products to help decarbonise the food value chain, with potential as a future low-carbon neutral shipping fuel.

"Subject to sufficient co-funding and a confirmed business case, a final investment decision to build the new plant could be taken late 2021 or early 2022," Ørsted said in a release last year.

SinneWetterstof pilot

Last autumn (2020) German energy company BayWa via its Dutch subsidiary, GroenLeven, entered into a contract with Dutch network operator Alliander on the creation of the SinneWetterstof hydrogen pilot.

Alliander is to build a hydrogen plant – planned to commence operations by late 2021– at the site of a solar park in Oosterwolde in the province of Friesland.

The pilot "will test the extent to which a hydrogen electrolyser can follow the generation profile of a solar plant" with hopes it can reduce grid congestion and minimise grid extensions for new solar or wind plants, BayWa said in a release.

As such, the project will source energy from an adjacent 50MWp solar farm built by GroenLeven in order to create green hydrogen.

Laying the groundwork

While the Dutch hydrogen market is still in its infancy, green hydrogen has the political and industrial support in place to become a lucrative market.

The take-up of green hydrogen initiatives and the signing of JVs in recent times by established and market-leading energy players is a clear sign of the pressures energy companies now face to transition to lower-carbon energy production.


Roland de Vlam

"The market is starting to see an interesting push into hydrogen from former oil and gas companies that have been left with empty reservoirs."

Yara's involvement with Ørsted is unsurprising given that it is one of the biggest users of natural gas to make fertiliser, and now needs to move away from methane in line with decarbonisation goals.

Shell's involvement in 2 green hydrogen projects this year is a clear sign the cooperation is paving the way for future investment in low-carbon hydrogen if it takes off.

"The market is starting to see an interesting push into hydrogen from former oil and gas companies that have been left with empty reservoirs," says Roland de Vlam, chair of law firm Loyens & Loeff's energy team.

"Those parties in offshore oil and gas are sitting with empty reservoirs in the North Sea and have a statutory obligation to remove those installations, which is estimated at roughly €4 billion – very costly. Those companies are looking for a way to extend commissioning obligations and perhaps extend them forever."

Meanwhile, projects like NorthH2 and PosHYdon have revealed offshore wind power to be a popular choice for producing green hydrogen.

As such, combined tenders for offshore wind and hydrogen projects could become the norm, wagers Michelle De Rijke, an energy partner at Dutch law firm Van Der Feltz Advocaten.

"The government recently said it wants to make it easier by regulation to combine wind and hydrogen. In my view it should be possible to have one license to produce electricity to install a wind farm and to produce hydrogen and supply this to the industry immediately," she says.

Energy policy is thought to be moving in a direction favourable to green hydrogen as the country shifts away from natural gas.

In 2019 the Dutch government signed the *Klimaatakkoord* – the Dutch National Climate Agreement – in which it pledged to reduce greenhouse gas emissions by 49% by 2030 compared to 1990 levels.

A hydrogen strategy from the government then surfaced in March 2020, promising investment of €35 million a year into green hydrogen pilots through the rearranging of existing renewables subsidy schemes.

The government's current target for hydrogen production is 500MW of green electrolysers by 2025.

However, the road to making green hydrogen a mainstream energy source is not without hurdles.

Regulation for the production and trading of hydrogen in the Netherlands is underdeveloped – as is the infrastructure by which hydrogen can flow freely in and out of the country.

This is despite the Netherlands probably having the most extensive gas pipeline infrastructure in Europe.

"Hydrogen's biggest barrier is the lack of infrastructure to support it," says Victor van Ahee, regulatory lawyer at Loyens & Loeff.

"There are a couple of lines that run from industrial site to industrial site but there is no major transport grid to transport hydrogen between port areas and industrial sites – and across the border."

An important milestone was reached in 2019 when Gasunie and Dutch transmission system operator TenneT published a joint study into integrating electricity and hydrogen grids in the Netherlands and Germany. The findings of that study could determine where electrolysers will be located.


Ørsted commissioned its first offshore wind farm last year – the 752MW Borssele 1 & 2 offshore wind farms in Zeeland


Michelle De Rijke

"In my view it should be possible to have one license to produce electricity to install a wind farm and to produce hydrogen and supply this to the industry immediately."

Further, certain industry standards for the commercialisation of hydrogen have yet to been fully put in place, as Matthijs van Leeuwen, energy partner at Norton Rose Fulbright points out.

This includes an industry stamp known as a "guarantee of origin" certificate used to verify that an energy source has been renewably produced – although he says that there are currently pilots in Europe testing its application to green hydrogen.

"There are all these kinds of very costly complexities with getting green hydrogen off the ground," adds de Vlam. "I think apart from the regulatory uncertainty, there's still a huge problem about how to make this a profitable enterprise."

In early January (2021) the 4 coalition parties ruling the Dutch government collapsed, putting any new policies and regulation supporting the green hydrogen industry on hold until a new government is formed.

However, Iman Brinkman, energy law partner at Pels Rijcken, is optimistic: "In general hydrogen is considered one of the solutions to the climate problems we face, which will be on the agenda of any government in the future."

With a new government expected to come into play by the end of the year (2021), for now, it seems progress on a green hydrogen revolution in the Netherlands remains in the hands of industrial heavyweights to push forward through collaborations and JVs. ■

Renewables in crosshairs as SPACs take aim

Power Finance & Risk editor **Richard Metcalf** speaks to the industry about SPACs mania.

Special purpose acquisition companies (SPACs) have proliferated at a blistering pace over the past year, and market participants are certain that at least one renewable energy developer will go public this way by the end of 2021.

Also known colloquially as blank check companies, SPACs have been around for years but have exploded in popularity in the past 12 months amid frothy equity markets.

The basic concept is easy to grasp. Shares are floated on a stock exchange via an initial public offering. The IPO is unusual, however, in that the issuer does not already engage in any revenue-generating business. Instead, it promises to its investors that it will find a suitable target and use the proceeds of the IPO to acquire it.

It takes a little more nuance to understand why investors would put their cash into such a high-risk scheme.

It helps that, if investors don't like the target that their SPAC eventually selects, there is a provision to allow them to get their money back by redeeming their shares.

But the recent SPAC boom has been driven by the prevailing market conditions, which are characterized by yield compression and a mania for growth. In such an environment, there is ample demand for speculative growth propositions.

Furthermore, the extraordinary performance of many post-SPAC stocks is fueling further interest in the vehicles, creating a virtuous cycle. "Most SPAC de-mergers that have been successful in the ESG/clean tech space are trading up 100% or more, fairly consistently," says Geoff Paul, head of equity capital markets at Marathon Capital in New York. "That's something investors have to pay attention to."

In the rush to meet the skyrocketing demand, hundreds of SPAC IPOs were launched in 2020, and the trend shows no signs of slowing down, providing plenty of business for investment banks and lawyers.

"We worked on 60-plus SPAC IPOs in the past year," said Doug Bacon, a partner in Kirkland & Ellis's M&A and private equity team in Houston, in January. "There are 40 or 50 more that we're working on right now firm-wide."


Debbie Yee

"The PIPE stands in for any cash exodus, de-risks the transaction and also provides a valuation for the company."

The sudden SPAC fever also dovetails with another fast-growing investment theme, which can be summed up in the three letters ESG (environmental, social and governance). Many of the new generation of SPACs have specified in their prospectuses that they are aiming to acquire a company that will play a role in the "energy transition" or a similar phrase.

Kevin Stevens, a Dallas-based venture capital investor who recently joined Energize Ventures, had counted no fewer than 55 energy transition SPACs as of December 2020.

Some sponsors, such as Apollo Global Management and Pacific Investment Management Co (PIMCO), have embarked on back-to-back energy transition SPACs, launching a second blank check IPO as soon as their first vehicle has selected a target.

"Energy transition SPACs are very hot right now," said Debbie Yee, another partner at Kirkland in Houston. "They are looking for growth businesses and the market has been very receptive to that."

So far, the enthusiasm for climate-friendly acquisitions has translated mainly into deals for companies that manufacture or provide services for electric vehicles or batteries. But deal watchers say it is only a matter of time before a renewable energy project developer becomes the target.

"A lot of banks have pitched me on SPACs," says a senior finance official at one solar and energy storage developer, who asked to remain anonymous. "I always talk to investment bankers and they pitch me their ideas, and this is their monthly idea. Everyone has 'SPAC' as one of the alternative ideas for a sponsor right now."

Renewable energy companies that have been named privately as potential targets for a SPAC include Intersect Power, 8minute Solar Energy, Cypress Creek Renewables and Strata Solar.

"We're absolutely looking at it," said Sheldon Kimber, Intersect's CEO and founder in San Francisco, in a recent interview. "Everybody's pitching it. If you're a company that's in ESG, that is enabled by some sort of emerging technology, whether it's clean tech or info tech, and you've got a pulse, you're getting calls."

"The recent SPAC activity in our space has certainly been interesting," added Tom Buttgenbach, president and CEO of 8minute in Los Angeles. "We consistently evaluate ways to meet our capital needs, but nothing to report right now." Representatives of the other developers either declined to comment or did not respond to inquiries.

PIPE dreams

Since a SPAC usually does not raise enough capital to fund an acquisition solely with its IPO, it has to reach out to investors privately to raise the remaining funds once it has identified its target. This process, known as a private investment in public equity (PIPE), is usually led by one or more of the investment banks that underwrote the IPO.

"That's the gas in the engine that's making this work," said Kirkland's Yee. "The PIPE stands in for any cash exodus, de-risks the transaction and also provides a valuation for the company, which is another difference from the traditional IPO market."

Geoff Paul

"Obviously the SPACs would love to find bilaterally-negotiated transactions, and SPAC sponsors are using their networks and connections to try to source opportunities independently."

A SPAC will usually begin conversations with potential PIPE investors well ahead of finalizing a deal to acquire a target. The process is similar to a roadshow for an IPO but more focused, with investment banks reaching out to perhaps between 50 and 100 institutional investors, rather than thousands of them plus retail.

The PIPE is then allocated to investors and the deal is announced publicly at the same time as the M&A.

As an example, the PIPE investors that are supporting the recently announced merger between Apollo's second energy transition SPAC, Spartan Acquisition Corp II, and residential solar finance company Sunlight Financial, range from institutional investors such as BlackRock, Franklin Templeton and Neuberger Berman to Chamath Palihapitiya, a Sri Lankan-born Canadian American with a high-profile Twitter account who was one of the early employees of Facebook.

SPAC-off

There are so many SPACs searching for the ideal investment opportunity that they will inevitably end up squaring off against each other over desirable targets. In such cases, a company looking to go public can set up a competitive process known informally as a SPAC-off.

"Obviously the SPACs would love to find bilaterally-negotiated transactions, and SPAC sponsors are using their networks and connections to try to source opportunities independently," said Paul, the Marathon Capital investment banker. "But while SPACs would prefer not to be involved in auction processes, for the right assets they are going to be willing to do that."

As they seek to differentiate themselves from each other to win these SPAC-offs, blank check companies are looking to offer much more than just the highest valuation, which makes the process somewhat different from traditional M&A. "They're talking about what they can bring beyond just dollars," said Paul.

The less tangible benefits that SPACs can bring include experienced board members and strategic relationships.

"They're competing on what's their expertise," said Intersect's Kimber. "There are some real rock star boards of leaders that have been put together that can add real value to emerging companies."

Growth story

Going public via a combination with a SPAC has several advantages over a traditional IPO, such as faster execution and less burdensome initial reporting requirements. Companies entering into a merger with a SPAC typically make greater use of long-term growth projections in their investor marketing materials.

"It makes it easier for growth-oriented companies that might otherwise be a year, or a year-and-a-half away from a traditional IPO to take advantage of a market where multiples are very high," says Bacon, the Kirkland lawyer. "You can't put 5-year projections in an S-1 filing... but in the SPAC world, you can."

That explains why venture capital-style companies in emerging technologies are able to go public earlier and more easily via a SPAC merger, but it does not rule out more mature, but perhaps lower-growth, businesses such as renewable energy development.

"Growth has to be part of the story, but there's a bifurcation between many of the companies – for example in the e-mobility space, where the business plans tend to be at a more nascent stage – and another class of companies that have operating platforms and some scale today, that are going to continue to benefit from attractive growth in the broader renewables space," says Marathon's Paul. "It's not necessarily the same growth rate but it offers investors something different, which is scale, and a near-term valuation you can hang your hat on."

On the other hand, developers may decide to lean into the high-growth angle.

"I wouldn't be seriously considering a SPAC if I didn't think we had a serious growth story to put some steak behind our sizzle," said Kimber, the Intersect CEO. "Between now and 2023, the financing we just did puts us in a position where we can grow from one of the leading development companies to one of the largest owners of renewable and storage assets in North America. That's quite a hockey stick."

Doug Bacon

"You can't put 5-year projections in an S-1 filing... but in the SPAC world, you can."

He was referring to Intersect's latest capital raise in the private market, which included a $127 million equity injection from Climate Adaptive Infrastructure and Trilantic North America.

Public versus private

With public equity markets once again poised to become a highly efficient source of capital for renewable energy companies, it poses an interesting challenge for infrastructure fund managers looking to deploy capital privately.

"They're going to have to invest somewhat earlier, up the risk spectrum," says Marathon's Paul. "There are companies that are one funding round or 24 months away from being in the public company spotlight, and so investors in private markets are seeing opportunities where it's the last round of private capital that this company needs."

The last time that public markets seemed to value renewable energy companies at a premium to private markets was in the early 2010s, during the yield company craze. Since the collapse of investor confidence in some of those companies in 2015, many wind and solar companies have found it preferable to stay in private ownership.

Renewable energy developers "have been able to raise money super efficiently in the private market," said the anonymous solar and energy storage company official. "But now, the public market valuations are just much higher. We are looking at people paying 12 times or 15 times Ebitda, or even higher."

Kimber, meanwhile, is quick to put some distance between Intersect's business model and that of the yieldcos.

"What I want to do is blow that away," he said. "Infrastructure is a growth story again." ■

Europe

Tenders launched

Closed deal values by sector

Mining
Transaction count **5**
$1,836 ($m)

Oil & Gas
Transaction count **10**
$11,478 ($m)

Power
Transaction count **12**
$4,933 ($m)

Renewables
Transaction count **138**
$14,845 ($m)

Social & Defence
Transaction count **13**
$1,174 ($m)

Telecoms
Transaction count **15**
$6,911 ($m)

Transport
Transaction count **13**
$4,969 ($m)

Oil & Gas Mining
Transaction count **1**
$1,000 ($m)

Projects with recent tender updates

1	A1 Lohne-Bramsche Motorway Upgrade (30KM) PPP
2	Acquisition of 51% in Emerald Floating Offshore Wind Farm (300MW)
3	Hemel Hempstead 4 Data Center
4	Porto Marghera LNG Terminal
5	Sizewell C Nuclear Power Plant (3.2GW)
6	UK High Speed 2 Rail Phase II
7	VindO Wind Energy Island (3GW)
8	East Anglia One Offshore Transmission Link (43KM)

Closed deals by country

	Transaction Country	Value ($m)	Count
1	**Spain**	11,962	36
2	**France**	7,484	22
3	**United Kingdom**	7,340	39
4	**Norway**	5,000	2
5	**Italy**	3,635	25
6	**Portugal**	2,690	4
7	**Russia**	2,059	6
8	**Germany**	1,914	10
9	**Netherlands**	1,339	21
10	**Czech Republic**	661	1
11	**Malta**	583	1
12	**Turkey**	580	1
13	**Switzerland**	549	3
14	**Poland**	490	8
15	**Ukraine**	424	3
16	**Finland**	375	6
17	**Ireland**	341	4
18	**Sweden**	142	6
19	**Belgium**	89	1
20	**Finland, Netherlands, Norway, Poland, Sweden**	79	1
21	**Greece**	67	3
22	**Lithuania**	27	1

Transactions that reached financial close

- 1 Dec — Malta LNG Carriers Portfolio
- 3 Dec — Acquisition of Covage
- 15 Dec — Acquisition of T-Solar 2020
- 17 Dec — Acquisition of EDP's Portuguese Hydropower Portfolio (1.7GW)
- 23 Dec — Cote d'Or et Les Landes Fibre Networks PPP
- 29 Dec — Capacity4Gas Gas Pipeline (105KM)
- 19 Jan — Total Hybrid Bond 2021
- 20 Jan — Barcelona Metro Line 9 Section IV PPP Refinancing (2021)

Dogger Bank Offshore Wind
UK

IJGlobal reporter **Sophie Mellor** takes a look at the financing behind the project that is expected one day to supply 5% of the UK's energy demand.

As the largest offshore wind farm to have made it to financial close in 2020, the £7.6 billion Dogger Bank project was one of the high points of an otherwise infernal year.

The deal involved securing more than £5 billion ($6.8bn) in debt from 3 ECAs and 29 commercial banks, while also selling off 20% of its equity stake in a timeline that stands testament to the maturity of the UK offshore wind market.

Project sponsors SSE and Equinor reached financial close for the giant wind farm off the coast of Yorkshire on 26 November (2020).

Fast forward a decade
Dogger Bank was first presented in 2010 by a consortium equally owned by SSE Renewables, innogy, Statoil – now Equinor – and Statkraft.

In an announcement that had the feel of science fiction, the consortium noted that it hoped to build 9GW of offshore wind in a strategic position between the UK, Norway and continental Europe as a central node in an inter-European electric power grid.

When the plan was announced a decade ago, the sponsors believed that wind power fluctuations might one day be balanced out by Norwegian hydropower.

The development rights for the 8,660km2 zone, located between 125km and 290km off the UK coast, were awarded in January 2010.

Things began to progress by 2013 as the sponsors spent £60 million in surveys to study development consent order applications for nature conservation organisations and other commercial bodies and statutory authorities in the UK and Europe.

Slowly, however, the project was being scaled back. The sponsors cut 1.8GW of capacity in 2014, dropping the wind farm's power from 9GW to 7.2GW to focus on other projects that were more attractive for financial investment.

A year later in August 2015, the sponsors cut an additional 2.4GW from its plans – Dogger Bank C & D – and only planning to move forward with Dogger Bank Creyke Beck A, Dogger Bank Creyke Beck B, Dogger Bank Teesside A and Dogger Bank Teesside B, with a combined installed capacity of 4.8GW.

The consortium removed the stalled projects from its portfolio and returned the rights to develop the seabed area to the Crown Estate.

Five years into the process, Statkraft also decided to exit offshore wind in December 2015, citing the "capital intensive" nature of the technology as one of the reasons behind its departure.

It successfully sold off its 25% stake in March 2017 to SSE Renewable and innogy, increasing their shareholding to 37.5%, leaving Equinor with its 25% stake in the company.

Finally, before the wind farm bid for a subsidy, a deal was struck where innogy took a 100% ownership of Dogger Bank Teeside B – renamed to Sofia offshore wind farm – while SSE Renewables and Equinor would take 50:50 ownership of the remaining 3 Dogger Bank projects.

As the largest offshore wind farm, the £7.6 billion Dogger Bank project was a high point of 2020

Crown Estate CfD Round 3
The UK's Department for Business, Energy and Industrial Strategy (BEIS) started accepting applications for CfD Round 3 at the end of May 2019. After a delay mid-August due to an applicant launching a legal challenge, the CfD was awarded that September.

SSE Renewables and Equinor, advised by BNP Paribas, secured subsidies on all 3 Dogger Bank offshore wind projects. The 3 awarded project parts were renamed to:

- Dogger Bank A – Dogger Bank Creyke Beck A (awarded subsidy of £39.65/MWh)
- Dogger Bank B – Dogger Bank Creyke Beck B (awarded subsidy of £41.61/MWh)
- Dogger Bank C – Dogger Bank Teeside (awarded subsidy of £41.61/MWh)

Each offshore wind farm has an operating capacity of 1.2GW – 3.6GW in total.

Dogger Bank A received the smallest subsidy out of the 3 projects, with its strike price coming in at £39.65/MWh, while Dogger Bank B and C were awarded £41.61/MWh.

Financing and equity sell down
Once the subsidy was in place, the project sponsors began the financing and equity sell-down of the first 2 phases of the wind farm. They mandated BNP Paribas and

Linklaters in the summer (June 2020) as financial and legal advisers on the process.

As a caveat to the projects' low strike prices, the sale of an equity stake was deemed necessary as additional project debt was considered unviable. The project sponsors launched an equity sell down process concurrently with the financing which attracted a raft of bidders form oil and gas majors to Chinese investors.

Each wind farm phase costs £3 billion to build, in addition to an offshore transmission (OFTO) capex of £800 million per phase.

SSE Renewables and Equinor on 26 November (2020) reached financial close on the £7.6 billion project with £4.8 billion in debt, £730 million of ancillary facilities, and £2.1 billion in equity.

A loan of £1.5 billion was provided by 3 export credit agencies:

- Bpifrance
- EKN
- GIEK

The ECAs have been involved in the project since the beginning of 2020 and the lenders were approached in June that year.

The bulk of the debt was arranged by a team of 29 commercial lenders:

- ABN Amro
- AIB
- Bank of China
- Barclays – account bank
- BBVA
- BNP Paribas
- CaixaBank
- CIBC
- CIC
- Credit Agricole
- Danske
- DNB
- ICBC
- ING
- KDB
- Lloyds – hedge execution bank
- Mizuho
- MUFG Bank – inter-creditor agent and security trustee
- Natixis
- NatWest – hedge execution bank
- Norinchukin
- OCBC
- Rabobank
- Santander – hedge execution bank and ECA agent and ECA facilities agent
- SEB
- Shinsei
- SMBC
- Societe Generale – hedge execution and documentation bank
- Standard Chartered Bank

The debt was significantly over-subscribed and priced in the region of Libor +190bp.

The debt package is split:

- £703.3 million – term loan for Dogger Bank A – 18 years 6 months
- £917.2 million – term loan for Dogger Bank B – 19 years 6 months
- £827.4 million – OFTO capex loan for Dogger Bank A – 7 years
- £832 million – OFTO capex loan for Dogger Bank – 7 years

With the £1.5 billion export credit facility, the total of the project finance debt package comes out to £4.8 billion.

There are also 2 ancillary facilities provided by the banking group:

- £359.8 million – Dogger Bank A – 18 years 6 months
- £374.8 million – Dogger Bank B – 19 years 6 months

The ancillary facilities total £734.6 million which takes the entire debt package up to £5.5 billion.

Dogger Bank A was project financed with a gearing of 65%, while Dogger Bank B was geared at 70%. The OFTO financing gearing is 90% of the forecasted OFTO sale proceeds.

Both sponsors provided around £1 billion in equity.

Lastly, MUFG provided a sole fronting letter of credit for the short-term and long-term debt, guaranteeing up to £775 million.

Equinor executive vice president Pål Eitrheim said: "The extensive interest from lenders underpins the attractiveness of UK offshore wind assets and confidence in SSE and Equinor."

The lenders' legal advisory team was led by Norton Rose Fulbright finance partner Rob Marsh who said that the successful financing of a project of this scale stands proof that renewable energy has moved into the mainstream.

Meanwhile, following a competitive M&A process, Italian oil giant Eni announced on 4 December 2020, it had agreed to take a 20% stake in the first 2 phases of the wind farm for £405 million.

Eni will pay £202.5 million to sponsors SSE Renewables and Equinor for each 10% stake in the first 2 phases of the wind farm.

The transaction is subject to regulatory and lender approvals – that were to be settled by early 2021. If the deal is approved, Eni's output share will amount to 480MW.

Advisers

Advisers to sponsors:

- BNP Paribas – financial
- Linklaters – legal

Advisers to lenders:

- Norton Rose Fulbright – legal
- K2 – technical
- Benatar & Co – insurance
- Baringa – market adviser

The wind farm in detail

The 2 phases of the project, A and B, will be equipped with 190x Haliade-X 13MW turbines – the largest commercially-available turbines at financial close – that are scheduled to deliver electricity in 2023. Each turbine is 260m tall, which falls just short of the Eiffel Tower's height.

When completed in 2026, each phase of Dogger Bank wind farm is expected to produce 6TWh of renewable electricity, totalling 18TWh annually – enough to supply 5% of the UK's demand or 6 million UK homes.

Bank C of the project is expected to reach FC later this year (2021). Energy from the first 2 banks has been contracted to:

- 40% – Ørsted
- 20% – Shell Energy Europe
- 20% – Danske Commodities
- 20% – sold on a merchant basis

SSE Renewables and Equinor signed 3x 15-year power purchase agreements (PPAs) with Danske Commodities, Ørsted and Shell Energy Europe for 60% of the energy the wind farm will produce.

Danske Commodites signed to offtake from the project in August, while Ørsted and Shell Energy Europe signed their PPAs just before financial close in November (2020).

Ørsted will be responsible for trading and balancing 960MW of capacity, while Shell Europe and Danske Commodities will each be responsible for 480MW of installed capacity.

The Port of Tyne will be the wind farm's long-term operational base. ABB was awarded a contract in October 2019 to supply its high-voltage direct current (HVDC) light converter systems to connect Dogger Bank A and B to the UK grid for what sources have indicated could be an up to $1 billion contract.

Lastly, construction began on the project and the sponsors have found fragments of Roman and Iron Age artefacts that have been unearthed by archaeologists working on the project. ■

A465 Motorway – Wales UK

The Welsh government's MIM model for publicly procured projects has proved to be bankable with the A465 motorway PPP reaching FC in the midst of the Covid-19 pandemic and market uncertainty brought on by Brexit. *IJGlobal* reporter **Maya Chavvakula** explains.

The A465 motorway PPP in Wales reached financial close in October (2020), bringing to conclusion a deal that has been in the making for the last 6 years and that had to overcome the twin challenges of Brexit and the coronavirus pandemic.

The European greenfield market has been constrained over the course of the last year, significantly impacted by the Covid-19 pandemic, but in the case of the A465 it was further burdened with risks stemming from the UK's exit from the European Union.

Having overcome these challenges and handled the issues of arranging cross-border financing remotely, the sponsor – a JV of FCC and Meridiam – closed the deal in just 3 months from award, standing testament to their combined industry experience and the resilience of infrastructure projects.

Background

The A465 project runs from Dowlais Top and Hirwaun in Wales and was initially brought to market in 2014 as a PPP to expand a 17.7km stretch of road from a 3-lane single carriageway to a 2-lane dual carriageway, along with the construction of a 2.2km stretch of new road.

It was procured through the mutual investment model (MIM), a form of PPP developed in Wales as a response to difficulties encountered with the English PFI/PF2s and Scotland's non-profit distributing (NPD) model.

Through the MIM model, the Welsh government can invest up to 20% of the project's equity. It also allows the government to nominate a director to sit on the board, thereby giving it greater control.

Commenting on the model, a spokesperson for Meridiam said: "The emphasis on community benefits was real and not just a marketing ploy. This is very attractive to French policy makers who are considering a similar model for projects here."

Procurement

The Welsh government shortlisted 3 bidders for the project in November 2018 which included:

- FCC with Meridiam
- BBGI, Acciona, Jones Brothers with Aberdeen Standard Investments (ASI)
- Hochtief with Iridium

Colas had originally partnered with BBGI but dropped out at the start of 2019. BBGI then teamed up with Acciona the Aberdeen Standard Investments fund in March that year.

Technical bids were received in August with the preferred bidder slated for announcement in November (2019).

This deadline was pushed back by 2 months and then again by 5 months to June 2020. The project was finally awarded to FCC/Merdiam JV on 18 June.

Financing

The project has an associated cost of £644.5 million ($883m) with debt arranged across 3 tranches, £593 million in senior debt and an equity bridge loan of £51.5 million.

A total of £235 million was secured through a commercial bank tranche with 28 years 11 month tenor. Financing was arranged by:

- CaixaBank
- Credit Agricole
- Korea Development Bank (KDB)
- NordLB
- Norinchukin
- Santander
- Shinsei Bank
- Siemens Bank

Credit Agricole – which is also the financial adviser on the deal – took a smaller ticket of £15 million in the senior debt, and not all lenders were in for an equal share.

The senior debt priced at between Libor +145bp and 150bp.

Institutional investors arranged £358 million with a 34-year tenor. The team includes:

- Aviva
- Sunlife
- Vantage Infrastructure

Aviva has reportedly taken the largest ticket in this tranche.

The equity bridge loan of £51.5 million with a 5-year tenor was arranged by:

- CaixaBank
- KDB
- NordLB
- Norinchukin
- Santander
- Shinsei Bank
- Siemens Bank

Santander took the largest ticket in this tranche going in for £11 million.

The A465 motorway PPP in Wales reached financial close in October (2020)

Challenges

The UK's exit from the European Union led to a prolonged discussion over the terms of the deal, but the sponsor team's desire to push the deal through brought it to financial close in short order.

Addressing the challenges posed by Brexit a source close to the deal says: "It was difficult to close the deal because lenders did not have visibility of the risk. The terms of the deal were not clear, so we had to be conscious of the possible long-term effects of this separation."

The source adds: "We had to consider tax implications, movement of labour and other factors that could have an affect on the cost of delivery."

The financing for the project was arranged entirely through virtually meetings, marking a first for Meridiam.

On whether this had any impact on the negotiation process a Meridiam source says: "We are used to being in a room with everybody during these last phases of the deal and in most cases, we all tend to stay there until an agreement is made."

The source adds: "It is not the same over a call and even more complicated when multiple people are involved. As a borrower, it is always easier to convince someone to lend to you face-to-face."

Despite being awarded the project after most Covid restrictions were in place, the sponsors reportedly never considered delaying financial close.

A source who worked on the deal says: "You never really know what is around the corner, one has to deal with risk as it arises without putting an end date to it. The markets were very volatile when restrictions were first put in place and delaying the project would be risking another cycle of this volatility without the certainty that the situation would be better in the future."

Meridiam says that its close relationship with the Welsh government developed during the competitive dialogue phase was crucial to pushing this deal over the line without substantial delays.

Advisers

Advisers to sponsors:

- Credit Agricole – financial
- Ashurst – legal
- Mott MacDonald – technical
- BDO – tax and accounting
- AON – insurance

Advisers to lenders:

- Herbert Smith Freehills – legal
- Steer (formerly Steer Davies Gleave) – technical
- BDO – model audit
- Marsh – insurance

Advisers to procurement authority – Transport for Wales – are:

- PwC – financial
- DLA Piper – legal
- LeighFisher – technical

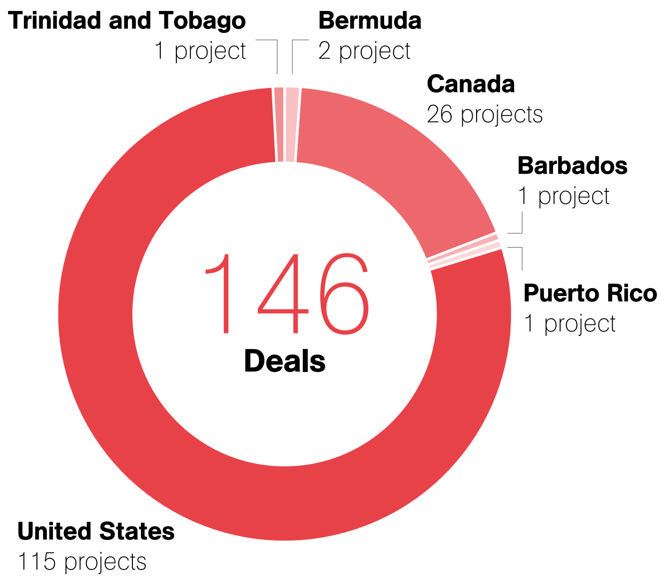
Advisers to other shortlisted bidder

Advisers to BBGI, Acciona, Jones Bros and ASI are:

- Societe Generale – financial
- Eversheds Sutherland – legal
- Pinsent Masons – lender legal
- Operis – model auditor ■

North America

Tenders launched



Projects with recent tender updates

1	Acquisition of a 50% Stake in Liberty (829MW) and Moxie Patriot (829MW) Gas-Fired Power Plants
2	City of Tampa Mass Transit PPP
3	JAX LNG Second Train
4	Acquisition of Noble Midstream Partners
5	Vineyard Offshore Wind Farm (800MW)
6	I-75 Commercial Vehicle Lanes (66KM) PPP
7	Acquisition of a Stake in Golar LNG Partners
8	Grantley Adams International Airport Expansion PPP

Closed deal values by sector

Oil & Gas
Transaction count **24**
$10,330 ($m)

Power
Transaction count **19**
$8,823 ($m)

Renewables
Transaction count **91**
$14,277 ($m)

Mining
Transaction count **1**
$200 ($m)

Social & Defence
Transaction count **5**
$2,553 ($m)

Telecoms
Transaction count **4**
$4,682 ($m)

Transport
Transaction count **8**
$6,817 ($m)

Water
Transaction count **4**
$3,033 ($m)

Closed deals by country

	Transaction Country	Value ($m)	Count
1	**United States**	45,702	140
2	**Canada**	5,023	15
3	**Puerto Rico**	1,400	1
4	**Canada, United States**	656	2
5	**Dominican Republic, Jamaica, United States**	263	1
6	**Dominican Republic**	52	1

Transactions that reached financial close

- 1 Dec — Acquisition of a 49.99% Stake in LightPath
- 2 Dec — San Antonio Vista Ridge Water Pipeline PPP Refinancing
- 17 Dec — PRASA Refunding 2020
- 22 Dec — Samson Solar PV Plant (250MW)
- 23 Dec — Valley Line West LRT (14KM) PPP
- 23 Dec — Acquisition of International-Matex Tank Terminals (IMTT)
- 30 Dec — Mesquite Sky Wind Farm (345MW)
- 31 Dec — Western Spirit Power Portfolio Additional Facility

University of **Idaho** US

The University of Idaho reached financial close on its steam plant and utility system in December 2020, financed via a taxable private placement and term loan – making it the third deal of its kind to close in the US. *IJGlobal* Americas editor **Ila Patel** explains.

The University of Idaho reached financial close on its steam plant and utility system in December 2020, the third deal of its kind to close in the US... part of a growing trend in the education sector to invite private investors to improve legacy utility systems and receive upfront funds to retire old debt and invest in strategic initiatives.

Ohio State University set the benchmark with its $1.165 billion lease of an on-campus energy asset in 2017 and the University of Iowa followed suit with its $1.319 billion utility system in March 2020.

While Ohio State was a pathfinder deal, it is with Iowa that university energy P3s appear to have gathered momentum with a further 6 deals announced since in various stages:

- University of Maryland, College Park (UMD) NEXTGEN Energy Programme
- Georgetown University District Energy
- Louisiana State University (LSU) Central Utility Plant
- University of Washington (UW) campus energy systems
- Iowa State University District Energy
- University of Alabama District Energy

California State University, Fresno in January this year (2021) selected a preferred bidder for the Central Utility Plant Replacement P3 project. This deal has taken quite some time to progress to this stage having begun the P3 process in 2018.

Procurement

U of I had a relatively painless procurement process. An RFQ was issued in November 2019 with 12 teams – made up of well-established operators/capital partners and new entrants to the higher-education sector – expressing interest.

A shortlist was announced in February 2020 with three bidders:

- ENGIE and Meridiam Infrastructure
- Sacyr and Plenary Group
- Worley and Axium Infrastructure

An RFP was then issued in June 2020 with responses submitted in October. The Sacyr and Plenary team was selected as preferred bidder thereafter with final sign-off from the university board in November (2020). For Sacyr, this was its first concessions deal in the US.

U of I is in the process of issuing more utility system RFPs, with one due imminently for its district energy plant which will be tendered off on a DBFOM contract for 50 years.

At the moment U of I uses a district energy system to heat and cool the campus. The plant, using a centralised location, distributes power to the campus

Adam Sherman

"In a highly competitive process, SMBC's flexible and innovative debt structure was instrumental to achieving the best outcome for U of I."

The University of Idaho reached financial close on its steam plant and utility system in December 2020

buildings through miles of tunnels across the campus.

U of I was founded in 1889 and services infrastructure used on campus is similar to that of a small town. For example, its cooled water distribution system is 12.8km long, and its electricity distribution network is 6km long. The drinking water distribution networks are 31.7km in total, and it also has steam and compressed air distribution pipes.

Sacyr and Plenary plan to reduce the university's carbon footprint made by energy consumption on campus by promoting renewable energy and improving efficiency on the system.

Financing and market views

Financial close was reached in December 2020 and the $225 million project was financed via a taxable private placement and term loan.

The private placement agent for Sacyr Plenary Utility Partners Idaho was Goldman Sachs and the bond was for $100 million. SMBC provided a $130 million term loan facility and acted as sole coordinating lead arranger, hedge provider and administrative agent. The bond has a 40-year tenor with a coupon of 3.70%.

The equity amount was $25.5 million split 50:50 between Plenary and Sacyr.

SMBC has committed to finance future capital improvements to the utility system.

U of I will pay annual utility and operations fees to the concessionaire as part of the agreement.

Adam Sherman, managing director, global structured finance/head of infrastructure and municipal North America at SMBC, said: "In a highly competitive process, SMBC's flexible and innovative debt structure was instrumental to achieving the best outcome for U of I and helping Sacyr Plenary Utility Partners develop and execute the winning bid."

Sia Kusha, group head – project development and partnering at Plenary Americas – told *IJGlobal*: "In addition to ongoing activities at Fresno, Dartmouth and others, we see Iowa State, Alabama, LSU, Wisconsin, and the University of Maryland among those contemplating new procurements. The university energy P3 market seems to be robust and we remain bullish on the sector."


Sia Kusha

"The university energy P3 market seems to be robust and we remain bullish on the sector."

Unfortunately, Dartmouth College elected to cancel plans for a P3 for its hot water conversion and biomass plant P3 project at the end of last year.

University of Idaho president Scott Green said at the time of final sign off: "The P3 agreement will allow the university to better invest in the student and research endeavours that have been part of our land-grant mission for more than 130 years. In addition to scholarship support that will improve the go-on rate in Idaho, the transaction creates a concessionaire-paid maintenance plan for our steam plant and utility system that will free up state funding for other projects. This partnership is a wise business decision that will benefit the university for generations to come."

Projects led by educational institutes are far more of an attractive prospect to the private sector because they are not tied to state administrations. There are currently 6, almost 7, projects in the pipeline but there is the potential for hundreds more as universities seek to improve outdated energy assets but without having to fund it themselves.

The good news is that the global pandemic has not impacted this burgeoning sector and more deals are likely to emerge in the near future so this is the sector to watch out for.


Ohio State University set the benchmark with its $1.165 billion lease of an on-campus energy asset in 2017

Advisers on the deal were:

- Rieth Jones Advisors – P3 structure for university
- PFM Financial Management – financial adviser for university
- Wells Fargo Securities – transaction strategic adviser for university
- Hawley Troxell Ennis & Hawley and Jones Day – legal counsel for university
- Ernst & Young – transaction adviser for university
- DWPF – model auditor to Sacyr Plenary Utility Partners Idaho
- INTECH Risk Management – lender insurance adviser to concession operator
- American Global – insurance advisor to Sacyr Plenary Utility Partners Idaho
- BTY Group – technical adviser to Sacyr Plenary Utility Partners Idaho
- Hunton – transaction legal counsel to Sacyr Plenary Utility Partners Idaho
- Ballard – lender counsel ■

Prince George's **Schools P3**, Maryland

IJGlobal Americas editor **Ila Patel** takes a look at the Prince George's Schools P3, Maryland which reached FC at the end of December last year with hopes it will fuel similar future schools deals in North America.

Prince George's County in Maryland became the first district in the US to finance the construction of 5 new middle schools and one K-8 school through a P3, despite concerns that the project could encounter similar problems to a transport deal that was embroiled in legal turmoil in the state last year (2020).

Maryland's controversial Purple Line P3 project saw disputes arise between concessionaires Meridiam and Star America (and at the time construction partner Fluor) and the Maryland Transit Administration (MTA) in 2020 due to an estimated $800 million in cost overruns and delays in construction.

Fluor is no longer part of the concession with a new construction partner currently being sought.

The MTA sought a restraining order as part of a lawsuit filed on 10 August 2020 against the companies in the Circuit Court for Baltimore City. The lawsuit accused Purple Line Transit Partners of breach of contract.

By the end of 2020, an amicable resolution was reached with the State of Maryland agreeing to pay P3 partners Meridiam and Star America $100 million by 31 December with the remaining amount to be paid this year (2021).

However this litigation process left a bad impression so it came as no surprise when public opposition against the schools project increased with town halls being held in Q3 2020.

The P3 project was deemed too risky and not having the interests of education as its priority.

At the time, Prince George's County Public Schools (PGCPS) said it had made a robust contract taking all concerns into account and protecting the interest of the public, money and its timeline. The procurer also outlined why the P3 method was more beneficial to the state than a traditional construction method.

But all's well that ends well. The project made it to financial close on 18 December 2020, financed through a private placement with the successful closing expected to pave the way for future school deals in North America.

Procurement

The first the market heard of the project was in 2018 when PGCPS announced it was looking for an adviser to act as a consultant on a potential schools P3 project. JLL was selected for the role.

The board of education of Prince George's County operates 240 facilities with an annual operating budget of $2 billion. PGCPS is currently facing acute overcrowding in its schools with a vast majority of the county's school portfolio at or near the end of its useful life-cycle and in need of significant repair and renovation.

In May 2019, an RFQ was issued alongside an RFP seeking legal counsel. Four teams were shortlisted by September 2019 with an RFP issued thereafter:

- Edgemoor Infrastructure and Real Estate,

Prince George's County is the first district in the US to finance the construction of new schools

- Star America, Clark Construction Group and Johnson Controls
- Meridiam, Hensel Phelps and Engie
- Fengate Asset Management, Gilbane Development Company, Stantec and Honeywell
- Preston Hollow Capital, Provident Resource Group, SB Ballard Construction and Aramark

The county then hired Jason Washington in February 2020 as its director of public-private partnerships after advertising for the job. Washington was the former executive director of the National Council for Public-Private Partnerships. He has been tasked with selecting and evaluating new P3 transactions and lead on the procurement of projects.

The final RFP submission deadline for the 30-year contract was September 2020 with the Fengate team named as the county's preferred bidder in October.

Despite some opposition, the Prince George's County Council approved the preferred bidder selection later that month.

Maryland's controversial Purple Line P3 project saw disputes arise between concessionaires Meridiam and Star America

Financing

The schools P3 project was financed via a private placement with commercial close taking place on 14 December and financial close 4 days later.

The consortium, Prince George's County Education & Community, issued $476 million in senior secured notes, rated an initial A2 by Moody's with a stable outlook.

Citi and National Bank of Canada Financial acted as co-placement agents on the $476 million senior secured notes which will mature in March 2053.

The equity breakdown is:

- Fengate Asset Management – 75%
- Gilbane Building Company – 25%

Fengate is managing its investment on behalf of the Fengate Core Infrastructure Fund III and affiliated entities, including an investment fund owned by LiUNA's Pension Fund of Central and Eastern Canada.

The proposal submitted by the preferred bidder is broken down into:

Proposal specifics

- initial indicative availability payments: $29.8 million
- project readiness date: 15 July 2023
- services period term: 30 years
- operations end: 30 June 2053
- total cost: $1.24 billion

Availability payment components

- capital charge – flat amount that will increase by 1.5%
- services charge – flat amount that is index-linked (CPI-U)
- deductions – offset PGCPS can be based on specified instances of non-performance (subject to a quarterly cap and monthly carry over with interest)
- extraordinary items (charges that will occur unexpectedly) – credit or a charge

PGCPS capital investment obligations

- progress payment – $15 million when 50% of design-build agreement price expended
- milestone payment – per school as they come online
- occupancy readiness date one – time payment per school
- availability payment – paid monthly after occupancy readiness

Extraordinary construction payment events

- delay payments, as applicable
- relief payments, as applicable

The procurers have obligated the private partnership consortium to use a number of minority-owned or locally-owned businesses from the area. Some of the firms that will be contracted to perform work are:

- Warren Brothers Construction
- Corenic Construction
- Three E Consulting
- K Dixon Architecture
- Leuterio Thomas
- Setty & Associates
- Arel Architecture Group
- Nyikos & Garcia
- Floura Teeter
- Lanier Electronics

The preferred bidder will be required to complete and put into operation the schools before 2024. If the winning consortium does not conform to the deadline it will face a $1.5 million fine per school.

Once built, the winning bidder will oversee the school's maintenance for the duration of the partnership, while receiving payments that total around $30 million a year.

As well as the annual payments, once the schools are up and running, the winning bidder will also see a progress payment of $15 million during the design period. It will also receive a $5 million payment for each school when it is ready to be occupied.

It is understood that the county has budgeted itself $32 million a year for the schools.

This innovative delivery approach is the first of its kind for a US public school system.

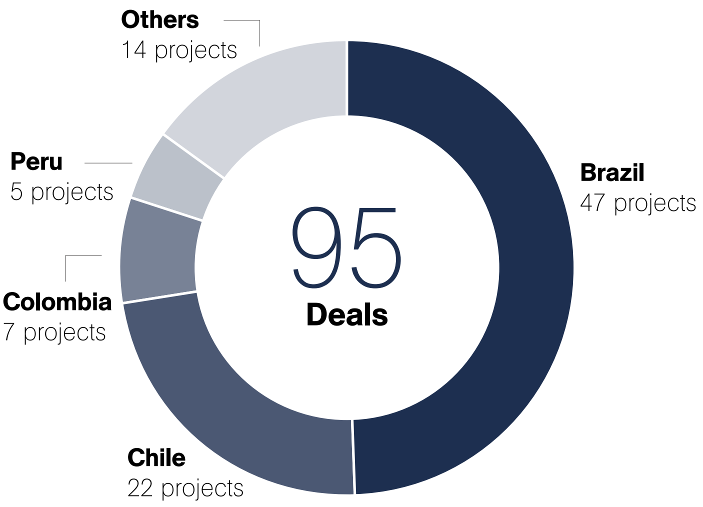
Numerous US municipal and state budgets are bearing the burden of the Covid-19 pandemic which is why P3s can provide a solution to repairing and rebuilding aged infrastructure. P3s also provide budget certainty, and with any luck, more and more districts will realise this and consider the benefits to support the education of students while saving millions of dollars.

Advisers on the deal were:

- JLL – financial to PGCPS
- Altus Group – technical to PGCPS
- Winston & Strawn – lender counsel
- Torys – legal to Prince George's County Education & Community consortium ■

Latin America

Tenders launched



Projects with recent tender updates

1	Acquisition of 49.98% in Belo Monte Hydropower Plant (11.2GW)
2	Acquisition of CH4 Energia
3	Airport of Natal PPP
4	El Sol de Vallenar Solar PV Plant (308MW)
5	Ilheus-Caetite Railway (537KM) PPP
6	Kimal - Lo Aguirre HVDC Transmission Line (1500KM)
7	Mato Grosso Highway (233.2KM) Lot 2 PPP
8	Terra Energia Solar PV and Wind Hybrid Plant (862.5MW)

Closed deal values by sector

Oil & Gas
Transaction count **6**
$5,189 ($m)

Power
Transaction count **7**
$2,202 ($m)

Renewables
Transaction count **25**
$3,532 ($m)

Social & Defence Water
Transaction count **1**
$184 ($m)

Mining
Transaction count **1**
$160 ($m)

Telecoms
Transaction count **1**
$36 ($m)

Transport
Transaction count **5**
$1,467 ($m)

Water
Transaction count **3**
$732 ($m)

Closed deals by country

	Transaction Country	**Value** ($m)	Count
1	**Brazil**	4245	26
2	**Mexico**	3419	2
3	**Chile**	2220	9
4	**Colombia**	1285	3
5	**Peru**	1025	2
6	**Paraguay**	658	1
7	**Panama**	263	1
8	**Uruguay**	188	2
9	**Bolivia, Brazil**	150	1
10	**Argentina**	51	2

Transactions that reached financial close

- 2 Dec — Tierra Mojada CCGT Power Plant (875MW) Refinancing
- 9 Dec — Maceio Water and Sanitation PPP (Block A)
- 15 Dec — FS Bioenergy Green Bond 2020
- 17 Dec — Energia Costa Azul LNG Terminal Phase 1
- 17 Dec — EnfraGen Refinancing
- 5 Jan — Acquisition of 27.5% in Gasbol Pipeline (1350KM)
- 4 Feb — Calama Wind Farm (151.2MW)
- 11 Feb — Talara Refinery Modernization Bond Facility (2021)

UEP Penonomé II Panama

InterEnergy Group's recent refinancing of two renewable energy projects in Panama – one of which is named for a papal encyclical – was the first issuance of green bonds from the private sector in Central America. Investors gave the deal their full blessing. **Taryana Odayar** reports.

The transaction – almost 10 months in the making – was a deliberate move on the part of InterEnergy to open up a green bond market for the region that it can return to with more projects as it grows its portfolio.

The company's previous project finance arrangement was on "quite restrictive terms," said CEO Andrés Slullitel in an earlier interview. "We wanted to pursue green bond issuances as a financing policy."

Other sponsors in the wider Latin American region, like Glenfarne and Hudson Energy, have also recently refinanced projects in the bond market. Glenfarne issued $710 million in bonds for its LatAm portfolio late last year (2020), while Hudson refinanced its Uruguay solar portfolio with a private placement.

"Companies will continue to take advantage of the low interest rate environment to finance and refinance projects," said Manuel Orillac, a partner at Shearman & Sterling who advised bookrunner Citigroup Global Markets on the InterEnergy deal.

"I have little doubt that there will be continued interest in green financing as governments, companies, and society rally behind the notion that we need to decarbonize our economies," the lawyer added.

Laudato Si'

InterEnergy's 1.2GW generation portfolio, spread across the Dominican Republic, Panama, Jamaica and Chile, includes plants that burn gas and other fossil fuels. Its renewables fleet presently has a capacity of 334MW, but the firm has ambitions to grow it in the coming years, with green bonds forming a key element of its financing strategy.

The assets backing its first green bond were the 215MW Laudato Si wind farm – the largest project of its kind in Central America and the Caribbean – and the 40MW Ikakos solar project, also known as Tecnisol, both in Panama.

The wind project takes its name, which is Latin for 'Praise Be to You,' from Pope Francis' second encyclical, published in May 2015. In it, the Pope reflects on the importance of environmental conservation and transformation of the energy industry to mitigate climate change, among other things.


Andrés Slullitel

"The company's previous project finance arrangement was on "quite restrictive terms."


The 215MW Laudato Si wind farm – the largest project of its kind in Central America and the Caribbean

Manuel Orillac

"I have little doubt that there will be continued interest in green financing as governments, companies, and society rally behind the notion that we need to decarbonize our economies."

The wind farm was brought online the year after (2016) the encyclical was published, having been fitted with 86 Goldwind turbines and after an investment of $430 million.

It was expected to meet 5% of Panama's energy demand, according to a statement from the International Finance Corp (IFC), which provided the initial financing in 2014.

The $300 million debt package comprised:

- $80 million – senior loan from IFC
- $60 million – senior loan from IFC's managed co-lending portfolio program
- $144 million – senior loans syndicated to development finance institutions and Panamanian banks
- $16 million – subordinated loan from IFC

By the time the loans were refinanced, they had a combined outstanding balance of $224 million.

The Ikakos solar project came online in 2018

The Laudato Si' project sells most of its output through power purchase agreements with three Panamanian electric distribution companies – ENSA (a subsidiary of Empresas Públicas de Medellín) and EDEMET and EDECHI (both owned by Spain's Naturgy Energy Group).

The Ikakos solar project came online in 2018 and sells its output to seven corporate offtakers under 15-year supply contracts and oil firm Petrolera Nacional under a 10-year PPA.

InterEnergy financed the solar project initially with inter-company loans.

Structuring the deal

By March 2020, InterEnergy was ready to start putting together the refinancing for the two Panamanian assets, with a tentative plan to issue the bonds by November of the same year.

The way the deal was structured, the 18-year senior secured bonds would be issued in 144A/RegS format through a special purpose vehicle called UEP Penonomé II – which owns the Laudato Si wind farm – and guaranteed by Tecnisol, which owns the Ikakos solar project. The bonds would be dual listed on the stock exchanges of Singapore and Panama.

"We worked hard for more than a year to organize this issuance and to successfully optimize the financing structure of the solar and wind parks," said Slullitel in a statement on 21 December (2020), after the bonds were priced. "We obtained a sound financing structure both in the interest rate and tenor."

The timing of the issuance, however, was affected by global events. The scheduled date of November did not work, as attracting the attention of investors for a novel project bond at the height of a contentious election season in the US proved too great a challenge.

"The uncertainty of the US elections closed the markets for almost a month," said Slullitel.

By December, however, the market was back in action and demand for the $262.664 million offering was strong.

Bookrunner Citi received orders totaling $535 million from 58 investors, including asset managers, hedge funds and family offices in Europe, Asia and Latin America, several of which are focused on renewable energy. Panamanian investors bought about a quarter of the bonds, which were priced at 6.5% on 9 December.

The institutions and advisers involved in the offering were:

- Citigroup Global Markets – initial purchaser and swap provider

Mónica Lupiañez

"We plan to continue to increase our investments in the region, by acquiring and developing 860MW of additional renewable generation capacity."

- Global Bank – letter of credit provider
- Bank of Nova Scotia – collateral trustee
- Shearman & Sterling – international counsel to the bookrunner
- Arias Fábrega & Fábrega – local counsel to the bookrunner
- Milbank – international counsel to the issuer
- SIGMA International and Global Market Attorneys – local counsel to the issuer
- PwC – independent auditor
- BG Investment Co and Citivalores – brokers

Expansion plans

Since the success of its debut green bond, InterEnergy has moved forward with its growth plans, buying the operational 34MW Matafongo wind farm and three development-stage renewable energy projects in the DR. InterEnergy already owned the first wind farms developed in the DR – Quilvio Cabrera and Los Cocos.

In Chile, the company owns a 45MW solar portfolio and two wind farms totaling 15MW, all of which qualify for beneficial treatment as PMGDs (Pequeños Medios de Generación Distribuida).

"We plan to continue to increase our investments in the region, by acquiring and developing 860MW of additional renewable generation capacity in Colombia, Panama, the Dominican Republic, Uruguay, Mexico, and Peru," said Mónica Lupiañez, the company's country manager in Panama. ■

Alarm over energy counter-reform in Mexico

As Mexico's President Andres Manuel López Obrador lays out his vision of a counter-reform of his country's energy industry, private investors in power and renewables are pondering whether to leave – assuming they are able to find an exit. **Carmen Arroyo** investigates.

López Obrador, better known as AMLO, sent a fast-track initiative to change Mexico's Electric Industry Law to the Chamber of Deputies on 1 February (2021), giving the legislature 30 days to vote on it. The bill would codify policies that were already being implemented by AMLO's administration to favor state-owned companies and their mostly fossil fuel-fired and large-scale hydro fleets, to the detriment of private investors and wind and solar projects.

"The reform is not new," says a financial adviser in Mexico City. "It's been going on for 2 years, but passively. Now they are making it into law."

If passed, the bill would undermine or reverse aspects of the privatization agenda carried out by AMLO's predecessor, Enrique Peña Nieto, in 2014, by changing dispatch rules, scrapping competitive power auctions, limiting the value of Clean Energy Certificates (CELs) and potentially canceling legacy self-supply contracts granted to older projects (*proyectos legados*).

"This bill generates a scenario of volatility for investors," says Aldo González, associate at Holland & Knight, in Mexico City. "Coupled with the pandemic and the change of administration in the US, the law change comes at a terrible moment for the sector."

Since López Obrador took office on 1 December, 2018, his administration has been working to undo the previous 2 governments' reforms – which liberalized the power sector – and instead bolster the role of state-owned utility Comisión Federal de Electricidad (CFE) and oil firm Pemex.

Several of the policies that have been most disruptive to the private sector were put in place in 2020, ostensibly in response to the Covid-19 pandemic, but AMLO has been more explicit about the aims of the newly proposed law.

"With this initiative we will put an end to the distortion of prices in a market that favors speculation, dumping and CFE subsidies for private companies, as well as years of looting," he said when presenting the draft.


Since López Obrador took office, his administration has been working to undo the previous 2 governments' reforms

The reform

The initiative introduced by López Obrador would change the dispatch rules that currently govern the system, prioritising state-owned projects and disregarding the cost of the power and the technology of the project.

The power would be injected into the grid as follows:

- hydro plants owned by CFE
- the rest of CFE's plants
- solar and wind projects, most of which are owned by private investors
- privately-owned combined-cycle gas-fired plants

The change to the dispatch rules is reminiscent of policies introduced by state grid operator CENACE in spring 2020, when it halted the interconnection of new renewable assets, arguing that they brought instability to the grid due to their intermittency. This policy has since been suspended after developers successfully fought it in the courts.

Moreover, the new bill would eliminate CFE and CENACE's obligations to hold long-term competitive auctions to procure power. This has already been the de facto case since 2019, when the government canceled the country's fourth such auction.

Finally, the bill would allow the reexamination of projects operating under the self-supply framework that existed prior to the 2014 market reforms. Permits for these projects, known as proyectos legados, could be revoked.

The administration had already moved against the proyectos legados scheme in June (2020), when it increased the transmission fees payable by qualifying projects. This policy had also been suspended by a Mexican court.

Observers believe the bill will receive enough votes to pass into law, but that it too will face legal challenges.

"The bill has its critics, which could influence the final text, but there is an intention to approve it," says Gonzalez.

Consequences

Market participants in Mexico are closely following the rapidly evolving situation. Investors fear that if the law passes, there will be harmful consequences not only for them, but for the country.

"By prioritizing CFE's fossil fuel-fired assets, the power will be more expensive, and there will be more carbon emissions," says the Mexico City-based financial adviser, who notes that Mexico will struggle to meet its carbon reduction commitments

"I don't think we will see a stampede of investors leaving, but they will have to evaluate their projects."

as a result. "The goal will be to pay off CFE's debt."

Moreover, as Mexico's demand for power increases, industry insiders worry that the country will suffer blackouts, as there is not enough CFE-owned capacity. CENACE expects demand to increase by an average of 3% annually.

"A year ago, the forecast was that by spring of 2021, there would be blackouts," adds the financial adviser. "The good news is that the economic activity was so depressed with the pandemic that the energy demand wasn't as high as it would have been, avoiding outages."

Meanwhile, investors are wondering what to do with their assets in the country, which may not meet their projected revenue targets if the bill becomes law. Some may consider a sale, even at a steep discount.

"It's going to be a trade-off between writing them off or holding onto them and accounting for the losses," says the financial adviser.

"I don't think we will see a stampede of investors leaving, but they will have to evaluate their projects," adds Carlos Ochoa, a partner at Holland & Knight in Mexico City.

Backlash

Despite the bleak scenario for investors, there is still a long way to go before the effects will be felt.

"It's important that investors keep monitoring changes in the law," says Alberto Esenaro, an associate at Holland & Knight. "Changes won't happen immediately. They will be implemented gradually in the everyday operation of the electricity market and face legal challenges."

A Supreme Court ruling on 3 February which struck down CENACE's anti-renewables policy, has been interpreted as a cause for optimism on this front.

"If the bill passes, we will see a wave of law suits and developers looking for legal reprieves in the courts," says Ochoa.

International free trade agreements and pressure from foreign countries with investments in Mexico could also limit the law's scope.

"Legal institutions and international treaties will curb the bill," says an official at a renewable energy developer in Mexico.

"It is tantamount to expropriation," adds the financial adviser.

The worst-case scenario for investors – that the law is passed without a hitch – may also not be the end of the story, observes Ochoa. "Regardless of who's elected in the 2024 Presidential elections, Mexico's stance towards renewables has to change." ■

Asia Pacific

Tenders launched

Closed deal values by sector

Mining
Transaction count 6
$2,446 ($m)

Oil & Gas
Transaction count 6
$2,827 ($m)

Power
Transaction count 8
$5,136 ($m)

Renewables
Transaction count 32
$4,701 ($m)

Social & Defence
Transaction count 8
$626 ($m)

Telecoms
Transaction count 3
$2,180 ($m)

Transport
Transaction count 15
$6,841 ($m)

Water
Transaction count 3
$328 ($m)

Projects with recent tender updates

1	Western Harbour Tunnel (6.5KM) PPP
2	Syr Darya Gas-Fired Power Plant (1.4GW) IPP
3	Suan Luang-Sam Yan District Cooling System Plant PPP
4	Eungella Wind Farm (500MW)
5	Acquisition of 50% in Greater Changhua 1 and 2a Offshore Wind Farms (900MW)
6	Havieron Gold Mine
7	Karachi Wastewater Treatment Plant 4 PPP
8	Ratle Hydropower Plant (850MW)

Closed deals by country

	Transaction Country	Value ($m)	Count
1	**Australia**	11,349	29
2	**Indonesia**	4,003	7
3	**Vietnam**	2,723	5
4	**China - Hong Kong (SAR)**	1,500	1
5	**India**	1,251	10
6	**Singapore**	1,250	1
7	**Philippines**	809	3
8	**Myanmar (Burma)**	750	1
9	**Japan**	731	8
10	**Bangladesh**	500	1
11	**Malaysia**	495	1
12	**Thailand**	380	4
13	**Marshall Islands**	303	2
14	**China - Chinese Taipei**	300	1
15	**Cambodia**	259	2
16	**Pakistan**	241	2
17	**Uzbekistan**	168	1
18	**New Zealand**	54	1
19	**Tonga**	50	1
20	**Singapore, Thailand**	50	1
21	**China - Mainland**	19	1

Transactions that reached financial close

- 2 Dec — NBN Bond Facility 2020
- 10 Dec — Acquisition of Hopkins Correctional Facility PPP
- 11 Dec — WestConnex Toll Road (33KM) Refinancing 2020
- 11 Dec — Navoi Region Solar PV Plant (100MW) IPP
- 15 Dec — Xiamen Xiangyu Nickel Mine, Steel Smelting Plant, Thermal Power Plant (1.44GW) and Multi-Functional Port Portfolio
- 17 Dec — Gunnedah Solar PV Plant (146MW) & Suntop Solar PV Plant (189MW)
- 23 Dec — Summit Meghnaghat II CCGT Power Plant (583MW) IPP
- 26 Feb — SATRIA Satellite PPP

Western Downs Green Power Hub Australia

IJGlobal reporter **Maya Chavvakula** speaks to Neoen CFO Louis-Mathieu Perrin about getting the Western Downs Green Power Hub project to FC late last year.

Neoen's Western Downs Green Power Hub – one of Australia's largest solar projects to date – reached financial close in late October (2020), keeping to a tight schedule in spite of coronavirus restrictions to deliver its first project in Queensland.

The 460MW solar park is located 22km south east of Chinchilla in the Western Downs Region, less than 6km from Queensland Powerlink's Western Downs sub-station. The solar park is also equipped with 150MW battery storage.

Western Downs' estimated output is around 1.08GWh – enough energy to power 235,000 average homes.

The French energy giant has said that the project will be delivered on time despite the global pandemic and has reiterated that Australia remains a focus for the company in terms of future growth prospects.

Background

Planning on Western Downs began in 2017 after scoping locations for the solar park. The Chinchilla site was ultimately chosen due to its proximity to a transmission line.

Neoen has a growing presence in Australia, currently employing a team of around 50 on the ground working out of Sydney and Canberra and this move sees it establish a foothold in a new region.

Western Downs is Neoen's first project in Queensland. Company chief financial executive Louis-Mathieu Perrin said the scale of the development was determined based on regional energy demand and the economies of scale needed to make the project profitable.

"We didn't set out to build the largest solar park in Australia, it was more incidental," said Perrin. He added: "It is also easier to get tier 1 banks on board for a larger project which makes financing much easier for us. Because of this we rarely consider projects below 100MW."

Last March (2020), Western Downs secured a PPA with CleanCo for 320MW – around 70% of the solar park's total output.

Later the same month, Neoen appointed Indian conglomerate Sterling & Wilson as EPC contractor with an O&M contract worth A$85 million.

Financing

Western Downs has a total associated cost of A$600 million ($465m) and reached financial close on 26 October 2020.

It is financed through a combination of project finance debt and equity:

- debt – A$397 million
- equity – A$203 million

The debt was arranged across 3 tranches:

- green loan of A$360.7 million with a 5-year tenor arranged by:
  - Natixis – A$60.70 million
  - Societe Generale – A$50 million
  - SMBC – A$50 million
  - MUFG Bank – A$50 million
  - NordLB – A$50 million
  - HSBC – A$50 million
  - Commonwealth Bank of Australia – A$50 million
- green DSR facility – A$11.36 million with a 5-year tenor arranged by Natixis
- green letter of credit – A$24.88 million with a 5-year tenor also arranged by Natixis

Financing Challenges

Neoen CFO Perrin said that finalising a banking syndicate during Covid was challenging as most lending institutions had limited visibility on what long term prospects would be, reducing risk appetite for most lenders and increasing funding costs.

The French developer started the financing process in Q2 2020 with an initial pool of 25 lending institutions, intending to close the project with "a limited number of banks".

The 7 banks that were ultimately chosen offered the most favourable terms for the deal with the cost of debt thought to be "just slightly higher" than pre-Covid rates.

Perrin said: "There was a healthy appetite for renewable projects despite the pandemic, but the process was longer than it would have been otherwise. The banks spent a bit longer going over the documents and challenging the financial model."

He added: "We closed the deal in a timeframe that allows us to deliver the

Louis-Mathieu Perrin

"There was a healthy appetite for renewable projects despite the pandemic, but the process was longer than it would have been otherwise. The banks spent a bit longer going over the documents and challenging the financial model."


Neoen's decision to deliver the largest solar project in Austrlia has rasied a few eyebrows

project on time. There was never a question of delaying the FC at any point, we have a PPA in place and so we must adhere to the delivery timeline."

Neoen in Australia

Australia is one of Neoen's key markets with the company actively working towards expanding its presence across the country.

It currently operates the world's first big battery, 150MW storage capacity, in Hornsdale, South Australia and is planning to build another one in Victoria.

The company's decision to deliver the largest solar project in the country amid transmission issues that have forced several solar parks to cut output with major players such as Blackrock, FRV and John Laing vying to sell their portfolios raised a few eyebrows.

Neoen, however, has said that investment in solar fits with the company's objective to have a well-balanced portfolio. Unlike many investors looking for a quick turnaround, Neoen is investing in renewables with a long-term objective.

The company projects that solar farms, like all other renewables, will be profitable in the future especially in Australia which will see several coal generators retire in the next couple of decades.

Advisers

Advisers to Neoen

- ICA Partners – financial
- White & Case – legal
- Marsh – insurance
- Baringa – market sounding
- Mazars – model audit
- EY – tax due diligence
-

Advisers to lenders:

- WSP – technical
- King & Wood Mallesons – legal ■

Xiamen Xiangyu steel plant Indonesia

With more and more Chinese players looking for opportunities to expand into the Southeast Asia market, *IJGlobal* reporter **Civi Yap** reports on one of the largest financings signed by 8 Chinese banks in December 2020.

In the last month of 2020, violent protests raged at one of Indonesia's largest smelters in Virtue Dragon Industrial Park, South Sulawesi. Workers were demonstrating as they demanded higher salaries and permanent employment contracts.

According to Virtue Dragon Nickel Industry (VDNI) – a subsidiary of China-based Jiangsu Delong Nickel – on 15 December 2020 the workers had "paralysed" smelter activities with more than 40 heavy equipment and operational vehicles set ablaze.

However, protests on the ground failed to halt Jiangsu Delong from proceeding with its nearby stainless-steel plant project with China state-owned logistics company Xiamen Xiangyu.

On the same day as the riot, the Rmb13.4 billion ($2.07bn) integrated project achieved financial close, making it one of Xiamen Xiangyu's largest overseas investments.

This transaction stands out as one of the largest financings in 2020 by Chinese lenders in Asia and – unlike previous project finance deals with Chinese banks taking big tickets – 8 Chinese banks joined the club deal, signalling their readiness to more actively step into the Southeast Asia market.

Background

The project was launched around 3 years ago when China's National Development and Reform Commission (NDRC) in September 2017 approved Xiamen Xiangyu's proposal. The project sponsor then established an onshore project company in Indonesia – Obsidian Stainless Steel.

Obsidian's shareholders at financial close included:

- Xiamen Xiangyu – 51%
- Jiangsu Delong Nickel Industry – 49%

Virtue Dragon Industrial Park in Konawe Regency, Southeast Sulawesi, is home to the integrated project with the following assets:

- nickel mine
- 5 million metric tonnes per year stainless steel smelter
- 44MW coal-fired power plant
- 40 million metric tonnes multi-functional port

China-based construction company Suzhou Thvow Technology is the EPC contractor for the thermal power plant.

The project has started trial production with a capacity of 450,000 metric tonnes per year. Xiamen Xiangyu targets full commencement of operations within 12-18 months.

A multi-layered financing

Clearing conditions precedent on the complex transaction took about a year, as Xiamen Xiangyu signed the Rmb6.88 billion debt package in December 2019.

Financing of the roughly Rmb13.4 billion integrated project was arranged with a 51/49 debt-to-equity ratio.

The syndicated loan was a multi-layered facility denominated in Chinese yuan and US dollar. Lenders to the $1.06 billion debt package included:

- Bank of China (BOC)
- China Development Bank
- China Construction Bank
- ICBC
- Agricultural Bank of China
- CITIC bank
- China Merchants Bank
- Tai Fung Bank

The tenor is 81 months, or 6.75 years, and it had a drawdown period of 24 months, with interest paid semi-annually. The loans were priced off loan prime rate (LPR), a benchmark lending rate adopted by commercial banks in China.

The credit facility comprises 3 tranches:

- Tranche A (Rmb) – about $886 million, priced off 5-year LPR+, with a Sinosure wrap
- Tranche B (dual-currency) – priced off 5-year LPR+, at a rate 25% higher than Sinosure
- Tranche C (dual-currency) – off 6-month Libor

Ping An Insurance covered tranches B and C, which had a combined principal of around $884 million.

The onshore lenders punched tranche A's ticket, while Tai Fung Bank, BOC Jakarta, BOC Singapore and ICBC Indonesia were on tranches B and C.

Drawing insights

NDRC has praised the integrated project as one of the "classic examples of Belt and Road Initiative in practice". BRI is a global infrastructure development strategy adopted by the Chinese government in 2013.

Chinese banks tend to be the sole lenders on BRI projects, or in a club with 2 to 3 banks. This transaction involved several banks in Xiamen, a port city on China's south east coast, and their offshore colleagues.

IJGlobal anticipates Chinese lenders will increasingly participate in overseas markets such as Southeast Asia.

"It shows the result of efforts in China to get lenders to reduce reliance on bilaterals and manage their exposure through syndication may be gaining traction," says Kanyi Lui, partner at Pinsent Masons based in Beijing.

Meanwhile, Chinese investor involvement in Southeast Asia is also rising. During H1 2020, China's investments in the sub-region totalled up to $6.8 billion, a yearly increase of around 53.1%, according to China's State Council.

"There also appears to be an increase in the willingness of Chinese contractors to seek financing from international lenders, as the Chinese lenders are currently very cautious. International lenders are also becoming more flexible," Lui explains.

As more Chinese lenders and investors eye Southeast Asia, competition among financial institutions is set to intensify.

"We would expect to see more innovative financing solutions provided by a syndicate of Chinese and international lenders going forward," Lui adds.

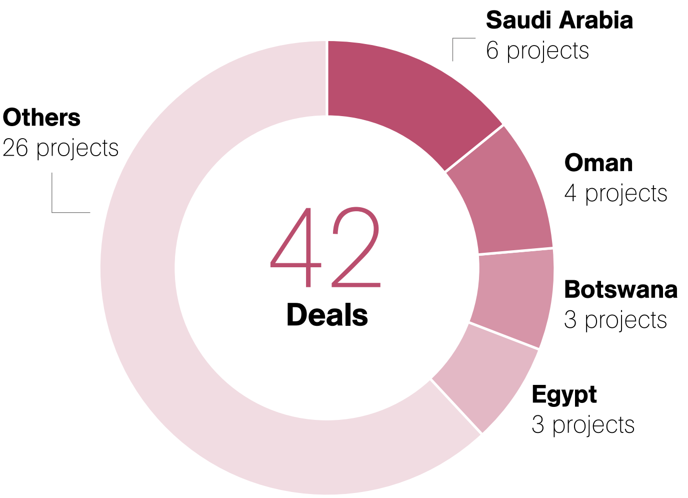
Advisers

Bank of China was mandated lead arranger, financial adviser, onshore and offshore facility agent, and security agent.

Pinsent Masons acted as lenders' legal counsel. ■

Middle East & Africa

Tenders launched



Projects with recent tender updates

1	Abydos Solar PV Plant (500MW)
2	Acquisition of 50% in Enel Green Power's Africa Wind & Solar Portfolio (769MW)
3	Az Zour North 2 IWPP (2700MW)
4	Facility E IWPP (2600MW)
5	Misrata Airport PPP
6	Qatar Schools Package 3 PPP
7	Quddiya Entertainment Project Utility Infrastructure
8	Temane Gas-Fired Plant (400MW)

Closed deal values by sector

Sector	Transaction count	Value ($m)
Oil & Gas	3	$2,225
Mining	1	$180
Power	3	$1,803
Social & Defence Renewables	1	$913
Telecoms	1	$600
Transport	6	$6,397
Water	1	$23
Renewables	6	$1,526

Closed deals by country

	Transaction Country	Value ($m)	Count
1	**Israel**	3,271	3
2	**Egypt**	3,047	3
3	**Guinea**	1,900	2
4	**Saudi Arabia**	1,125	3
5	**United Arab Emirates**	1,045	1
6	**Niger, Nigeria**	1,000	1
7	**South Africa**	936	2
8	**Togo**	913	1
9	**Morocco**	213	1
10	**Gabon**	66	1
11	**Madagascar**	43	1
12	**Zambia**	40	1
13	**Uganda**	36	1
14	**Jordan**	23	1
15	**Ghana, Nigeria**	10	1

Transactions that reached financial close

- 3 Dec — Jerusalem Light Rail Transit (JLRT) Green Line Extension (18.3KM) PPP
- 17 Dec — Al Dhafra Solar PV Plant (2GW) IPP
- 18 Dec — Cairo Public Monorail Transit System (96KM) PPP
- 18 Dec — Souapiti (515MW) and Kaleta (240MW) Hydroelectric Power Plants CEXIM Facility
- 30 Dec — Acquisition of 30% in Energean Israel Limited
- 31 Dec — Tri K Gold Mine
- 12 Jan — Tanger Med II Port Container Terminal 3
- 22 Feb — Liquid Telecom Refinancing 2021

Al Dhafra solar PV

United Arab Emirates

Sponsors EDF and Jinko Power worked with TAQA and Masdar to reach financial close on the 2GW Al Dhafra solar power plant – financing the world's largest single-site solar PV entirely off balance sheet for a potential bridge-to-bond facility in the future. *IJGlobal* reporter **James Hebert** reports.

The 2GW Al Dhafra will be the world's largest single-site solar power plant

A sponsor team of EDF and Jinko Power has cooperated with TAQA and Masdar to reach financial close on what will be the world's largest single-site solar power plant – the 2GW Al Dhafra solar power plant.

The Emirates Water & Electricity Company (EWEC) pushed hard on the financing structure, enforcing a hard mini-perm rather than incentivising a potential refinancing through cash sweeps and large-step ups in debt pricing.

As a result, the project was financed off the balance sheet in a deal that may well become a bridge-to-bond facility further down the line due to the mandatory refinancing.

The 2GW project set a world record for solar PV, trumping one that had been set just a few days prior in late July 2020 – however it was superseded just a month later by a trailblazing solar programme in Portugal.

Al Dhafra is Abu Dhabi's second major solar scheme following the 1,177MW Sweihan solar PV which Jinko also took part in and also once held the solar tariff record.

The sequel to Sweihan reached financial close on 17 December 2020.

Procurement

EWEC launched the project in Abu Dhabi with expressions of interest (EoIs) issued to the market on 12 February 2019. At this time, it was advertised with a 40% stake for the developer, which in turn would design, build, finance, operate and maintain (DBFOM) the project under a 30-year agreement.

A total of 48 EoIs were received, with the following firms known to be in the race for the DBFOM contract by the middle of 2019:

- ACWA Power
- EDF
- Engie
- Jinko Power
- Marubeni
- Siemens
- Softbank

The RFP deadline was delayed throughout the year – in part due to the potential addition of a 300MW battery component that was later dropped – and bids (and alternative bids) were expected to be opened by December 2019.

EWEC held clarification meetings in January 2020 with bidders a few months after enforcing its demand for a hard mini-perm with a mandatory refinancing in the bidding documents.

The tender then took a new direction in 2020, as did other things that year. EWEC invited revised bids with a deadline of 1 March 2020. At this point, five bidding groups had formed for the final stretch of the procurement:

- ACWA Power, Shanghai Electric
- EDF, Jinko Power
- Engie, Alfanar
- SB Energy, Eni
- Marubeni, Total

March 2020 stands infamous in the market – EWEC cancelled a public readout for revised bids scheduled for 18 March, just three days following WHO's announcement of a pandemic due to the spread of Covid-19, which brought with it strict regulations on public gatherings.

"EWEC would like to thank you for your continued support and will advise next steps shortly," read the missive to bidders at the time.

Finally, the tender reached a conclusion with the opening of bids on 28 April 2020. These evaluated weighted levelized cost of energy (EWLEC) prices were as follows:

- EDF and Jinko Power – AED0.07934/kWh ($0.0216938/kWh)
- ACWA Power and Shanghai Electric – AED0.09254/kWh
- Engie – AED0.10120/kWh
- SB Energy and Eni – AED0.10743/kWh
- Marubeni and Total – AED0.12084/kWh

The Abu Dhabi Power Corporation (ADPower) later said that the lowest bid comes out to AED0.0497 per kilowatt hour which represented a claim for world record for solar PV.

This announcement doubly confirmed the EDF and Jinko Power team as preferred bidder.

This readout caused some widespread media confusion at the time. One of the bidders told *IJGlobal* that EWEC uses "a weird formula WLEC that is not LCoE but is a weighted average tariff with four weights of 1x, 1.3x, 1.6x, and 2.3x over the annual dispatch, so the tariff that is read out is artificially lower compared to a normal LCoE calculation."

Financing

The $1 billion debt consists of a hard mini-perm requiring a refinancing further down the line, which may well take the form of bonds – thereby constituting a bridge-to-bond facility.

However, the commercial bank loan format has not been ruled out.

The participants on the club are:

- BNP Paribas
- Bank of China
- Crédit Agricole
- HSBC
- MUFG Bank
- SMBC
- Standard Chartered Bank

There is a pre-pandemic debt pricing of Libor +80bps.

EWEC signed the 30-year power purchase agreement (PPA) with EDF and Jinko Power on 27 July 2020 which confirmed a world record solar tariff of $0.0135 per kilowatt hour on a levelised electricity cost (LEC) basis.

This beat out a fresh claim only the week before at the 800MW Al Kharsaah solar IPP which hit financial close (23 July 2020) with an adjusted price of $0.01449 per kilowatt hour.

The single-site approach

However, since July 2020 the world of solar PV kept spinning – just one month later on 27 August 2020, The Portuguese directorate general for energy and geology announced that its 670MW solar tender drew a bid as low as $0.0131 per kilowatt hour.

Al Dhafra still boasts other accomplishments, such as achieving financial close despite the rigid structure put in place by EWEC.

Furthermore, every megawatt of its 2GW design spec will be installed within a 20 square kilometre space of desert, comprising at least four million PV modules.

The sheer scale of this single-site strategy is comparable to the approach from next door in Dubai where DEWA has been building up its gargantuan Mohammed Bin Rashid Al-Maktoum solar park since January 2012 – most recently with the financial closing of its fifth phase.

Every megawatt of the Al Dhafra 2GW design spec will be installed within a 20 square kilometre space of desert, comprising at least four million PV modules

Roughly 1GW is operational at this multi-phase park, with a further 1.8GW under construction after nine years of development, which is a glacial pace compared to the 2GW Al Dhafra which may be fully operational within two years.

The sponsors were thought to have gone with PowerChina Huandong as their EPC contractor earlier in the bidding, but the contract was instead awarded to China Machinery Engineering Corporation (CMEC) in late December 2020.

Al Dhafra is scheduled to begin commercial operations in Q2 2022.

Advisers

The lenders were advised by Clifford Chance.

The sponsors were advised by:

- Synergy Consulting – financial
- Norton Rose Fulbright – legal
- EWEC was advised by:
- Alderbrook – financial
- White & Case – legal
- Fichtner – technical ■


The 1,177MW Sweihan solar PV which Jinko also took part in once held the solar tariff record

The Saudi megaprojects in need of water and power

The House of Saud is putting up large megaprojects across the kingdom – how will the water and power needs at each site be fulfilled? *IJGlobal* reporter **James Hebert** investigates.

Saudi Arabia's efforts to enforce the sweeping reforms of its economic, social and cultural spheres is symbolised by its pursuit of singular large megaprojects – the objectives of which go to the heart of the House of Saud's Vision 2030 initiative.

Some of these objectives have both the domestic and international scenes in mind, such as integrating the country's youthful population into the Saudi future and attracting millions of international tourists to its seaside resorts.

Whichever the hopes and dreams pinned on these gargantuan monuments of Saudi hospitality, the megaprojects will require equally large energy and infra inputs to keep both the lights on and its visitors/inhabitants happy.

The utility components of these megaprojects have the crucial backing of the Public Investment Fund (PIF), which has already proven to give serious credence for lender interest for the debt financing.

Below are the energy and infra needs of the 4 biggest (so far) tourism and entertainment locations and the progress made on each thus far: these are the Red Sea, Qiddiya, Amaala, and Neom Smart City megaprojects.

Red Sea

The luxury-focused Red Sea Project features a $1.5 billion utilities DBOT contract, which the Red Sea Development Company (RSDC) awarded to Saudi power and water developer ACWA Power in mid-November (2020).

It is therefore the one megaproject with the most amount of progress towards fulfilling its own energy and infra needs, which include:

- at least 210MW of renewable energy generation
- 3 seawater reverse osmosis (SWRO) plants to provide and treat water

ACWA Power is aiming for a Q1 2021 financial close and at present the lenders on the roughly $1.125 billion debt package include:

- Al Rajhi Bank
- Banque Saudi Fransi
- Riyad Bank
- Standard Chartered Bank

RSDC is overseeing the utilities project. It will offtake both the power and water supply from ACWA Power and the 25-year agreement will be backstopped by the PIF.

The RDSC has set an ambitious target of attracting at least one million visitors per year to its $50 billion megaproject. The equally ambitious design spec includes:

- 14 luxury and hyper-luxury hotels
- marinas, leisure and lifestyle amenities
- up to 28,000 square km of islands, beaches, desert, mountains and volcanic areas

The planned area is therefore almost as large as Belgium at 30,689 square km. The luxury mega project will be located in the Umluj area in Tabuk next to – where else – the Red Sea.

The RSDC is being advised by:

- EY – financial
- Clifford Chance – legal

ACWA Power is being advised by:

- Covington & Burling – legal

The lenders are being advised by:

- DLA Piper – legal

Qiddiya

The Qiddiya Investment Company's (QIC) entertainment megaproject is the next

The luxury-focused Red Sea Project features 14 luxury and hyper-luxury hotels

on our list – however, there has been little movement since subsidiary Qiddiya Development Company (QDC) received 2 request for proposal (RFP) bids for the utility assets contract on 1 July last year (2020).

One source close to the tender told *IJGlobal* that a decision is expected "soon but there are no exact dates".

Previously an award had been expected to take place as early as September (2020). The 2 primed firms are:

- ACWA Power
- Alfanar

The winning bidder will sign with QDC a build, own, operate (BOO) contract for the utility component of the megaproject, which includes the following assets:

- power
- waste management
- water

Meanwhile, the parent company QIC has awarded 2 roads and bridges construction contracts, each corresponding to the upper and lower plateaus.

The first was a $190 million contract awarded mid-July (2020) to SAJCO for the construction of 45km of roads and bridges on the lower plateau.

The second such contract was awarded on 27 November (2020) for the upper plateau: the Haif & Freyssinet joint venture (JV) was handed the works worth SR1.1 billion ($293.3 million).

The Qiddiya entertainment megaproject is aimed at Saudi Arabia's predominantly young population, of which up to 67% are under the age of 35 – the venue will include sporting facilities, the arts and a wide variety of parks.

Qiddiya Development Company is being advised by:

- Synergy Consulting – financial
- Clifford Chance – legal
- Fichtner – technical

Amaala

Amaala is another tourism destination to be built alongside the Red Sea coastline in Tabuk, in the north west of the Kingdom. Heritage is the chief aim of this megaproject – including 95% of its 4,155 square km being marked for conservation efforts.

The Amaala Company intends to procure the utility projects required, and to this end it mandated the financial and technical advisers in late-March (2020). The utilities to be tendered include:

- power
- waste management
- water

The $500 billion Neom Smart City

However, the legal adviser has yet to be appointed, a source confirmed. The advisers mandated by Amaala Company are:

- Synergy Consulting – financial
- Fichtner – technical

The heritage-focused megaproject is designed to include:

- 200 retail shops, art exhibitions, and marinas
- 700 villas
- 2,500 hotel rooms

Construction is expected to be completed by 2028.

Neom Smart City

The $500 billion Neom Smart City is planned as a special economic zone with residential and entertainment facilities making heavy use of artificial intelligence in nearly every aspect of its design – or in other words, a smart city. The name of this megaproject – NEOM – is derived from 'new future'.

In the new past, AECOM was awarded by Neom Company the project management consultancy services contract in September (2020). Their responsibilities are predominantly infra and include:

- designing the transport and utilities infra needs of the project
- providing environmental and geotechnical support for Phase 1
- supervising both the design and construction stages

What about its energy supply? In line with its slick, futuristic nature, Neom Bay's design documents is steeped in renewable energy capabilities – but if so, it may have to rely on expensive CSP technology to provide a night-time source of power. Otherwise solar PV, wind, and energy storage are all in the frame for Neom Bay's utility needs.

In mid-August last year (2020), Neom Company signed with Bechtel the contracts to lay the foundations for the digital infrastructure hub and to design, build and project manage construction of its transport, power and water infrastructure.

The development company also signed contracts with Saudi telco STC to build out its 5G network.

The first phase of the Neom Bay megaproject is expected to be completed by 2025.

Lender appetite for megaproject infra…

Already, lenders have jumped onto the Red Sea utilities project as it has newly entered the financing stage. Furthermore, "others will be brought in", a source on the sponsor-side told *IJGlobal* at the time – it is by far the most advanced of the 4 utility projects discussed here, but what are the lender prospects for the other 3?

On this matter, PIF support underpins the bullish mood towards lender participation.

PIF provides the "counter guarantee termination payment obligations of the Red Sea Development Company," one advisory source on the megaprojects told *IJGlobal*, "the same structure will be followed for other PIF gigaprojects."

If so, then the Red Sea Project may well be leading the way for its sister megaprojects.

The Covid-19 pandemic has slowed progress on at least 3 out of 4 of the above megaprojects, which has therefore disaffected the procurement of their respective utility components.

Nonetheless, the on-going project financing of the utilities of the Red Sea Project exposes a ray of hope for attracting international investment towards the energy and water needs of Saudi Arabia's symbols of sweeping reform. ■


The future of financial learning starts here