15 Project Bonds To Change Your Preconceptions

The Global Project Bond Market

The Capital Markets are an established source of funding for project financing.

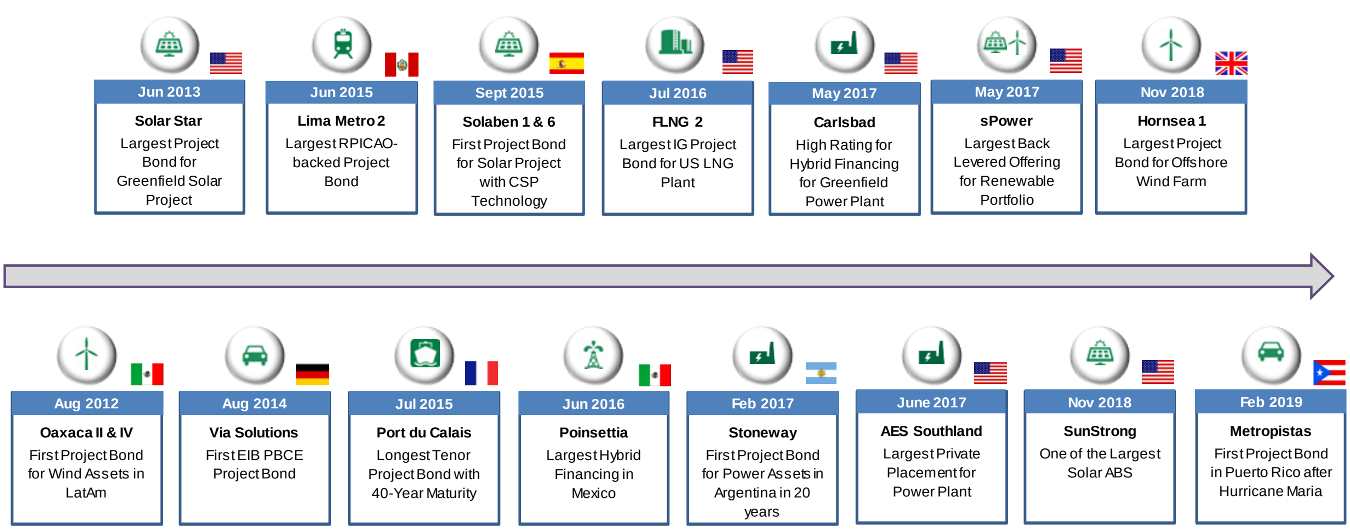
Project Bonds offer distinct advantages to issuers such as long tenor typically matching the underlying offtake agreements, fixed pricing, quick-to-market execution, and deep market for investment. Tapping the Capital Markets has also proved beneficial for investors, allowing them to diversify their investment portfolio.

Throughout the years, the Project Bond market has advanced with the issuance of ground-breaking transactions. Issuances backing new asset classes, new geographies, and innovative structures have developed this market, allowing it to become a reliable source of financing for issuers developing complex infrastructure and energy projects.

Project Bonds have been used to finance user-pay traffic risk toll roads and greenfield power plants in the US, offshore wind farms in Europe, and airports, renewables and oil & gas asset portfolios in Latin America. These are just a few transactions that demonstrate the new frontiers that Project Bonds have reached.

In this article, we review select noteworthy transactions that have shaped the Project Bond market. Below we present an overview of the transactions covered in this article. This list represents only a small sample of some of the transactions that have transformed the market.

Timeline Illustration of 15 Noteworthy Project Bond Transactions



Sources: Crédit Agricole CIB, Project Finance International, IJGlobal, Private Placement Monitor, Moody's, Fitch, Standard & Poor's, and select transaction / offering documents.

CE Oaxaca Dos, S de RL de CV & CE Oaxaca Cuatro, S de RL de CV

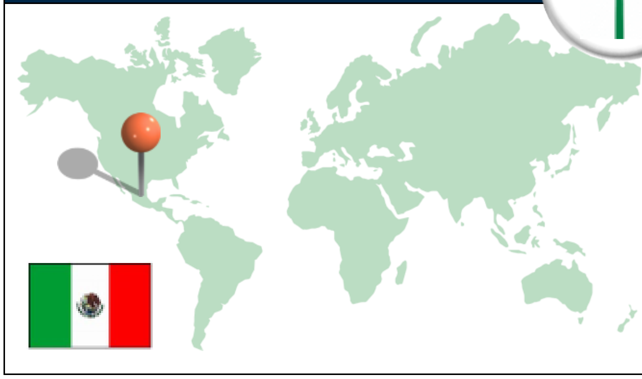
The CE Oaxaca Dos, S de RL de CV & CE Oaxaca Cuatro, S de RL de CV (Oaxaca II and Oaxaca IV) issuances supported the refinancing of two wind farm projects, each with 102MW of total installed capacity, located in the Oaxaca region of Mexico. These wind farm transactions were collectively the first-ever Latin American wind projects to tap into the Capital Markets. Prior to these transactions, the majority of wind Project Bond issuances were concentrated in the United States and Europe (See “Project Bond Focus – Issue 3 – New Energies – Wind” for more information). These two transactions highlighted the expansion of wind Project Bond financings into new geographies.

In late 2009, Comisión Federal de Electricidad (CFE), Mexico’s state power company and the largest electric utility in Latin America, launched a tender for the construction and operation of three wind projects (Oaxaca II, Oaxaca III, and Oaxaca IV) to ramp up Mexico’s wind generation capacity. In March 2010, the three projects were awarded to Acciona Energia SA. Acciona Energia SA was granted an agreement with CFE to operate the wind projects for 20 years in exchange for payments in USD from CFE pursuant to Power Purchase Agreements. The construction of the II and IV projects was partially financed by a bank facility. The projects reached commercial operation in early 2012.

In August 2012, Oaxaca II issued $148.5MM in 19-year 144A / Reg S notes to refinance the original bank facility. The senior secured notes priced at 7.25% and had an average life at issuance of 13 years. The offering was rated BBB- by S&P and Fitch. Concurrently, Oaxaca IV issued $150.2MM in 19-year senior secured notes that also priced at 7.25%. Project III was not included in the 144A / Reg S issuances. The final book for the two offerings included international institutional investors, as well as local investors (Afores, or Mexican pension funds).

Another interesting takeaway of these two bond offerings is that this offering came to market when commercial banks were unprepared to lend to the refinancings of the projects. The sponsor was able to tap the Capital Markets as an alternative and move forward with its refinancing plan.

Wind Farms in Mexico



Transaction Highlights

Issuer:	CE Oaxaca Dos, S de RL
Date of Issuance:	August 2012
Issuance Amount:	$148.5MM
Use of Proceeds:	Refinance construction financing
Credit Ratings:	BBB- (S&P); BBB- (Fitch)
Coupon Rate:	7.250%
Final Maturity:	2031
Country:	Mexico
Project Type:	Energy; Wind
Project Sponsor:	Acciona Energia SA
Source of Payment:	Power Purchase Agreement with CFE

Transaction Highlights

Issuer:	CE Oaxaca Cuatro, S de RL de CV
Date of Issuance:	August 2012
Issuance Amount:	$150.2MM
Use of Proceeds:	Refinance construction financing
Credit Ratings:	BBB- (S&P); BBB- (Fitch)
Coupon Rate:	7.250%
Final Maturity:	2031
Country:	Mexico
Project Type:	Energy; Wind
Project Sponsor:	Acciona Energia SA
Source of Payment:	Power Purchase Agreement with CFE

Why Significant?

With a rating of BBB-, Oaxaca II and Oaxaca IV were the first Latin American wind projects to achieve investment grade ratings and tap the Capital Markets. With the inclusion of local investors in the final order book, Oaxaca II & IV also became the first international Project Bonds to significantly tap local Mexican institutional investors (Afores). The transactions also became the first USD-denominated wind Project Bonds outside of the United States.

Solar Star Funding, LLC

Solar Star Funding, LLC (Solar Star) is the largest Project Bond offering to date for a greenfield solar project.

The Project Bond issuance backs the aggregate 579MW photovoltaic (PV) generating facilities in Kern and Los Angeles counties in California. The underlying project consists of two separate facilities, the 309MW Solar Star California XIX facility and the 270MW Solar Star California XX facility. The project was initially developed by SunPower Corporation and was later acquired by MidAmerican Energy (MidAmerican) in December 2012. Solar Star, a subsidiary under the sponsor MidAmerican, was formed to own the two facilities. At the time of the transaction, the underlying facilities were under construction in the Mojave Desert. The two facilities were constructed and are now operated by the original developer, SunPower Corporation. Both facilities are contracted under 20-year fixed price Power Purchase Agreements for 100% of their output with Southern California Edison Company rated A2 (Moody's); BBB+ (S&P); and A- (Fitch).

In June 2013, Solar Star issued $1,000MM in 22-year senior secured notes at 5.375%. The 144A / Reg S offering had a 14.7-year average life and was rated Baa3 (Moody's); BBB- (S&P); and BBB- (Fitch). The proceeds were used to finance the construction of the two facilities and to lower the equity commitment by MidAmerican.

This issuance was the first part of a two-part Project Bond transaction to finance the construction of the two facilities. Solar Star initially intended to issue about $1.275BN in two separate series. The issuance on June 2013 was the initial series and was expected to be approximately $700MM. Solar Star had anticipated to issue again in 2014 with approximately $575MM in senior secured notes. However, the initial transaction in 2013 was significantly upsized to $1,000MM from $700MM.

In March 2015, Solar Star issued another $325MM in 20-year senior secured notes. The notes were priced at 3.95% and have an average life of 12.5 years. The new issuance was assigned a Baa3 (Moody's); BBB (S&P); and BBB- (Fitch) ratings. S&P up-notched its rating with this add-on issuance. The proceeds from the issuance allowed MidAmerican to reduce its equity contribution to reach a capital structure of 48% debt and 52% equity. The transaction was upsized from $315MM to $325MM.

PV Solar Farm in the United States

Transaction Highlights

Issuer:	Solar Star Funding, LLC
Date of Issuance:	June 2013
Issuance Amount:	$1,000MM
Use of Proceeds:	Fund construction costs & financing fees; cover interest during construction; and reduce equity commitment
Credit Ratings:	Baa3 (Moody's); BBB- (S&P); BBB- (Fitch)
Coupon Rate:	5.375%
Final Maturity:	2035
Country:	United States
Project Type:	Energy; Solar
Project Sponsor:	MidAmerican Energy
Source of Payment:	Power Purchase Agreement with Southern California Edison

Transaction Highlights

Issuer:	Solar Star Funding, LLC
Date of Issuance:	March 2015
Issuance Amount:	$325MM
Use of Proceeds:	Fund construction costs & financing fees; cover interest during construction; and reduce equity commitment
Credit Ratings:	Baa3 (Moody's); BBB (S&P); BBB- (Fitch)
Coupon Rate:	3.950%
Final Maturity:	2035
Country:	United States
Project Type:	Energy; Solar
Project Sponsor:	MidAmerican Energy
Source of Payment:	Power Purchase Agreement with Southern California Edison

Why Significant?

The Solar Star inaugural issuance is significant due to the size of the offering. With its upsizing to $1,000MM, it became the largest Project Bond issuance for a greenfield solar project. It is also notable that this issuance was a part of a repeat issuance program, with Solar Star issuing $325MM in senior secured notes again in March 2015.

Via Solutions Nord GmbH & Co. KG

Via Solutions Nord GmbH & Co. KG (Via Solutions) marked the first greenfield Project Bond Credit Enhancement (PBCE)-backed bonds in the Capital Markets.

The underlying A7 project is the 65km stretch of road north of Hamburg, serving as the main motorway connecting Germany and Denmark. The project consists of the expansion of the A7 from 2x2 lanes to 2x3 and 2x4 lanes. The project is being developed and operated by a consortium of sponsors comprised of Hochtief, DIF, and Kemna. The consortium entered into a standard German PPP contract with the Deutsche Einheit Fernstraßenplanungs - und - bau GmbH, representing the Federal Republic of Germany (the Grantor). The duration of the contract agreement is 30 years from financial close. Construction began in September 2014 and is expected to reach completion in 2018. The construction risk is low compared to similar projects because the construction involves simple upgrades. The contract also includes the maintenance of another stretch of road. The project was procured on a full 100% availability basis, carrying no traffic risk and receiving payments backed by the Federal Republic of Germany rated Aaa, improving the project's credit quality.

In August 2014, Via Solutions issued €429MM in 29-year senior secured notes. The fixed-rate notes have an average life of 16 years and is rated A3 by Moody's. The structure is inclusive of a monthly delayed draw mechanism throughout the 4.5-year construction period and the issuance benefits from the PBCE initiative, backed by the European Investment Bank (EIB). The PBCE backs 20%, or €90MM, of the issuance in the form of an unconditional and irrevocable revolving letter of credit. The PBCE is only available during the construction phase to provide additional liquidity. It serves as a first-loss support if the senior debt is accelerated and will terminate once the project is in operation. The PBCE facility led to a one-and-a-half notch rating uplift on the bonds, which would have had a rating of Baa2, according to Moody's.

The issuance was privately-placed with seven investors and the notes were not listed. The Grantor required that the consortium provide committed offers prior to bidding. Due to this requirement, investors provided commitments several months before close at a fixed spread over mid-swaps.

Toll Road in Germany

Transaction Highlights

Issuer:	**Via Solutions Nord GmbH & Co**
Date of Issuance:	August 2014
Issuance Amount:	€429MM
Use of Proceeds:	Fund the design, construction, operation and management of the project
Credit Ratings:	A3 (Moody's)
Coupon Rate:	Private
Final Maturity:	2043
Country:	Germany
Project Type:	Transportation, Road
Project Sponsor:	Consortium comprised of Hochtief PPP Solutions GmBH (49%), DIF INFRA 3 PPP Luxembourg (41%), and Kemna BAU Andrea GmbH (10%)
Source of Payment:	Availability payments as defined under the PPP contract

Why Significant?

The Via Solutions issuance is significant for several reasons. It was the first German greenfield EIB PBCE Project Bond financing in the Capital Markets. The letter of credit enhanced the construction phase by providing additional liquidity which would become subordinated debt if drawn. The transaction was also notable because it was not listed as the issuance was privately-placed with investors that committed prior to the bidding process.

Lima Metro Line 2 Finance Limited

Lima Metro Line 2 Finance Limited (Lima Metro 2) is one of the largest infrastructure Project Bond offerings in Latin America and the largest RPI-CAO-backed offering to-date. RPI-CAOs (“Retribucion por Inversion – Certificado de Avance de Obras”) are a milestone payment, government-sponsored mechanism characteristic of the Peruvian infrastructure financing program. We further detail this compensation regime below.

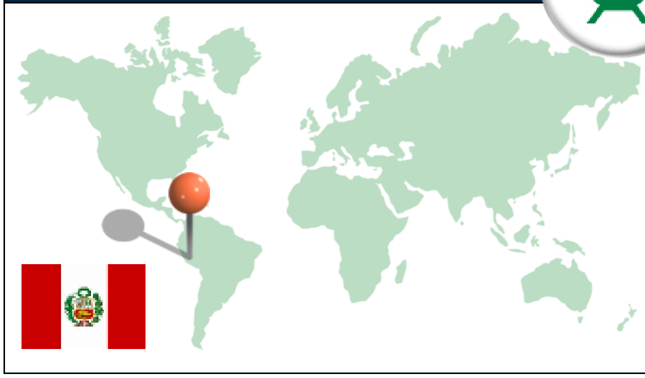
The bonds were issued to finance the construction of two routes of the subway system in the city of Lima, Peru, along with the related electromechanical equipment. The project involves the construction of 35 subway stations and approximately 35 kilometers of tunnels and courtyards.

In April 2014, the Peruvian Ministry of Transport and Communications (the Ministry) entered into a concession agreement with Metro de Lima Linea S.A. (a consortium comprised of ACS Iridium, Vialia (FCC), Salini Impregilo, AnsaldoBreda, Ansaldo STS, and COSAPI, and the ultimate equity sponsors of the project) for the construction and operation of two underground railway lines. Through the concession agreement, Metro de Lima Linea S.A. (the concessionaire) will be compensated by the Ministry under an RPI-CAO payment regime.

The RPI-CAO regime is a payment mechanism typical in Peruvian infrastructure transactions under which the concessionaire obtains the right to receive systematic payments as compensation for construction costs incurred for a project. RPI-CAOs are obtained after construction milestones are achieved and progress reports are submitted to and approved by the Ministry. These USD-denominated compensation rights are due and payable following a specified installment schedule and represent an irrevocable and unconditional payment guarantee of the Ministry to the concessionaire. RPI-CAOs are not direct sovereign obligations, but the Peruvian government is obligated to honor their payment if the Ministry fails to make due payments.

In June 2015, Lima Metro 2 issued $1,150MM in 144A / Reg S senior secured notes at 5.875%. The 19.1-year notes had an average life at issuance of 12.8 years and are rated Baa1 (Moody’s); BBB (S&P); and BBB (Fitch). The notes drew significant interest from Asset Managers and Local Peruvian Investors, with these investor bases comprising the majority of the final order book.

Metro Line in Peru



Transaction Highlights

Issuer:	Lima Metro Line 2 Finance Limited
Date of Issuance:	June 2015
Issuance Amount:	$1,150MM
Use of Proceeds:	Finance construction of a metro line project in the city of Lima
Credit Ratings:	Baa1 (Moody’s); BBB (S&P); BBB (Fitch)
Coupon Rate:	5.875%
Final Maturity:	July 2034
Country:	Peru
Project Type:	Transportation, Rail
Project Sponsor:	A consortium comprised of ACS Iridium, Vialia (FCC), Salini Impregilo, AnsaldoBreda, Ansaldo STS, and COSAPI
Source of Payment:	RPI-CAO payment regime

Why Significant?

The Lima Metro Line 2 issuance is significant due to its size and structure. The issuance amount reached $1,150MM, making it one of the largest Project Bond offerings in Latin America to-date. The offering also featured a distinct structure, being the largest RPI-CAO-backed Project Bond, shedding light on this Peru-specific payment regime. Participation from local Peruvian investors was significant with this investor pool accounting for approximately 30% of total allocations.

Société des Ports du Détroit

The Société des Ports du Détroit issuance (Port du Calais) marked the first 40-year Project Bond.

The offering backed the expansion project to create a deep-water basin next to the existing port in Calais, alongside new berths, a railway, and multi-modal links. The construction is to be performed under a fixed-price EPC contract with a consortium inclusive of Bouygues, Spie Batignolles, and Jan de Nul. The project is expected to reach commercial operations at the end of 2020 and benefits from an underlying concession agreement with the region of Nord-Pas-de-Calais (the Grantor) for a total of 50 years. The concession has a dual structure in which the concessionaire and project company are distinct entities. The port concession is inclusive of merchant risk based on passenger and freight tariffs, but the project company is shielded from such risks as it has a revenue structure most similar to a PPP-style availability-based payment regime. The majority of the project financing was provided at the project company level, funding the construction/expansion efforts rather than the concession operation.

In July 2015, Port de Calais issued €504MM in 40-year senior secured notes. The privately-placed notes have a structure in which pricing increases after the construction is completed. The notes have a coupon of 3.70% during construction which increases to approximately 4.50% three years after the initiation of the operation phase. The private placement offering was entirely placed with one investor. It should also be noted that the notes are fully amortizing (i.e. there is no balloon payment due at the end of the 40-year term).

The offering benefits from support from the EIB through the PBCE program. The PBCE kicks in only after construction and backs approximately 10% of the notes. It acts as a first-loss cover and as an additional source of liquidity during the project's initial years of operation. The transaction is believed to be investment grade, even without the additional EIB enhancement product.

The structure also includes a liquidity facility to be drawn in case of cash shortfalls. The Grantor guarantees the debt service of the senior secured notes and agrees to refill the liquidity facility, if needed.

Port in France

Transaction Highlights

Issuer:	Société des Ports du Détroit
Date of Issuance:	July 2015
Issuance Amount:	€504MM
Use of Proceeds:	Finance the expansion of a port in France
Credit Ratings:	--
Coupon Rate:	3.70% (construction phase); 4.50% (operation phase)
Final Maturity:	2055
Country:	France
Project Type:	Infrastructure; Port
Project Sponsors:	Meridiam, CDC, the Cambre de commerce et d'industrie Côte D'Opale, the Chambre de commerce et d'industrie Nord de France
Source of Payment:	Availability-based payments as defined under the concession agreement

Why Significant?

The Port du Calais issuance is significant because of its long-term issuance backed by the concession granted. The 50-year concession granted by Nord-Pas de Calais opened the door for the first 40-year Project Bond. The bond's uncommon structure is also noteworthy, as the bond features increased pricing and strong guarantees after construction is completed. This pricing flexibility was facilitated by the presence of only one investor.

Solaben Luxembourg S.A.

The Solaben Luxembourg S.A. (Solaben) issuance was the first solar Project Bond issued in Spain.

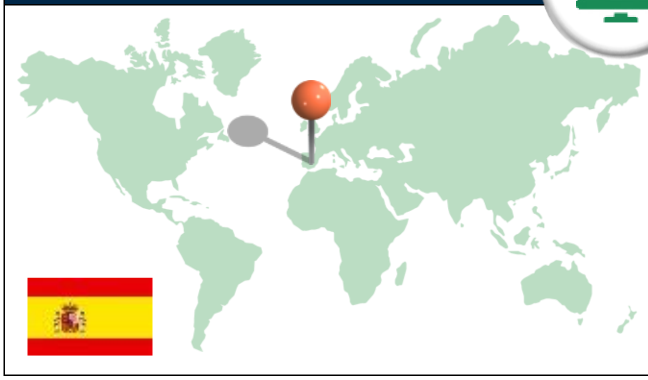
The Solaben 1 & 6 projects are two 50MW solar thermal plants located in the Extremadura region of Spain. The two concentrating solar power (CSP) plants use parabolic trough technology and began operations in the summer of 2013. A CSP project collects and concentrates heat from the sun using highly reflective mirror panels and focuses the heat onto a receiver filled with a highly conductive fluid, such as synthetic oil. This fluid is then used to create steam and power a conventional steam turbine to generate electricity.

The projects receive subsidies until 2038 under a Spanish payment regime. The new pool-plus-premium regime allows the projects to benefit from a stable payment framework, which outlines that 70% of the projects' revenues are unrelated to demand or production. The regime also includes a mechanism that guarantees a rate of return and removes all risk of pool price discrepancies. The projects benefit from technology that has a long track record. The transaction boasts a conservative (55/45) debt to equity ratio and strong coverage ratios.

In late August 2015, Abengoa SA was struggling as its share price fell approximately 25% after concerns surrounding the leverage of the company. As part of its strategy to raise cash and shore up its capital structure, it agreed to sell the Solaben 1 & 6 projects to its US-listed yieldco (at the time, Abengoa Yield) for €277MM.

In September 2015, Solaben issued €285MM in fixed-rate senior secured bonds. The issuance has a maturity of 19 years and an average life of 10 years. The fully amortizing bonds featured a coupon of 3.758% and were rated BBB by S&P. The bond issuance was fully subscribed by insurance companies.

CSP Solar Farms in Spain



Transaction Highlights

Issuer:	**Solaben Luxembourg S.A.**
Date of Issuance:	September 2015
Issuance Amount:	€285MM
Use of Proceeds:	Refinance construction costs related to projects and cover transaction & other costs
Credit Ratings:	BBB (S&P)
Coupon Rate:	3.758%
Final Maturity:	2034
Country:	Spain
Project Type:	Power; Solar
Project Sponsor:	Atlantica Yield
Source of Payment:	Spain's pool-plus-premium regime

Why Significant?

The Solaben issuance is significant most notably as the first Project Bond for a Spanish solar project. Solaben was also the first solar Project Bond transaction in Europe backed by parabolic trough technology.

Poinsettia Finance Limited

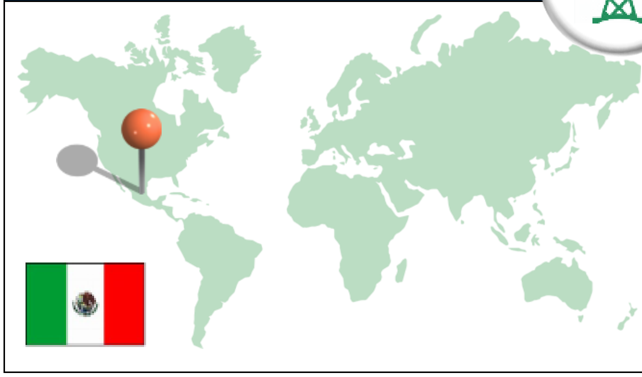
The Poinsettia Finance Limited (Poinsettia) offering was a hybrid project financing inclusive of a Project Bond tranche as well as a bank loan tranche related to a sale & leaseback of a portfolio of oil & gas assets in Mexico. This issuance is one of the largest bank/bond hybrid project financings in Mexico.

In June 2016, Petroleos Mexicanos (Pemex) – a public petroleum company owned by the Mexican government – entered into a sale-leaseback agreement with KKR – a private equity firm – for certain oil and gas assets. Under the agreement, Pemex agreed to sell these assets to KKR while maintaining responsibility for operating the assets. In return, Pemex agreed to make unconditional and irrevocable, USD-denominated lease payments to Kohlberg Kravis Roberts ("KKR") during the 15-year term of the agreement. The lease payments back the repayment of the debt issued by Poinsettia. The transaction was seen as a way for Pemex to monetize its assets as part of a company-wide asset/liability management strategy in light of the effects of low oil prices on the company at the time.

In order to finance the transaction, Poinsettia received bank loan financing and issued bonds in the Capital Markets, which rank *pari passu* to the bank loan debt. The transaction included a $100MM 12-year term loan, a $235MM 10-year term loan, a $115MM five-year term loan, and a $50MM five-year revolver. The bonds (closed in June 2016) were issued for $530.8MM as 15-year 144A / Reg S senior secured notes. Priced at 6.625%, the notes have an 11.4-year average life and are rated Baa3 (Moody's); and BBB+ (Standard & Poor's, or S&P).

The order book was largely comprised of Insurance Companies, with Asset Managers filling up the remainder of the book. This transaction was priced at a modest premium to the underlying Pemex curve.

Portfolio of Oil & Gas Assets in Mexico



Transaction Highlights

Issuer:	Poinsettia Finance Limited
Date of Issuance:	June 2016
Issuance Amount:	$530.8MM
Use of Proceeds:	Finance the purchase price of a portfolio of operating oil & gas assets and cover transaction-related costs
Credit Ratings:	Baa3 (Moody's); BBB+ (S&P)
Coupon Rate:	6.625%
Final Maturity:	June 2031
Country:	Mexico
Project Type:	Energy; Oil & Gas
Project Sponsor:	KKR
Source of Payment:	Hell-or-high-water lease payments

Why Significant?

The significance of this issuance is that it featured one of the largest bank/bond hybrid project financings in Mexico. The transaction is the first in Mexico to include a private equity firm investing in Pemex oil & gas assets, which may lead to other private equity firms to invest in similar assets in the country.

FLNG Liquefaction 2, LLC

The FLNG Liquefaction 2, LLC (FLIQ2) bond offering is notable because it was the largest investment grade transaction for a LNG asset located in the United States.

The sponsors of the project are Freeport LNG Development, LP (FLNG) and IFM Global Infrastructure Fund (IFM). FLNG operates a LNG regasification terminal near Freeport, Texas, that is currently being expanded to add natural gas liquefaction and LNG export facilities. The expansion consists of three liquefaction trains that are separately owned by individual entities. The FLIQ2 issuance supports the development of the second train of the facility (Train 2). Under the expansion, each train is independently financed and each train is contracted with different offtakers with varying credit qualities. Train 2 has a 20-year use-or-pay tolling agreement with BP Energy Company, which is guaranteed by its US parent company, BP Corporation North America.

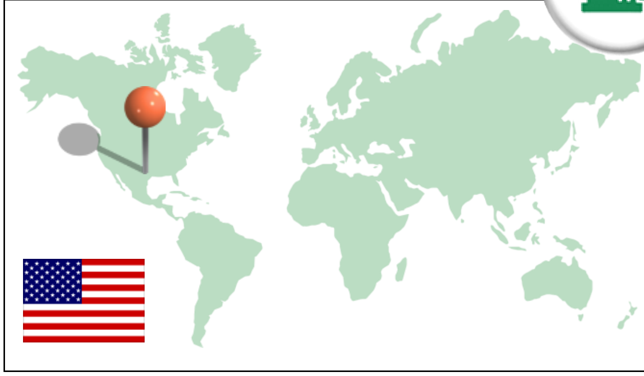
In November 2014, FLIQ2 raised approximately $3.9BN in senior secured construction financing. After the initial bank loan project financing, FLIQ2 sought to raise capital from the Project Bond market to commence the refinancing program for the bank loan facility.

In July 2016, FLIQ2 issued $1.25BN 144A / Reg S senior secured notes at 4.125%. The proceeds from the offering were used to refinance a portion of the existing bank facility and pay swap breakage costs and fees related to the issuance. The notes are fully amortizing with a tenor of 22 years and a 14-year average life. The notes are rated BBB by S&P and Fitch. The offering was marketed broadly to asset managers and insurance companies and was significantly upsized.

In November 2016, FLIQ2 issued an additional $600MM in 4(a)(2) / Reg D senior secured notes to continue the bank facility refinancing program. The transaction was marketed to a select group of insurance companies and asset managers.

Following these initial transactions, FLIQ2 has continued to tap the 4(a)(2) market with additional issuances, raising more than $1.6BN since 2017.

LNG Facility in the United States



Transaction Highlights

Issuer:	FLNG Liquefaction 2, LLC
Date of Issuance:	July 2016
Issuance Amount:	$1,250MM
Use of Proceeds:	Refinance portion of existing bank debt; pay swap breakage costs & fees & expenses
Credit Ratings:	BBB (S&P); BBB (Fitch)
Coupon Rate:	4.125%
Final Maturity:	2038
Country:	United States
Project Type:	Energy; LNG
Project Sponsor:	IFM Global Infrastructure Fund & Freeport LNG Development
Source of Payment:	Tolling agreement revenue

Transaction Highlights

Issuer:	FLNG Liquefaction 2, LLC
Date of Issuance:	November 2016
Issuance Amount:	$600MM
Use of Proceeds:	Refinance portion of existing bank debt; pay swap breakage costs & fees and expenses
Credit Ratings:	NAIC-2 (BBB)
Coupon Rate:	Private
Final Maturity:	2038
Country:	United States
Project Type:	Energy; LNG
Project Sponsor:	IFM Global Infrastructure Fund & Freeport LNG Development
Source of Payment:	Tolling agreement revenue

Why Significant?

The $1.25BN Project Bond was the first investment grade bond offering for a LNG plant in the United States. Prior issuances in the LNG space were either non-investment grade or for assets located in the Middle East. This offering, and the subsequent 4(a)(2) / Reg D transactions, are part of a repeat issuance program in order to refinance approximately $3.9BN in bank facilities.

Stoneway Capital Corp

The Stoneway offerings issued to finance the construction of a portfolio of power plants in Argentina were the first Project Bond in the country in nearly two decades.

Stoneway is a Canadian private company constituted with the purpose of building, owning and operating a portfolio of power plants, through its three operating subsidiaries incorporated in Argentina.

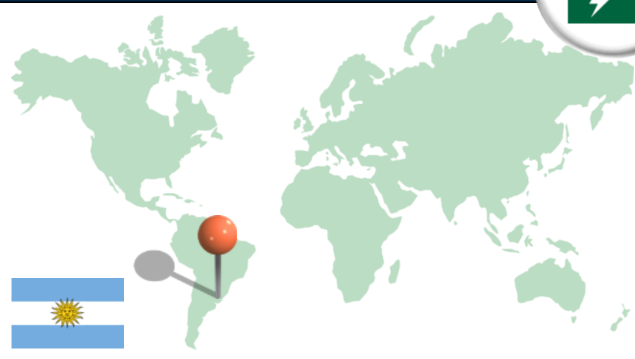
The portfolio consists of four thermal power plants in the Province of Buenos Aires with an aggregate capacity of more than 806MW: Las Palmas, Lujan II, Matheu III and San Pedro. The power plants benefit from 10-year PPAs with Argentina's wholesale electricity market administrator ("CAMMESA"), partially controlled by the Argentinian government. The PPAs grant US dollar-denominated, fixed price, capacity payments, and certain variable payments, including excess output sales into the spot market. Fuel is directly supplied by CAMMESA, eliminating supply risk, and most operating expenses are passed-through to the offtaker. The capacity payments under the PPAs are due irrespective of actual dispatch and strictly based on availability.

In 2017, Stoneway Capital Corp. issued the first Project Bond in Argentina in nearly twenty years. The $500MM 10-year bullet offering was placed in the 144A / Reg S market in February and was followed by a $165MM re-tap in November. Issuance proceeds were mainly destined to finance the construction of the four power plants.

Both issuances priced at a 10.00% and were rated B3 / B by Moody's and Fitch.

Investor appetite for these Project Bonds was anchored in the view that CAMMESA offtake risk is credit-linked to the Argentinean sovereign, despite the fact that CAMMESA obligations are not explicitly guaranteed by the Government of Argentina, and by liquidity provisions in-place during the projects' construction period to mitigate completion risk.

Power Plants in Argentina



Transaction Highlights

Issuer:	Stoneway Capital Corp.
Date of Issuance:	February 2017
Issuance Amount:	$500MM
Use of Proceeds:	Finance construction; fees & expenses
Credit Ratings:	B3 (Moody's); B (Fitch)
Coupon Rate:	10.000%
Final Maturity:	2027
Country:	Argentina
Project Type:	Power Plants
Project Sponsor:	Araucaria Energy S.A., SPI Energy S.A. and Araucaria Generation S.A.; ultimate parent Stoneway Capital Corp.
Source of Payment:	Fixed price PPAs with CAMMESA

Transaction Highlights

Issuer:	Stoneway Capital Corp.
Date of Issuance:	November 2017
Issuance Amount:	$165MM
Use of Proceeds:	Finance construction; fees & expenses
Credit Ratings:	B3 (Moody's); B (Fitch)
Coupon Rate:	10.000%
Final Maturity:	2027
Country:	Argentina
Project Type:	Power Plants
Project Sponsor:	Araucaria Energy S.A., SPI Energy S.A. and Araucaria Generation S.A.; ultimate parent Stoneway Capital Corp.
Source of Payment:	Fixed price PPAs with CAMMESA

Why Significant?

First Project Bond offering out of Argentina in more than 20 years and despite the non-investment grade sovereign rating. The transaction confirms investor appetite for Latin America greenfield energy assets, including in high yield contexts.

Carlsbad Energy Holdings, LLC

The Carlsbad Energy Center Project Bond was issued alongside a bank Term Loan, in one of the largest bank/bond hybrid transactions to-date for a greenfield asset. The offering received a strong investment grade rating.

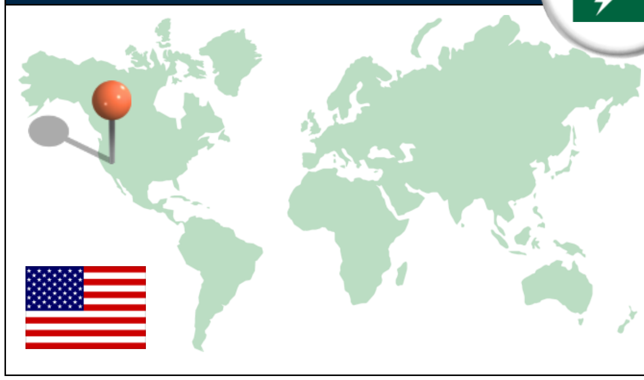
The Carlsbad Energy Center is a 519MW natural gas-fired power plant located in Carlsbad, California. The project is designed to operate as a peaker and will help balance intermittent supplies and integrate the growing supply of renewable power in the region following the retirement of the San Onofre Nuclear station. The sponsor, NRG Energy Inc, secured a 20-year Power Purchase Tolling Agreement (PPTA) with San Diego Gas & Electric Company (SDG&E), a regulated utility. The PPTA was structured as an availability-based contract with SDG&E contracting 100% of the capacity and providing all fuel requirements. The project will be constructed over a two-year period.

In May 2017, Carlsbad Energy Holdings, LLC issued $407MM in 21.4-year senior secured notes alongside a $194MM 10.4 year Term Loan to finance the construction of the project. The Term Loan is fully amortizing over the first years of the PPTA, when the notes are interest-only. The notes fully amortize over the following years of the contract, after full repayment of the Term Loan. The two tranches of debt are *pari-passu* as lenders and investors share the same collateral package.

The senior secured notes had an average life at issuance of 16.6 years and included a delayed draw. The offering was rated strong investment-grade despite the relatively long construction period.

The Project Bond attracted a large number of institutional investors and was oversubscribed, allowing the issuer to tighten pricing. The final book was mainly composed of U.S. insurance companies. Of note, one leading Asian investor participated in the transaction, representing their first ever investment in a Project Bond for a US asset.

Peaker Plant in the United States



Transaction Highlights

Issuer:	Carlsbad Energy Holdings, LLC
Date of Issuance:	May 2017
Issuance Amount:	$407MM
Use of Proceeds:	Fund construction costs & financing fees; cover interest during construction; and reduce equity commitment
Credit Ratings:	Investment grade
Coupon Rate:	4.120%
Final Maturity:	2038
Country:	United States
Project Type:	Peaker
Project Sponsor:	NRG Energy, Inc.
Source of Payment:	Power Purchase and Tolling Agreement with SDG&E

Why Significant?

The transaction represents one of the largest bank/bond hybrid transactions in the Project Bond market and achieved a strong investment-grade rating despite exposure to construction risk. The offering was largely oversubscribed, priced well inside initial guidance, and attracted a large number of institutional investors, including one first-time Asian investor.

AES Southland

The AES Southland Project Bond was issued alongside a bank Term Loan, in the largest US Private Placement of a Project Bond to date.

The project comprises two combined cycle natural gas-fired power plants with combined capacity of 1,284MW, as well as a 100MW battery storage facility. All assets are in California. The gas-fired plants are the Alamitos Energy Center, expected to replace the existing AES Alamitos Generating Station in Long Beach, and the Huntington Beach Energy Project. Both power plants are due to come online in 2020. The 100MW battery storage asset is to be collocated with the Alamitos Energy Center and a dedicated facility to store the batteries will be constructed. Kiewit Power Corp is acting as EPC contractor.

In 2014, AES was awarded 20-year Power Purchase Agreements (PPAs) by Southern California Edison (SCE), to provide 1,284MW of combined cycle gas-fired generation and 100 MW of battery-based energy storage. Under the PPAs, 100% of the capacity will be sold to SCE in exchange for a fixed monthly capacity fee. SCE is also responsible for providing natural gas.

In June 2017, AES Southland issued $1,475MM in 22.0-year senior secured notes under a 4(a)(2) US Private Placement format, alongside a $492MM 10-year Term Loan. Both tranches of debt are *pari-passu* and fully amortizing.

Both tranches were well received in the Capital Markets and Bank Market, and were over-subscribed.

Power Plants in the United States

Transaction Highlights

Issuer:	AES Southland
Date of Issuance:	June 2017
Issuance Amount:	$1,475MM
Use of Proceeds:	Fund construction costs & financing fees; cover interest during construction; and reduce equity commitment
Credit Ratings:	BBB
Coupon Rate:	4.500%
Final Maturity:	2040
Country:	United States
Project Type:	Peaker
Project Sponsor:	AES Corporation
Source of Payment:	Power Purchase Agreement with SCE

Why Significant?

The transaction represents the largest US Private Placement of a Project Bond to-date and allowed the sponsor to finance construction, fully monetize the PPA, and eliminate refinancing risk.

sPower Finance I, LLC

sPower tapped the Project Bond market to refinance a portfolio of utility-scale solar and wind projects in one of the largest renewable portfolio financing in recent years.

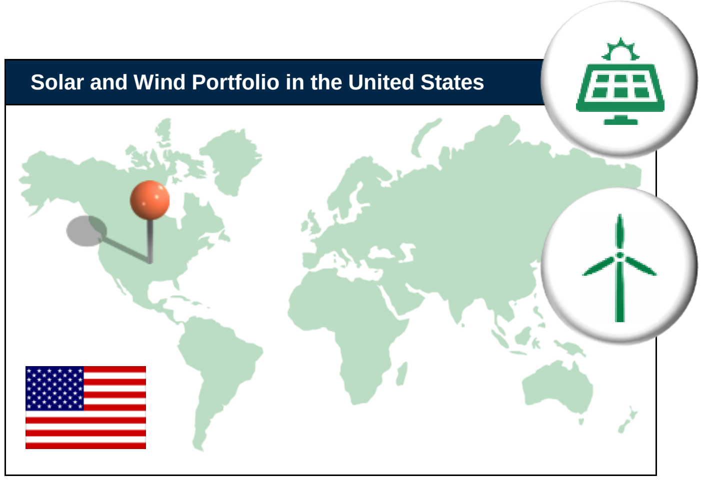
The Project Bond issuance is backed by 41 utility-scale renewable power projects domiciled in seven US states with aggregate capacity of 565MW. Of the 41 projects, 39 are photovoltaic solar projects (425MW) and two are utility-scale wind power projects (140MW). All 41 projects were in-service and commenced commercial operations before the notes were issued and are all contracted with creditworthy counterparties under long term PPAs. The portfolio utilizes a diverse set of top tier technologies and O&M is provided by experienced parties for each project. The portfolio represents approximately 44% of sPower's 1.3GW operating portfolio at the time of the financing.

In November 2017, sPower Finance I, LLC, a special purpose vehicle Holdco, issued $421MM in 19.0-year senior secured notes. The 4(a)(2) / Reg D offering has a 11.0-year average life and was rated investment-grade. The notes are fully-amortizing over contracted cash flows with minimal exposure to merchant revenues. The proceeds were mainly used to refinance approximately $300MM of existing debt at the project levels.

Most of the projects were partially financed with Tax Equity. The notes were issued by a HoldCo receiving distributions associated with the Managing Members' interest in the respective Tax Equity funds. The underlying Tax Equity funds included IRR-based partnership flip structures and the due diligence focused on evaluating cash flow mechanism under different irradiation and wind estimates.

Despite the relative complexity of the structure, the offering was significantly oversubscribed and attracted a diverse group of US private placement investors.

Solar and Wind Portfolio in the United States



Transaction Highlights

Issuer:	sPower Finance I, LLC
Date of Issuance:	November 2017
Issuance Amount:	$421MM
Use of Proceeds:	Refinance existing debt; pay swap breakage costs & fees & expenses
Credit Ratings:	Investment grade
Coupon Rate:	4.550%
Final Maturity:	2036
Country:	United States
Project Type:	Solar; Wind
Project Sponsor:	sPower
Source of Payment:	Power Purchase Agreements with creditworthy counterparties

Why Significant?

The sPower issuance is significant given the size of the underlying portfolio and the combination of solar and wind assets. It is also one of the largest Project Bonds issued on the back of Tax Equity funds, demonstrating investors' expertise in analyzing complex back leveraged transactions.

SunStrong 2018-1, LLC

SunPower Corp ("SunPower") and Hannon Armstrong Sustainable Infrastructure Capital Inc ("Hannon Armstrong"), created a joint venture, SunStrong Capital Holdings LLC ("SunStrong"), to acquire interests in a portfolio of solar leases originated and maintained by SunPower's affiliates.

SunStrong issued $400MM notes under the 144A format, secured by the aforementioned portfolio consisting of more than 37,500 U.S. residential solar leases to refinance existing debt obligations. This inaugural Asset Backed Notes for this issuer refinances a portfolio consisting solely of solar panels provided by SunPower.

In addition to providing the solar panels, SunPower and its affiliates will continue to operate and maintain the portfolio throughout the tenor of the notes.

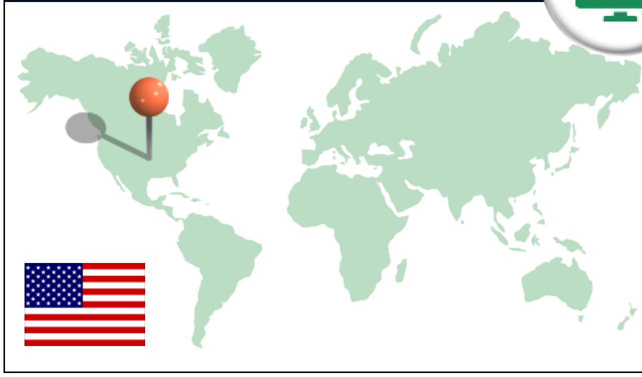
The leases are owned by various Tax Equity funds, most of them with partnership flip structures, and Tax Equity investors include leading financial institutions.

The notes were issued in a single tranche rated A by Kroll, reflecting a conservative advance rate, structural enhancement features, and strong underlying credit risk. The portfolio was composed of leases signed with creditworthy homeowners, demonstrated by the high average FICO score of the pool above 750.

Moody's awarded a GB1 (Excellent) green rating to the offering, their highest possible score, underlying the strong green attributes of the transaction. The portfolio is indeed estimated to generate 474,346 MWh of clean energy and offset 221,368 metric tons of CO_2 annually, which is equivalent to the annual electricity consumption of over 23,900 US households.

This transaction represents one of the largest solar ABS to-date and confirms the continued market appetite for this growing asset class.

Portfolio of Solar Leases in the United States



Transaction Highlights

Issuer:	SunStrong 2018-1, LLC
Date of Issuance:	November 2018
Issuance Amount:	$400MM
Use of Proceeds:	Refinance a portion of the existing debt; pay fees and expenses incurred in connection with the offering, and provide distribution to sponsors
Credit Ratings:	A (Kroll)
Coupon Rate:	5.680%
Final Maturity:	2048
Country:	United States
Portfolio:	Residential Solar Leases
Project Sponsors:	SunStrong Capital Holdings LLC, indirectly owned by SunPower Corp (51%) and Hannon Armstrong Sustainable Infrastructure Capital Inc. (49%)
Source of Payment:	Revenues associated with 37,568 Residential Solar Leases with high Fico homeowners

Why Significant?

The SunStrong issuance is significant given the size of the transaction and the size of the underlying portfolio of solar leases. It is one of the largest solar ABS issued on the back of Tax Equity funds, demonstrating investors' expertise in analyzing complex back leveraged transactions.

Hornsea 1 Offshore Wind

The Project Bond issued to finance the partial acquisition of the Hornsea 1 Offshore Wind Project by Global Infrastructure Partners (GIP) from Ørsted represents the largest transaction for a greenfield offshore wind farm to-date. It scales the Walney Extension project in the U.K. Irish Sea that was initiated by Ørsted last year to open up the debt capital market to its large offshore financing programme.

When the construction will be completed in 2020, Hornsea 1 will have almost twice the capacity of the record-holding 659 MW Walney Extension project. Hornsea 1 will include 174 Siemens Gamesa turbines and cover an area of 407 square kilometres located 120 km from the Yorkshire coastline. It will be the first and smallest of three projects that Ørsted is planning for the area.

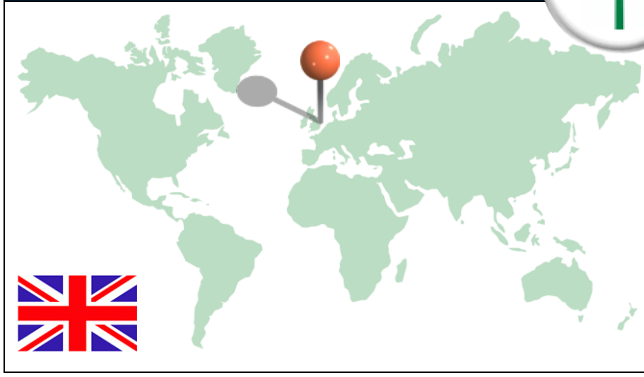
GIP has acquired a 50% stake in Hornsea 1 for £4.5BN ($5.8BN), with a £2.95BN debt package, the largest ever assembled for a European renewable energy project. The multi-tranche financing includes £1.95BN in senior secured notes, £700MM in senior bank loans and a £250MM mezzanine facility. The transaction benefited from the Danish support related to the co-sponsor Ørsted through the Danish ECA, EKF, which provided debt guarantees with £400MM covered for both Project Bonds and Project Loans, and the Danish PFA pension which provided the mezzanine tranche.

The transaction benefits from an EPC construction guarantee, O&M is provided by Ørsted and the power sales are realized through contract for difference. The tenor of the bonds, which is 16.5 years, mirrors the length of Hornsea's contract for difference.

The Project Bonds are split between CPI-linked notes and fixed-rate notes tranches.

The offering was significantly oversubscribed and all the investors bids had to be downsized.

Offshore Wind Farm in the United Kingdom



Transaction Highlights

Issuer:	Hornsea 1 Offshore Wind
Date of Issuance:	November 2018
Issuance Amount:	£1,950MM
Use of Proceeds:	Finance development and construction costs & transactions costs
Credit Ratings:	BBB
Coupon Rate:	3.5% (fixed-rate tranche)
Final Maturity:	2036
Country:	United Kingdom
Project Type:	Wind
Project Sponsor:	Ørsted & Global Infrastructure Partners
Source of Payment:	Contract for Difference

Why Significant?

The Hornsea 1 Project Bond is the largest offering for an offshore wind farm, confirming investor appetite for the asset class. It also demonstrates how complex construction periods can be mitigated by fully-wrapped EPC agreement and the benefits of ECA's involvement.

Autopistas Metropolitanas de Puerto Rico, LLC

Autopistas Metropolitanas de Puerto Rico (“Metropistas”) is engaged in the operation and maintenance of Puerto Rico Highway 22 (“PR-22”) and Puerto Rico Highway 5 (“PR-5”) pursuant to a toll road concession agreement until 2061, with the Puerto Rico Highways and Transportation Authority (“PRHTA”). The toll roads span approximately 87 km.

Metropistas is a consortium between Abertis Infraestructuras (“Abertis”), a leader in toll roads and infrastructure development, operations, and management, and GS Infrastructure Partners, (“GSIP”), Goldman Sachs’ main vehicle for private equity investments in infrastructure, and one of the largest infrastructure fund managers globally.

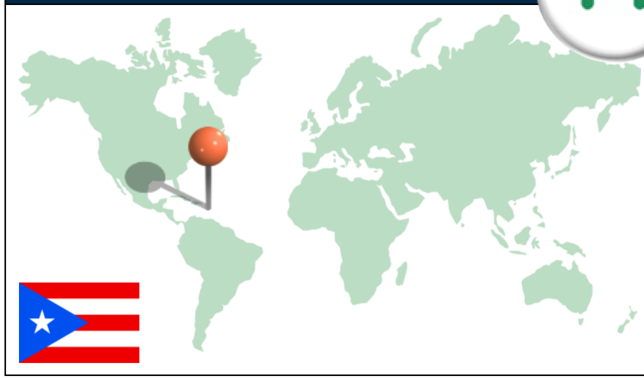
Despite the difficult economic situation of the island and the devastating impact of Hurricane María in September 2017, the toll roads have continued to perform well, with traffic remaining robust year-over-year. PR-22 and PR-5 are the main commuter arteries for the most robust economic centers of the island; which has supported Metropistas’ strong financial performance since its inception and immediate rebound following Hurricane María.

Metropistas issued $181MM in 20-year fully amortizing senior secured notes in February 2019, with a following $120MM issuance with similar terms in May 2019. Both transactions were placed in the 4(a)(2) market and issuance proceeds were used to repay existing bank facilities.

The first notes were placed among US insurance companies while the second tranche also included local Puerto Rican investors.

These transactions are the first project bond issuances in the Puerto Rican infrastructure industry since the beginning of the economic recession and the devastation following hurricane María.

Toll roads in Puerto Rico



Transaction Highlights

Issuer:	Autopistas Metropolitanas de Puerto Rico
Date of Issuance:	February 2019 and May 2019
Issuance Amount:	$301MM in two issuances
Use of Proceeds:	Refinance existing debt and pay transaction costs
Credit Ratings:	BBB- (S&P)/ BBB- (Kroll)
Coupon Rate:	Private
Final Maturity:	2038
Country:	Puerto Rico, United States
Projects Type:	2 Toll roads
Project Sponsors:	Abertis Infraestructuras, SA and GS Infrastructure Partners
Source of Payment:	Toll collections

Why Significant?

The Metropistas issuance is significant given that it is the first bond issuance in the Puerto Rican infrastructure industry since the beginning of the economic recession and the devastation following hurricane María, demonstrating market’s appetite for Puerto Rican investments in the infrastructure industry.

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